

SYMPOSIUM ABSTRACTS

[1] FORUM · ARCHAEOLOGY NOW: INTERSECTIONS OF THEORY, METHOD, AND PRACTICE IN THE 21ST CENTURY

Traditional archaeological activity has been subdivided into discrete categories – that are only occasionally subject to synthetic discussion. This balkanization has several negative affects, including theory with little reference to data and methodological incantations that strip the past of nuance or relevance. Recent efforts to re-integrate the various aspects of research in creative ways, however, acknowledge the unity of archaeological practice. This symposium presents five different projects that engage these different “intersections: selected to represent different theoretical perspectives and research contexts, they collectively present a portrait of “archaeology now” that provides promise good and important things to come.

[2] SYMPOSIUM · STONE HOES AND BAYONETS IN THE AMERICAN BOTTOM: THE BEGINNINGS OF MISSISSIPPIAN AND EARLY AMERICAN FRONTIER OCCUPATIONS IN GRANITE CITY, ILLINOIS

The Alexander Jacob (11MS2288) and the Squire (11MS2244) sites, located in Granite City, Illinois, provide a better understanding of habitation in the American Bottom. The Alexander Jacob site was occupied at the beginning of the Mississippian Period. This planned community was laid out in a horseshoe shape with a large central plaza and an associated mound. The Squire site, occupied one thousand years later, utilized the mound as a family burial area. The farmstead had its own unique character possibly being used as trading factory as well as a gathering point for the local militia.

[3] FORUM · RAISING THE PROFILE III: INCREASING PROTECTION FOR ARCHAEOLOGICAL RESOURCES AT THE LOCAL LEVEL (SPONSORED BY GOVERNMENT AFFAIRS COMMITTEE, PUBLIC EDUCATION COMMITTEE, PUBLIC ARCHAEOLOGY INTEREST GROUP)

This forum concludes discussions held in Vancouver and Atlanta on finding effective ways to promote and strengthen protections for archaeological resources at the local level. The forum will address why local governments benefit from archaeological resource protection, how local programs become established, and what you as archaeologists and citizens can do to bring archaeological resource protection to your communities. As before, case studies will be presented to illustrate effective means of protecting the archaeological record and promoting appreciation of the past at the local level.

[4] SYMPOSIUM · RESIDUE ANALYSIS 1: THE TAPHONOMY OF ARCHAEOLOGICAL RESIDUES (SPONSORED BY SOCIETY FOR ARCHAEOLOGICAL SCIENCES)

One issue faced by residue analysts is the taphonomy archaeological residues undergo. One technique utilized to address the questions of how these residues form, of what substances are they are composed, and how they were handled post-excavation, is through experimental archaeology. This enables analysts to create controlled residues for a baseline of comparison. Lab-created residues also allow residue analysts to test different mixes of materials and substances. This session explores the analysis of positive and negative results for experimental residues to better refine and understand the analysis of archaeological residues and the effects post-excavation handling procedures may have on the outcome of results.

[5] GENERAL SESSION · AGRICULTURE, ANIMALS AND CLIMATE IN MAYA LOWLANDS**[6] GENERAL SESSION · CALIFORNIA ARCHAEOLOGY FROM THE EARLY HOLOCENE TO THE COLONIAL PERIOD****[7] SYMPOSIUM · NAGPRA IN 20/20 VISION: REVIEWING 20 YEARS OF REPATRIATION AND LOOKING AHEAD TO THE NEXT 20 (SPONSORED BY COMMITTEE ON NATIVE AMERICAN RELATIONS)**

The passage of the Native American Graves Protection and Repatriation Act twenty years ago changed the practice of archaeology. In spite of the many benefits of NAGPRA, serious deficiencies in the law and in its application weaken tribal authority in regard to cultural heritage, by reducing tribal control and reinforcing the power dynamics that existed prior to NAGPRA's passage. The perceived loss of authority over “specimens” has resulted in an imperialist nostalgia that hinders the development of a truly decolonized profession. Participants in this session will reflect on NAGPRA's consequences and discuss where improvements must be made.

[8] SYMPOSIUM · RESULTS OF NEW EXCAVATIONS AT THE MIDDLE PALEOLITHIC SITE OF ROC DE MARSAL

The Middle Paleolithic site of Roc de Marsal (southwest France) was originally excavated by an amateur archaeologist in the 1950s and 1960s. Although his work was largely unpublished, the site became famous because of his discovery of a nearly complete Neandertal child, whom many believe represents one of the few deliberate burials from this time. New excavations took place between 2004 and 2009. This symposium will present the results of this work including detailed discussions of the many hearths discovered there, discussion of the zooarchaeological and lithic studies, and presentation of new interpretations on the deposition of the child skeleton.

[9] SYMPOSIUM · THE EARLY FARMING IN DALMATIA PROJECT 2003-2009: NEW INSIGHTS ON THE SPREAD OF FARMING TO THE ADRIATIC

This case study of the spread of farming through the Mediterranean is a multidisciplinary investigation of the inception, development, and impact of an agricultural way of life in Dalmatia. Results of seven years of research at Pokrovnik and Danilo Bitinj indicate that a mature farming system based on numerous domestic plants and animals reached Dalmatia c. 8,000 CalBP. Farming flourished in this new environment, with the formation of large villages that dominated the landscape. The contributors will outline this new evidence and explore its significance for understanding the development of later prehistoric societies in southern Europe.

[10] FORUM · SCIENCE IN SUPPORT OF ARCHAEOLOGY: WHAT IS STATE-OF-THE-ART?**(SPONSORED BY PALEORESEARCH INSTITUTE)**

Interactive forum focusing on recommendations for field sampling to match research designs and obtain the most information from archaeobotanic and related scientific analyses. Understanding which analysis is most likely to yield evidence for interpreting the past environment or subsistence questions is the first step in designing an appropriate sampling strategy. Advances in analytical techniques have expanded our ability to ask and answer questions regarding how people lived -- if sampled appropriately. When are analyses complementary and synergistic in their ability to bring the past to life? Our interactive format not only shows what is possible, it encourages questions about specific applications.

[11] SYMPOSIUM · THE POWER OF ENVIRONMENT: APPROACHING ARCHAEOLOGICAL INVESTIGATIONS FROM A POLITICAL ECOLOGY FRAMEWORK

With a growing public concern for the environment and an increasing anthropological interest in human-environment interactions, archaeologists are well poised to contribute to critical scholarship on how power relations act on and through the environment. How can archaeology more effectively analyze the dialectical relationship of social and environmental (re)production? And how can the artifactual

record be deployed in understandings of the politics of ecology? This panel seeks to confront these issues and present research utilizing theoretical and methodological approaches that address the relations of power present in and part of the environment.

[12] FORUM · **ESTABLISHING tDAR: THE DIGITAL ARCHAEOLOGICAL RECORD**

Increasingly information about archaeological resources originates in digital formats. Reports are produced, transmitted and viewed in digital form. Digital records of artifacts, features, and other archaeological remains are maintained in databases and analyzed statistically. This situation presents both opportunities and challenges. Digital data are more easily accessed, searched, and shared than paper records, yet digital data are more fragile. Comparability across digital datasets sets must be assessed and addressed for integrative analyses to succeed. The forum describes a disciplinary effort to assemble a digital archive of archaeological reports and data and to provide tools to access and utilize these data.

[13] GENERAL SESSION · **ARCHAEOLOGY IN MEXICO**

[14] SYMPOSIUM · **WHITHER SOUTHWEST ARCHAEOLOGY?**

Archaeologists in southwestern North America have led numerous innovations in method and theory, including the New Archaeologies of the early 20th and mid-20th-century. Today very diverse approaches—phenomenological, "processual-plus," and inspired by CAS—compete to produce insight. Meanwhile everyday practice of archaeology changes rapidly as Native Americans increasingly conduct or control their own archaeologies, large databases are constructed, and research production continues to tilt towards CRM. In this symposium we analyze and critique the present and envision desirable futures for the theory, method, and practice of southwestern archaeology. Where would we like to see these centered in 10 years?

[15] SYMPOSIUM · **CAHOKIA 2010: SITUATING AN ANCIENT INDIGENOUS CITY IN THE WORLD**

The last decade of intensive and ongoing archaeological and historical research has led to a renewed appreciation that Cahokia, located a few miles east of St. Louis, was a Native American city with a unique historical trajectory. Its peoples' histories were defined by migration, pilgrimage, proselytizing, political-cultural innovation and, finally, diaspora. Participants situate the place, its people, and historical trajectory into continental and global perspective, highlighting the latest findings and multiple interpretations.

[16] SYMPOSIUM · **COMMON PROBLEMS, UNCOMMON SOLUTIONS? SPECIALIZATION, INTENSIFICATION AND DIVERSIFICATION IN MEDITERRANEAN-TYPE AND ADJACENT ENVIRONMENTS**

Increasingly, researchers have identified trends of resource specialization, intensification and diversification across the Mediterranean region throughout the late Pleistocene. Key explanations for these shifting strategies include the effects of increasing human populations and environmental change on subsistence efforts. Other regions of the world, though experiencing similar climatic regimes as the Mediterranean basin, have undergone different histories regarding subsistence shifts in response to environmental change and demographic pressure. This session aims to connect current zooarchaeological research in Mediterranean-type environments, with the intention of highlighting different methodologies and theories being applied to understanding subsistence change.

[17] SYMPOSIUM · **GENDERED LABOR IN SPECIALIZED ECONOMIES (SPONSORED BY WAIG)**

Current research on craft production suggests that increases in specialization can result in dramatic changes to the gendered division of labor. This session addresses how the manufacture of particular craft items impacted the organization of labor in other sectors of the economy, and/or how shifts in the organization of craft

production resulted from new task allocation in various economic activities. It examines changes to the gendered division of labor in a range of case studies that highlight redefined labor roles for men and women.

[18] SYMPOSIUM · **THE ARCHAEOLOGY OF HUACAS: EXPLORING THE MATERIALITY, MEANING, AND EFFICACY OF SACRED OBJECTS AND PLACES IN THE ANDES**

The Andean term huaca generally refers to a sacred thing, be it a place, idol, or image. Given the power huacas were attributed, they constitute an interesting point of intersection with respect to recent discussion concerning issues of materiality, agency, and personhood. The papers in this session approach the agency and efficacy of Andean huacas by focusing on arrangements, relationality, and referentiality between and among objects, contexts, and spaces construed as sacred. A consideration of the relationships between the concept and embodiment of power offers new insights into alternative ontologies and understandings of being in the world beyond the dominant paradigm of Cartesian dualism.

[19] SYMPOSIUM · **THE VILLAGE ECODYNAMICS PROJECT II**

The Village Ecodynamics Project seeks to understand long-term interactions between ancient Pueblo peoples and their socio-natural environments. The project is multi-disciplinary and collaborative, and combines empirical research with modeling efforts. Phase II of this project expands the study area in SW Colorado, develops a second study area in the Northern Rio Grande, refines and expands existing paleoenvironmental models, and adds new components to the agent-based simulation. This symposium provides an update on the VEP, introduces Phase II activities, considers the role of multi-disciplinary research in archaeology, and addresses the practical matters of running a large, multi-institutional research project.

[20] SYMPOSIUM · **ONE MORE TANGO AT MAYAPÁN: STUDIES OF URBAN LIFE AT A LATE MAYA POLITICAL CAPITAL**

Research at Mayapán over the past decade contributes new knowledge regarding the politics, economy, and social life of this Postclassic Maya political capital. Excavations of monumental buildings, dwellings and independent craft workshops enable comparisons of urban life in downtown Mayapán and the distant neighborhood of Itzmal Ch'en. A diverse array of field methods and analyses have generated new data useful for a complex, multi-dimensional view of the city - by revising estimates of the settlement size and regional context, identifying diversity in occupation, wealth and social identity, and reconstructing the production and consumption economies of domestic, administrative, and ritual features.

[21] GENERAL SESSION · **PALEOINDIAN STUDIES**

[22] SYMPOSIUM · **ROCK ART IN GLOBAL PERSPECTIVE: THEMES AND TECHNIQUES IN THE ARCHAEOLOGY OF THE SITE**

The session is intended to transcend geography in an attempt to achieve a richer and fuller interpretive perspective on rock art. An emphasis is placed on the archaeology of current research.

[23] SYMPOSIUM · **ACROSS BOUNDARIES: INTEGRATING ARCHEOLOGY & SCIENCE**

It is unquestionable that technological advances in Archaeometry have revolutionized the way in which we conceptualize Archaeology. This growing transfer of scientific methods of many kinds implies an interdisciplinarity that goes beyond simply working together and that involves collaboration between archaeologists and scientists before, during and after fieldwork. This integration between the sciences and archaeology also requires that the practitioners be broadly educated, well informed and have ample understanding of the archaeological project and the particular problems to be solved. In this symposium we are interested in presentations from projects that have had some success in this integration so we can understand which areas and attitudes promote effective interaction.

[24] ELECTRONIC SYMPOSIUM · **PRACTICAL METHODS OF DATA PRODUCTION, DISSEMINATION, AND PRESERVATION**

This symposium focuses on sharing methods and repercussions of archaeological digital data production, dissemination, and preservation in private sector, governmental, and educational settings. The themes address the scope of changes digital data practices are bringing about everywhere SAA members work, including: (1) relationships between formats, media, representations, models, and archaeological theory; (2) issues between security, career incentives and open access to scientific information; (3) processes of sustainability and preservation of data and the archaeological record; (4) emerging tools, content, standards, and modes of research in an diverse data ecosystem; (5) professional communities, stakeholders, and other 'publics' online.

[25] POSTER SESSION · **ARCHAEOLOGY OF THE NORTHEASTERN U.S.**

[26] POSTER SESSION · **ARCHAEOLOGY OF THE SOUTHEASTERN U.S.**

[27] POSTER SESSION · **ARCTIC AND SUBARCTIC ARCHAEOLOGY**

[28] POSTER SESSION · **AVOCATIONAL ARCHAEOLOGY MAKING A DIFFERENCE: WHO'S DONE IT AND WHO'S DOING IT- PART 1**
(SPONSORED BY THE COUNCIL OF AFFILIATED SOCIETIES)

Since the beginning of American Archeology, amateurs, avocational, and collectors have played crucial roles in our discipline. They have been involved in locating and preserving sites, curating collections, lobbying for legislation, providing financial support for projects and institutions, and in so many other roles we are unable to list individually. It is fair to say that many avocational archeologist have been at the forefront of American Archeology and they continue to be so. In this session we present the past and continued contributions of avocational archeologists from every corner of the Americas. We hope to encourage the general public to become engaged in the past by highlighting the role they can play in our discipline in the future.

[29] POSTER SESSION · **SITES AND LANDSCAPES IN THE GREAT LAKES AND MIDWEST**

[30] POSTER SESSION · **SUBSISTENCE, HEALTH, AND SOCIETY IN THE MIDWEST**

[31] SYMPOSIUM · **CHANNEL ISLANDS AND COASTAL SOUTHERN CALIFORNIA: RECENT RESEARCH AND COMPARISONS**

The Channel Islands off the southern California coast provide a unique opportunity to study prehistoric adaptations in an insular environment. Although the broad cultural historical outlines of the region have been examined for over a hundred years, new patterns are emerging from recent research based on more systematic investigations and better controlled samples. Data are presented in this symposium from San Nicolas Island and other areas in southern California, including the Palos Verdes Peninsula, which is sometimes referred to as the ninth Channel Island. Topics include settlement and subsistence patterns, environmental overexploitation, and genetic data on the ancient inhabitants.

[32] SYMPOSIUM · **LOCAL AND GLOBAL CHANGE: LANDSCAPE, CLIMATE, SOCIO-POLITICAL INTERACTION, AND WORLD SYSTEMS ANALYSIS IN EURASIAN ARCHAEOLOGY**

This symposium addresses the issues of global variation regional and interaction in different regions of Eurasia, from the Mediterranean basin to the Central Asia steppes. Encompassing a wide swath of time, from the Bronze Age through the Medieval period, case studies will examine relationships between diverse factors such as climatic and ecological changes and socio-political interactions between local communities and confederacies, states, or empires. In exploring the relationship between global and local variation, this symposium seeks to expand upon new and developing

frameworks to re-address the dynamic nature of social responses to driving forces such as climate or socio-political change.

[33] SYMPOSIUM · **UNWAVERING: CULTURAL RESOURCE INVESTIGATIONS ALONG THE U.S. – MEXICO BORDER**

On April 1, 2008, the Secretary of Homeland Security waived over 30 environmental laws and regulations allowing U.S. Customs and Border Protection (CBP) to construct tactical infrastructure along the U.S. – Mexico border without the constraints of cultural resource legislation. However, CBP and the Secretary were committed to cultural resource stewardship. Assisted by consulting professionals and U.S. Army Corps, CBP developed an internal cultural resource compliance process and completed surveys and mitigation studies from San Diego, California to the Gulf of Mexico in Texas. Papers in this symposium present results from some of the investigations.

[34] GENERAL SESSION · **EUROPEAN IRON AGE AND MEDIEVAL ARCHAEOLOGY**

[35] SYMPOSIUM · **THE ARCHAEOLOGY OF THE CENTRAL NAMIB, WESTERN NAMIBIA**

This symposium explores the results of recent archaeological fieldwork in the central Namib Desert, Western Namibia. This research covers time periods from the earliest hominin occupations of the Pleistocene to the historical period of European contact. The main topics of this symposium include Middle Pleistocene adaptive strategies, modern human origins in the Middle Stone Age, and Later Stone Age forager and pastoralist lifeways. The central goal of this session is to build a better knowledge of the long-term prehistory of this region and generate frameworks for understanding human adaptations to this extreme environment.

[36] GENERAL SESSION · **HOPEWELL CULTURE LANDSCAPES AND ITS EARLY WOODLAND ANTECEDENTS**

[37] GENERAL SESSION · **IDENTITY AND INTERACTION IN THE DESERT SOUTHWEST**

[38] POSTER SESSION · **AVOCATIONAL ARCHAEOLOGY MAKING A DIFFERENCE: WHO'S DONE IT AND WHO'S DOING IT-PART 2**
(SPONSORED BY THE COUNCIL OF AFFILIATED SOCIETIES)

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[39] POSTER SESSION · **COMPLEX HUNTER-GATHERERS OF INTERIOR BRITISH COLUMBIA: NEW INTERDISCIPLINARY RESEARCH AT THE BRIDGE RIVER SITE**

The Bridge River site is a complex hunter-gatherer village of approximately 80 large housepits located in south-central British Columbia and occupied between 200 and 2000 years ago. Interdisciplinary archaeological research at the site is currently addressing a wide range of questions emphasizing the development of village life, emergent status inequality, subsistence intensification, uses of domesticated dogs, and village abandonment processes. These posters integrate studies in zooarchaeology, paleoethnobotany, geoarchaeology, lithic technology, and applied geophysics to help create a comprehensive portrait of life in this ancient community. They offer new insights into processes of cultural change and continuity.

[40] POSTER SESSION · KIVA: 75 YEARS OF SOUTHWESTERN ANTHROPOLOGY AND HISTORY

On the occasion of the 75th birthday of Kiva: The Journal of Southwestern Anthropology and History, posters in this session explore how the support of the avocational Arizona Archaeological and Historical Society and a dedicated group of editors created the Southwest's premier journal. We look at the people and institutions that have made Kiva what it is today. The methodological and theoretical contributions of students and eminent scholars have given Kiva a national and international reputation as one of the best places to explore the history and prehistory of the peoples of the Southwest United States and north Mexico.

[41] POSTER SESSION · ON THE KNOWLEDGE FRONTIER: THE FIRST DECADE OF CULTURAL RESOURCES DISCOVERY AND MANAGEMENT ON THE VALLES CALDERA NATIONAL PRESERVE

Immediately following the creation of this national preserve in 2000, archaeologists began the inventory and resource evaluation in the Valles Caldera National Preserve (VCNP). This 89,000-acre former private-ranch nestled inside a volcanic caldera in the Jemez Mountains of northern New Mexico was an enigma—a high plains Rocky Mountains setting nestled within the American Southwest. As we enter the tenth year of this public land management experiment, we take stock of what knowledge we have built and how our questions about this many-layered cultural landscape have gained momentum or changed direction entirely.

[42] POSTER SESSION · TALES FROM THE BLACK RANGE

Since 2008 the Gila Archaeological Project, comprising students from Howard University, Indiana University of Pennsylvania, New Mexico State University, and the Mescalero Apache Reservation, has been investigating life in the Black Range Mountains of New Mexico during the late 1800s. The focus has been on conflict and coexistence among Apaches, miners, soldiers, and other frontier denizens in and around Hermosa, a small mining community become ghost town. Archaeological, historical, and ethnohistorical research have helped reconstruct the interaction among the different groups. This poster session reflects the different approaches taken to make sense of this critical period in frontier life.

[43] POSTER SESSION · THE FRANK CHURCH RIVER OF NO RETURN WILDERNESS PROGRAMMATIC AGREEMENT: CONDUCTING CULTURAL RESOURCE MANAGEMENT IN A WILDERNESS SETTING

Archaeological fieldwork in the best of circumstances is full of logistical headaches. Adding a wilderness component to the mix can compound a relatively simple task into a complicated one. The Frank Church River of No Return Wilderness Programmatic Agreement between the Idaho SHPO, the Advisory Council, and four National Forests (Bitterroot, Nez Perce, Payette, and Salmon-Challis) is an eight year agreement for managing cultural resources. The document sets up a number of targets to be met over the life of the agreement. This symposium explores the work conducted by each of the Forests in their attempt to meet these targets.

[44] POSTER SESSION · HISTORY AND TRAJECTORY OF IRRIGATION AND WATER MANAGEMENT IN THE SOUTHERN SOUTHWEST

In 1976 Emil Haury wrote "...Snaketown preserves traces of the oldest irrigation system in the United States and ... is the foremost example of the history of irrigation north of Mexico..." Snaketown's significance notwithstanding, recent research in the American Southwest has expanded our understanding of the developmental trajectory of irrigation technologies, now dated to at least 3500 years ago. This symposium presents current studies of water control in the Southwest from the Late Archaic to the thirteenth century A.D. Environmental, geomorphological, and social parameters are considered in temporal and geographical perspective, underscoring influences of cultural and natural forces on agricultural landscapes.

[45] GENERAL SESSION · ARCHAEOLOGICAL APPROACHES TO THE INCA EMPIRE

[46] GENERAL SESSION · ARCHAIC THROUGH LATE WOODLAND CULTURAL DYNAMICS IN THE MIDWEST AND GREAT LAKES AREA

[47] GENERAL SESSION · ARCHAEOLOGY OF SOUTH AMERICA

[48] SYMPOSIUM · BEYOND THE BIOLOGICAL NEED TO EAT: ARCHAEOLOGIES OF FOOD AND FOODWAYS

This session explores new and disparate archaeological approaches to food, which builds upon subsistence and identity-centered frameworks. Participants will interpret food in the archaeological record in theoretically and methodologically innovative ways and apply these perspectives to a variety of archaeological contexts. Topics include: the materiality of food and its role in the construction of identities and subjectivities, field and laboratory methods that facilitate data collection from food-related artifacts, medicinal and other non-subsistence uses of food, and cuisine. The session includes both theory driven explorations and case study-centered papers from a variety of prehistoric and historical contexts.

[49] ETHICS BOWL

[50] SYMPOSIUM · MEDIA'S IMAGE OF THE ARCHAEOLOGIST THROUGH TIME— IS THE MEDIA THE MESSAGE

(SPONSORED BY MEDIA RELATIONS COMMITTEE)

Newspapers are dying and the blogosphere is preeminent, but when newspapers and magazines ruled the news, how did they cover archaeology? How did television and the movies portray us? Through the decades archaeology changed, but are those changes apparent in the media. Is Indiana Jones the stereotype for today's archaeologist or are the bumbling B-movie archaeologists? How was archaeology portrayed when the polio vaccine became available, when men walked on the moon, when gopher was the internet and how will we be portrayed in the future. Media record our lives and our profession, but what is that record like.

[51] SYMPOSIUM · CELEBRATING WOMEN IN ARCHAEOLOGY: A RICH AND COLORFUL HISTORY

(SPONSORED BY COMMITTEE ON THE STATUS OF WOMEN IN ARCHAEOLOGY)

In the last few decades, women have become better represented within the discipline of archaeology. The contributions of women to the discipline have developed over many decades, however, and many of their impacts today are based on the steps that their predecessors took. This symposium seeks to honor the careers of some of the women who have contributed to the development of the discipline and at the same time encourage women to continue to pursue archaeology as a career. Rather than a traditional symposium format with discussants, the participants will participate in an open forum following the symposium.

[52] SYMPOSIUM · JOARA AND FORT SAN JUAN: COLONIALISM AND HOUSEHOLD PRACTICE AT THE BERRY SITE, NORTH CAROLINA

Archaeologists have discovered few sites that preserve the earliest footprints of European expansion through North America. In 1567, at the native town of Joara, Juan Pardo founded Fort San Juan and manned it with thirty soldiers. Destroyed after just eighteen months, it nevertheless witnessed one of the longest periods of colonial exchange between Europeans and the peoples of North America's interior until the late 1600's. The Berry site in North Carolina is the location of Joara and Fort San Juan. This symposium presents the results of work in the Spanish compound at Berry, focusing on household space and household practice.

[53] GENERAL SESSION · AFRICA'S LATER PAST

[54] GENERAL SESSION · HOUSEHOLD AND SETTLEMENT ARCHAEOLOGY IN THE MAYA LOWLANDS

[55] SYMPOSIUM · RESIDUE ANALYSIS 2: CURRENT APPLICATIONS OF RESIDUE ANALYSIS TO ARCHAEOLOGICAL QUESTIONS

(SPONSORED BY SAS (SOCIETY FOR ARCHAEOLOGICAL SCIENCE))

It has become increasingly common for archaeologists to incorporate residue analysis into their regional research programs. The types of data provided from these various studies add new, better and often previously unknown information to the current research, which enables a more nuanced interpretation of the archaeological record. This session pulls together examples from all over the world demonstrating how residue analysis is being used by researchers today to improve the quality of information they uncover. New data derived from residue analyses and how they enhance, modify, or confirm previous site and/or regional models and interpretations are discussed.

[56] SYMPOSIUM · FROM THE AMERICAN SOUTHWEST TO CALIFORNIA AND BEYOND: PAPERS IN HONOR OF MICHAEL GLASSOW, PART 1

In a career exceeding four decades, Dr. Michael Glassow has exerted a profound influence on the archaeology of California and the Southwest. He pioneered the application of processual analytical methods including ecological, demographic, and evolutionary approaches; promoted the development of cultural resource management; and has been a tireless advocate for the conservation of archaeological sites, quality archaeological research, and professional ethics. The contributions to this session report on the wide ranging results of his influence, encompassing topics from the Pacific Coast to New Mexico and reaching as far as the Kalahari Desert.

[57] SYMPOSIUM · RECENT INVESTIGATIONS ON THE ARCHAEOLOGY OF NORTHWEST MEXICO

Northwest Mexico occupies a key geographical space between Mesoamerica and the U.S. Southwest. For that reason, this area was previously studied only in terms of outside colonization, migration, and large scale economic systems. As research interest in the area grows are finding a much more complex archaeological record, in a wide range of spatial and temporal contexts, which needs to be understood in its own terms. This session presents current investigations in architecture and landscape studies, mortuary analysis, and interregional interaction through ceramic exchange from an array of projects in the modern states of Durango, Zacatecas and Sonora.

[58] SYMPOSIUM · THE ROOTS OF THE MIDDLE PALEOLITHIC: AN UNIQUELY EURASIAN EVOLUTIONARY EXPERIMENT

The Middle Paleolithic has long been treated as a monotonous interval on the road leading to the Upper Paleolithic and "modern human behavior". Recently, researchers have recognized that, like the hominins that produced it, the Middle Paleolithic represents a distinctive set of evolutionary experiments. Some of its characteristics parallel developments in Africa and some are unique to Eurasia. Likewise, some anticipate the Upper Paleolithic whereas others do not. Symposium participants consider the origins of specific features of Middle Paleolithic behavior, asking when they appeared and what sort of evolutionary processes might have led to their development, spread, and coalescence.

[59] SYMPOSIUM · THE BIENNIAL GORDON WILLEY SYMPOSIUM ON THE HISTORY OF ARCHAEOLOGY: SHOVEL READY: ARCHAEOLOGY & ROOSEVELT'S NEW DEAL FOR AMERICA

(SPONSORED BY HISTORY OF ARCHAEOLOGY INTEREST GROUP)

SAA was founded 75 years ago during the Great Depression. That same year the newly created WPA—the major New Deal work relief program—funded the first of many significant excavations. Today, the US again faces major economic turmoil, and it is time to reconsider the legacy of New Deal archaeology. New Deal excavations continue to shape our understanding of the past as we invoke new technologies and new theoretical approaches to old collections. Archaeologists have also turned to excavating material remains of the New Deal itself. Join our exploration of the past, present, and future of New Deal archaeology.

[60] SYMPOSIUM · THEORETICAL AND METHODOLOGICAL APPROACHES TO THE STUDY OF INTERACTIONS IN EASTERN NORTH AMERICA

Elaboration of ritual life, changes in subsistence strategies, and the emergence of social inequalities commonly occur in contexts of increased interactions. This symposium explores the roles of inter-societal contacts in the cultural trajectories and socio-political developments of prehistoric and protohistoric Eastern North America. Individual papers will reflect the variable nature of interactions as well as the need to adapt or combine various theoretical frameworks according to different contexts and scales of analysis. Topics include the role of exchange in the creation of socioeconomic inequalities, the relationship between pan-regional cults and interaction spheres, and the archaeological signatures of inter-societal contacts.

[61] SYMPOSIUM · TRAJECTORIES TO COMPLEXITY IN WOODLAND ENVIRONMENTS: EASTERN NORTH AMERICA AND TEMPERATE EUROPE COMPARED

The North American eastern woodlands and temperate Europe share a number of environmental and cultural historical similarities: both regions are covered by deciduous forests and over the Holocene both experienced cultural trajectories from simple to complex hunter-gatherers and simple to complex farming societies including technologies and domesticated species imported from other regions. Comparisons between the two regions have been surprisingly rare in recent decades. The session is intended to promote discussion about the methodological and theoretical approaches employed in each area, including debates on possible triggers for developmental dynamics such as socio-political, economic or environmental and climatic parameters.

[62] SYMPOSIUM · A DARKER DISCIPLINE: EXPANDING THE FRONTIERS OF WORLD CAVE ARCHAEOLOGY

For several decades, archaeologists in many regions have worked with professional speleologists and/or recreational cavers to bring new light to the emerging subdiscipline of cave archaeology. A 2009 symposium on world cave archaeology explored methodologies and interpretations in the study of prehistoric dark zone cave use. The 2010 session will showcase research that further refines our understanding of the archaeology of dark zone caves, with an emphasis on more detailed investigation into the range of prehistoric cave uses, the delineation of ceremonial cave assemblages and activities, and the varieties of data that cave environments can yield.

[63] FORUM · A NEW AGE FOR THE SAA: INTERNATIONAL INDIGENOUS ARCHAEOLOGY

(SPONSORED BY NATIVE AMERICAN RELATIONS COMMITTEE)

Parker's election as the first SAA President was a good start toward involving Native Americans in archaeology. Yet, in 2009, there are still fewer than 30 Native American members. What would increase diversity and take SAA into a new age? Indigenous archaeology can bridge the divide between western science and Indigenous knowledge and provide an incentive for membership. The topic of Indigenous Archaeology will be presented by panelists from Japan, Australia, New Zealand, Canada, and the U.S. Open discussion will explore Indigenous roles within the SAA and how the SAA might become more active in Indigenous Archaeology nationally and internationally.

[64] SYMPOSIUM · ANIMALS AND INEQUALITY IN THE ANCIENT WORLD

Wealth associated with animals is commonly derived from a complex combination of the prestige of mastering animals, the role of herds as property, the symbolic role of animals as metaphors for specific cultural values, and the production of meat, secondary products, and offspring. The processes of hunting, herding, slaughtering, butchering and consuming animals and their products are so vital to the practices of everyday life that they inevitably become invested with powerful and dense layers of meaning. Moreover, animal remains and iconography are archaeologically recoverable; the ways in which domestic and wild animals cross the boundaries of nature and culture can tell us a great deal about the ways people organized

concepts of order, inequality, and difference in past societies, from the divine were-jaguar of Mesoamerica to the bulls of Neolithic Anatolia. This session will explore the diverse ways that animals and their associated products, both material and ideological, constitute sources of wealth and status for hunters, pastoralists and sedentary farmers alike in a global context.

[65] SYMPOSIUM · EVERY PLACE IS A NODE: RETHINKING CENTERS, PERIPHERIES, AND PATRIMONY IN HONDURAS

Honduras is often described as a liminal place at the intersection of multiple cultures or margins of significant historical events. Under Dr. Darío Euraque, the I.H.A.H. has broadened definitions of cultural patrimony by advancing scholarship across Honduras, fostering national and international partnerships, and promoting community consultation, education, and information dissemination. Reevaluating what constitutes patrimony and its role in the construction of multiethnic identities has decentered narratives about cores, peripheries, and margins. When we reconceptualize every place as a node in multiple networks of sociopolitical relationships, we can consider how shifting practices, hierarchies, continuities, and conflicts define Honduras's past and present.

[66] FORUM · THE LIFE OF A PROJECT: NEGOTIATING THE PRACTICITIES AND ETHICS OF COLLABORATIVE RESEARCH (SPONSORED BY INDIGENOUS POPULATIONS INTEREST GROUP)

Our professional training as archaeologists rarely addresses the nuts-and-bolts of how one builds collaborative relationships with communities or deals with the ethical dilemmas that are unique to community-based research. This forum draws upon the experience of participants to discuss the basic strategies used to negotiate access, build community partnerships, and deal with the unanticipated challenges of collaboration. Particular attention will be given to the ethics of collaboration and how researchers navigate issues such as reconciling archaeological narratives with community narratives, and balance their professional integrity with their responsibility to the members of a community.

[67] Symposium · Hunting Red Gold: Updates in the Prehistory of Spondylus in South America

The colorful bivalve *Spondylus* is widely recognized as playing an important role in many societies throughout prehistoric South America, but we, as archaeologists, have fallen behind. Many interpretations of *Spondylus* are based upon works presented in the 1970s, often taking into account relatively few recent finds, of which there have been hundreds, if not thousands. This session will update our knowledge of patterns and variability as well as our interpretations in the use of *Spondylus* throughout prehistoric South America.

[68] SYMPOSIUM · POLYNESIAN DIASPORA: PREHISTORIC CONTACTS WITH THE NEW WORLD

The possibility that Polynesian voyagers reached the shores of the New World before Europeans has been considered by scientists and non-scientists alike for nearly two centuries. In North America where the case for contact has focused on sewn-plank boat technology and fishhooks, the possibility was discussed regularly between the 1910s and 1950s. In South America the case for diffusion, based on an array of material and linguistic evidence, was considered as far back as the early 1800s. In the last five years scholars have started re-examining these cases, and in this session we will present recent archaeological, linguistic, and genetic research that confirms prehistoric cultural exchanges between Polynesia and the New World.

[69] FORUM · ESTABLISHING PROFESSIONAL STANDARDS FOR FORENSIC ARCHAEOLOGY

Forensic Archaeology has made the transition from isolated individuals to an established discipline through a very organic process. As we seek recognition from the forensic community, should forensic archaeology establish a standard code of practise? Should forensic archaeologists be certified in some way, similar to

forensic anthropologists or fingerprint experts, in order to legitimately practise? How can we get the American Academy of Forensic Science and others to recognise forensic archaeology as distinct from forensic anthropology? This forum will discuss such issues and how the forensic archaeology community can continue to solidify itself and its position within the wider forensic community.

[70] SYMPOSIUM · FROM EFFIGY MOUNDS TO MIDDENS: CULTURAL CHANGE AND CONTINUITY AMONG LATE WOODLAND POPULATIONS IN WISCONSIN

Recent ceramic, osteological, and geo-spatial studies have brought to light significant new data about human behavior during the Late Woodland period (circa AD 300-1100) in Wisconsin. Syntheses of these data have required reappraisals of material culture relationships in this time period as well as to earlier and later time frames in Wisconsin. The papers in this session address previous interpretations of people and places, providing new insights to our understanding of how people used the landscape of Wisconsin during this time period.

[71] POSTER SESSION · EVIDENCING ANCIENT CARBOHYDRATE REVOLUTIONS IN SOUTH-CENTRAL NORTH AMERICA

Hot-rock cooking features, associated stone tools, plant microfossils, and charred plant foods in south-central North America—Texas and vicinity—attest to ancient carbohydrate revolutions 9,000-2,000 years ago, a timeframe consistent with patterns elsewhere on the continent. Posters explore temporal and functional relationships among geophyte and nut macrofossils and microfossils, as well as known and expected morphological variation in earth ovens and stone-boiling activities. The nature and distribution of cook stone features and the potential of wild plant food microfossils—starch grains, phytoliths, and plant fibers—are explored as reliable measures of dietary change and land-use intensification with bioanthropological ramifications.

[72] POSTER SESSION · GREAT PLAINS AND ROCKY MOUNTAIN ARCHAEOLOGY

[73] POSTER SESSION · MAPPING, IMAGING, AND MODELING IN ARCHAEOLOGY

[74] POSTER SESSION · PALEODIETARY ANALYSES

[75] POSTER SESSION · SCIENCE, CHALLENGES, AND CONSERVATION: MANAGING HERITAGE RESOURCES IN THE 21ST CENTURY ON BLM'S NATIONAL LANDSCAPE CONSERVATION SYSTEM

With the creation of the National Landscape Conservation System in 2000, the Bureau of Land Management (BLM) embarked on a new endeavor to manage 27 million acres of some of the West's most spectacular landscapes, including some created specifically for heritage values. Its challenge is to manage these special places within the framework of BLM's conservation mandate in the context of multiple use. These posters will illustrate an array of archaeological projects, management challenges, technological developments, and the critical roles of partners to create meaningful interpretation, education, and science about the System's Heritage Resources.

[76] SYMPOSIUM · KEY ISSUES IN DIGITAL CURATION (SPONSORED BY COMMITTEE ON MUSEUMS, COLLECTIONS, AND CURATION)

Technological advances have changed the way museums and repositories curate information and images as well as how they share data with professional archaeologists and an increasingly global general public. The nearly universal use of databases by archaeologists and collections managers and the rise of the World Wide Web and digital photography are improving how we document collections and how we serve the users of collections. Nonetheless, institutions all over the world are now wrestling with difficult issues related to digital curation. This symposium explores, mainly through case studies, how the profession is approaching issues of permanence, funding, standards, and access.

[77] SYMPOSIUM · **RECONSTRUCTING HISTORIES AND LAYERS OF MEANING: MATERIAL ANALYSES FROM EL PERÚ-WAKA' AND ENVIRONS**

The Maya city of Waka' and its hinterlands have been the subject of on-going field research and laboratory analysis since 2003. In conjunction with other data, material analyses are bringing interpretations of excavated contexts and reconstructions of social life into sharper focus. Project archaeologists report on the interplay of material and contextual data as they build syntheses that deepen our understanding of life in the kingdom during its 1300-year history.

[78] SYMPOSIUM · **PUSHING THE ENVELOPE IN CROSS-CULTURAL ARCHAEOLOGY**

Archaeologists are quick to champion cross cultural approaches but are generally slow at developing them. This session takes a look at various approaches to cross cultural work in archaeology, and asks where cross cultural archaeology might go. From various standpoints, the contributors discuss cross cultural approaches that focus on larger scale systemic cycling, world systems approaches, ideological approaches, social structural designs, and infrastructural commonalities. Discussion will focus on common problems and potentials in the field, as well as "pushing the envelope" on cross cultural approaches.

[79] GENERAL SESSION · **ARCTIC & SUBARCTIC ARCHAEOLOGY**

[80] SYMPOSIUM · **SHIPWRECKS AS PART OF OUR MARITIME CULTURAL HERITAGE**

The same principles of cultural heritage apply to shipwrecks as to terrestrial archaeology sites: both form an integral part of this country's past and should be protected. Just as different techniques apply to excavation and interpretation, different laws also apply. Before 1987, shipwrecks were governed by federal laws. Although the 1987 Abandoned Shipwreck Act gave each state title to shipwrecks in their borders, protection is still an issue. This session discusses what can happen when treasure hunters gain control of shipwrecks, how nautical archaeologists work within the present legal framework, and what more needs to be done to protect shipwrecks.

[81] SYMPOSIUM · **FROM THE AMERICAN SOUTHWEST TO CALIFORNIA AND BEYOND: PAPERS IN HONOR OF MICHAEL GLASSOW, PART 2**

In a career exceeding four decades, Dr. Michael Glassow has exerted a profound influence on the archaeology of California and the Southwest. He pioneered the application of processual analytical methods including ecological, demographic, and evolutionary approaches; promoted the development of cultural resource management; and has been a tireless advocate for the conservation of archaeological sites, quality archaeological research, and professional ethics. The contributions to this session report on the wide ranging results of his influence, encompassing topics from the Pacific Coast to New Mexico and reaching as far as the Kalahari Desert.

[82] GENERAL SESSION · **GENERAL OLD WORLD ARCHAEOLOGY**

[83] SYMPOSIUM · **CURRENT RESEARCH ON THE COLLECTIONS FROM THE ORENDORF SITE, FULTON COUNTY, ILLINOIS**

Ongoing analysis of artifacts and ecofacts from the several Orendorf habitation sites and human remains, largely from the mortuary precinct, are adding to our understanding of the Spoon River Middle Mississippians of the Central Illinois River Valley. The contents of approximately 300 public and private buildings (many catastrophically burned), and 2500 storage/refuse pits and other features are yielding a richly detailed picture of 13th century life at this fortified temple town. The continuing analysis of the remains of ca 300 former Orendorf inhabitants is adding even more detail to our understanding of the population.

[84] SYMPOSIUM · **TURDS, TURKEYS, AND TICKS ON CEDAR MESA: NEW INSIGHTS FROM OLD COLLECTIONS**

Existing collections from 1970s fieldwork on Cedar Mesa, SE Utah are providing new information for current questions as well as stimulating additional research. Topics include DNA evidence of genetic relationships of both Basketmaker II human and turkey populations; evidence of early turkey domestication and diet; nutritional effects of stone-boiling maize with limestone; and Basketmaker II versus Archaic biface technology. Also reported are two possible Chacoan great houses and their relationships to other Cedar Mesa cultural complexes. Finally, tree-ring data and ceramic attributes (including rim ticks) clarify the timing, process, and regional relationships of 13th century Cedar Mesa depopulation.

[85] SYMPOSIUM · **ANTHROPOLOGICAL GEOPHYSICS: SCALE AND CONFIGURATION IN THE ARCHAEOLOGICAL RECORD**

While geophysical techniques are becoming widely used in archaeological settings, few attempts have been made to extrapolate this potential to exploring broader anthropological theoretical issues. Most current applications of archaeological geophysics relate to 1) the use of various techniques to determine more accurately material distributions at known sites, and 2) archaeological prospection to "find" sites. What are the questions that can be addressed, and how do geophysical techniques answer them? This symposium attempts to move beyond assessment of technique and calibration of machines to address questions of scale and configuration in the archaeological record, ranging from monumental architecture to ephemeral campsites.

[86] SYMPOSIUM · **ARPA AT 30: LESSONS LEARNED FOR THE FUTURE (SPONSORED BY GOVERNMENT AFFAIRS COMMITTEE)**

During ARPA's 30 year history, certain key developments and factors have affected the use of the statute to protect cultural resources. This symposium will analyze these important aspects of ARPA's history to consider the lessons learned from the first 30 years. The goal is to suggest ways that the act either can be used more effectively or changed to better achieve its purpose in the future. Specific ARPA topics to be dealt with are: criminal investigations involving prehistoric and historic resources; new investigative technology; undercover investigations; protection of submerged resources; restitution and civil penalties; and archaeological damage assessment.

[87] SYMPOSIUM · **DIVERSITY ON THE EDGE OF THE SOUTHWEST: LATE HUNTER-GATHERERS AND FARMERS OF THE JORNADA MOGOLLON**

Recent investigations in the Jornada Mogollon region of southeastern New Mexico and western Texas demonstrate that the area's late preceramic through Formative periods encompassed far greater geographical and chronological diversity in subsistence, settlement and technology than previously recognized. For example, intensive farming and storage began much earlier in parts of the region than once thought, diachronic changes in mobility and subsistence east of the Pecos look similar to those previously documented in Southern New Mexico, and substantial asynchrony exists in development of agricultural adaptations among various Jornada areas. The session explores these commonalities and contrasts across the Jornada Mogollon.

[88] GENERAL SESSION · **METHOD, THEORY AND PRACTICE IN ARCHAEOLOGY**

[89] SYMPOSIUM · **ARCHAEOASTRONOMY IN THE AMERICAS**

New finds of astronomical systems in North and South America resemble well-known Mesoamerican complexes. Solstice and other universal alignments contrast with planetary and constellation alignments unique to the Americas. Archaeological examples include hieroglyphs, light- and shadow-casting instruments, view and reference points, architectural orientations, and gaze. Astronomical systems were widespread in South America before 2,000 BC and persisted through historic times in both hemispheres. Alignments

were calendars and organizers of space; many were used to maintain fertility of the land through management of the sky. Agriculture, religion, political economy, and mythology explain the origin and rapid evolution of astronomical complexes.

[90] SYMPOSIUM · **IN THE EASTERN FLUTED POINT TRADITION**

This session presents new research in eastern Paleoindian archaeology. Participants report on the discovery of new sites and re-investigations of some classic sites in the region. New approaches and data provide an opportunity to re-evaluate Paleoindian adaptations during the late Pleistocene, highlighting the importance of eastern Paleoindian studies in understanding the early settlement of North America. Papers from this symposium cover a wide geographical region extending from the Southeast to the Canadian Maritimes.

[91] SYMPOSIUM · **NEW APPROACHES TO THE ARCHAEOLOGY OF BLUE CREEK AND NORTHWESTERN BELIZE**

After 18 years of field work, the Blue Creek Archaeological Project has redefined its research foci into a set of intertwined research domain. These include: Modeling Maya Cities and Their Political Economies, Collapse: The end of the World as they Knew It!, Wetlands and Dryland Agriculture, and Elite Behavior. While our work emphasizes the value of long-term field work, we also integrate innovative research designs.

[92] GENERAL SESSION · **RECENT RESEARCH IN EGYPT, THE NEAR EAST, AND THE GULF REGION**

[93] FORUM · **DIGGING UP THE FUTURE OF PUBLISHING: THE ARCHAEOLOGY OF THE AMERICAS DIGITAL MONOGRAPH INITIATIVE**
In March 2009, the Andrew W. Mellon Foundation awarded a grant to six university presses seeking to enhance book-length monographs in the field of archaeology by incorporating more robust data sets that take advantage of technologies made available by digital publication. Key stakeholders of the Archaeology of the Americas Digital Monograph Initiative and related digital archaeology projects will discuss the complex dynamic of sustainability, standards and specifications, and technology platforms and tools in the effort to expand the range and impact of archaeological publications by providing greater access to important underlying data sets.

[94] SYMPOSIUM · **ARCHAEOLOGY IN THE VALLEYS OF COCHABAMBA: A SESSION IN MEMORY OF CRAIG MORRIS (SPONSORED BY COMMITTEE ON THE AMERICAS)**

The valleys of Cochabamba are an essential region in our understanding of the Andean cultural system. This exclusive session dedicated to the valleys will present research work of the last two decades dealing with the complete prehistoric sequence. This research has produced an important set of data that has allowed us to refine some important issues in the evolution of Andean local and expansionist societies. Craig Morris, to whom this session is dedicated, made important research on assessing the high value and tight control of the Inca Empire in Cochabamba. Similarly, important research on previous large-scale societies such as Tiwanaku has made important steps towards fine tuning our understanding of how Tiwanaku society embraces the local political societies.

[95] FORUM · **THE LIFE HISTORIES OF OBJECTS IN EAST ASIAN PREHISTORY AND HISTORY**

This forum focuses on the topic of shifts in the meaning and function of artifacts over time in East Asia. The participants recognize the need to incorporate into the study of past societies in East Asia varied theoretical and comparative approaches that have to date been mostly ignored by scholars of this large region. The forum therefore serves as an ideal setting for a discussion of the strengths and limitations of such approaches, as well as their applicability to each participant's research topic. It is planned that the forum will lead to an edited volume on the topic.

[96] SYMPOSIUM · **STOREROOMS, TOKENS AND ADMINISTRATIVE DEVICES IN EARLY COMPLEX SOCIETIES**

This will address the emergence of bureaucratic actions to block, control and record surplus goods and people; it will review the data on administrative devices in early complex societies in Mesoamerica, the Andean Region and the Near East. In the Near East there is increasing awareness of goods levied, their storage, and methods of control. In the Andean Region, we have an idea of how state-controlled storage facilities were disposed along the main roads of the Inca empire, but have yet to trace the evolution of storage facilities. In Mesoamerica very little has been done to trace administrative activity areas and technology.

[97] GENERAL SESSION · **NEW TECHNICAL APPLICATIONS TO CARIBBEAN ARCHAEOLOGY**

[98] GENERAL SESSION · **RECENT RESEARCH IN COASTAL PERU**

[99] GENERAL SESSION · **MAYA ICONOGRAPHY AND RITUAL**

[100] SYMPOSIUM · **ALLIANCE AND LANDSCAPE ON PERRY MESA, CENTRAL ARIZONA**

Compelling evidence for endemic warfare has been documented in many areas of the Southwest. Among them is the Verde Confederacy, described as a highly coordinated alliance that encompassed much of central Arizona. In the late 1200s, pueblos were built above the sheer cliffs of Perry Mesa and overlooking access routes onto the mesa top. Was this migration a strategic deployment to create an integrated "castle defense" atop the mesa and bolster the western flank of the confederacy? Or did climatic change attract migrants to a landscape with improved agricultural capacity? Multiple lines of evidence are mustered to evaluate these ideas.

[101] GENERAL SESSION · **EXPLORING THE EUROPEAN BRONZE AGE**

[102] SYMPOSIUM · **THE LATE PREHISTORIC AND PROTOHISTORIC COMPONENTS AT THE NEW LENOX SITE**

The New Lenox site is clearly important for understanding the transition from prehistoric to proto-historic lifeways in northern Illinois. Radiocarbon assays with corrected dates ranging from 1278 to 1666 have been obtained from the excavation of over 250 features (including a burial, hearths, processing, storage and trash pits). Several partial structures and three complete structures were uncovered; whole structures include an Oneota long house, a semi-subterranean Langford house, and a large enclosure of unknown function. The well preserved flora and fauna, lithics, ceramics and European trade goods seem to suggest only subtle changes during this early contact period.

[103] SYMPOSIUM · **OAXACA ARCHEOLOGY: RECENT RESEARCH ON PRE-HISPANIC SOCIETIES**

In recent years archaeologists have carried out research in the Valley of Oaxaca and the adjacent Mixteca Alta and Baja in Oaxaca, Mexico, which has yielded information about the pre-Hispanic Zapotec and Mixtec groups that inhabited these regions. This symposium will disseminate the results of recent interdisciplinary research, addressing topics such as iconography, religion, social hierarchy, settlement patterns, agricultural economics, health and nutrition, and spatial analysis. New proposals for managing cultural resources will also be discussed.

[104] SYMPOSIUM · **ARCHAEOLOGY WITH STYLE: CELEBRATING THE RESEARCH CAREER OF MARGARET W. CONKEY (SPONSORED BY ROCK ART INTEREST GROUP)**

Margaret W. Conkey has had a profound research impact in almost all areas of archaeology. Her contributions in the discipline have had global reach and resonate in research agendas from Australia to the Pyrenees. Meg Conkey has been one of the leading voices in the development of both the archaeology of gender and Indigenous

archaeology. The session celebrates and focuses specifically on her contribution to rock art research and her theoretical contributions to style, semiotics, aggregation, gender, and landscape. It recognizes that a major contribution of Conkey's work has been the contextualising of rock art in broader archaeological discourse.

[105] GENERAL SESSION · **OLD PROBLEMS AND NEW INSIGHTS INTO ONEONTA AND FORT ANCIENT SOCIETIES**

[106] GENERAL SESSION · **OLD WORLD POLITICS AND ARCHAEOLOGY: PAST AND PRESENT**

[107] SYMPOSIUM · **SEDUCED BY THE DARK SIDE, PART 1: EXPLORING CAVES IN MESOAMERICAN ICONOGRAPHY**

Following David Stuart's decipherment of a glyph for cave, it became apparent that the Maya were indeed writing about their subterranean world. The time is ripe to extend those insights to the larger realm of artistic endeavor. This is the first session dedicated exclusively to the interpretation of iconographic representations of caves, symbols and motifs associated with caves, and iconography found within caves. This session seeks to explore on the breath of representations related to caves to develop a deeper and more nuanced understanding of how Mesoamerican people viewed these important landscape features.

[108] GENERAL SESSION · **LITHIC AND LANDSCAPE STUDIES IN NORTHWESTERN NORTH AMERICA**

[109] GENERAL SESSION · **MAYA ARCHAEOLOGY IN YUCATAN**

[110] SYMPOSIUM · **TRIALS BY FIRE: ARCHAEOLOGIES OF BURNED SITES AND FEATURES**

Understanding site formation processes is central to archaeological interpretation. Burned structures, features, spaces, and entire sites occur across every time period and geographic area, yet archaeologists have rarely made a systematic effort to investigate and assess the natural and cultural factors contributing to the creation of burned sites and feature. A cross-cultural study of different cases of burned sites and structures will help archaeologists articulate and understand the varied cultural as well as the physical processes of fire and heat in their dual roles in destruction and preservation of the archaeological record.

[111] GENERAL SESSION · **ARCHAEOLOGY OF THE PLAINS AND ROCKY MOUNTAINS**

[112] GENERAL SESSION · **MONUMENTAL ARCHITECTURE IN THE MAYA LOWLANDS**

[113] SYMPOSIUM · **NEW APPROACHES IN REGIONAL NETWORK ANALYSIS**

Archaeological research on interregional interactions has been making increasing use of network analysis. Once confined to studies of island archipelagos, network methods are now seen across a wide range of contexts. The papers grouped together in this session represent this diversity, ranging from Neolithic to Medieval, and from Japan to the US Southwest. By juxtaposing such a range of case studies we hope to tease out some of the pros and cons of network analysis. We will also ask if a more standardized set of methods is desirable, and if so how this might be achieved.

[114] SYMPOSIUM · **ARCHAEOLOGIES OF INTRUSIVENESS**

Intrusions into the archaeological record are often considered irksome, destructive events with little heuristic value, and intrusiveness has received little conceptual framing in archaeology. Yet, intrusiveness pervades our inquiry, from past events to issues of cultural heritage and our own status as intruders on the past and its descendant communities. This session aims at exploring the various intertwined aspects of the archaeologies of intrusiveness and will help to understand intrusiveness in archaeology from why and how certain sites are used, abandoned, and re-used over time,

to the distribution of intrusive physical evidence, and methods to ethically deal with intrusive phenomena.

[115] SYMPOSIUM · **JAMES BROWN AND THE IMPACT OF CAHOKIA IN THE MISSISSIPPIAN SOUTHEAST**

Understanding the iconography of Mississippian artwork from across the Southeast has expanded recently with the linkage of the art styles to specific regions, and specifically Brown's work tying the Braden school to 13th century Cahokia. Classic Braden style artwork, seen on media of ceramics, shell, copper, and rock, was connected to ritual activities that took place at Cahokia and other Mississippian communities in the greater Southeast. Papers in this symposium explore connections across the Mississippian Southeast as objects made in one community were carried to distant locations, sometimes heirlooms, and brought together and deposited as part of new rituals.

[116] SYMPOSIUM · **RETHINKING PRECOLONIAL SOCIALITIES IN THE ANCIENT CARIBBEAN**

Recent approaches in archaeology of the ancient Caribbean have come to focus less on determinative models of social change and top down approaches to social organization. This is in part a result of the application of concepts derived from social, complexity and exchange theories for elucidating the constitution of ancient societies. This symposium presents a series of case studies from the ancient Caribbean influenced by these frameworks and offer alternatives to traditional conceptualizations to social organization and transformation in the region. These studies demonstrate the utility of social theory and related concepts and offer more nuanced view of community, identity, politics, power and migration in the shaping of complex socialities in the region.

[117] ELECTRONIC SYMPOSIUM · **THE CANVAS OF SPACE: METHOD AND THEORY OF SPATIAL INVESTIGATIONS IN THE 21ST CENTURY**

In the last two decades, the increasing adoption of spatial technologies has created a series of specialized methodological and theoretical approaches to interpret patterns of human behavior. Unfortunately, the lack of integration between these approaches inhibits our understanding of the creation, maintenance and transformations of space within the cultural landscape. The session highlights how important it is to explore, interpret and connect spatial methods, theories and interpretations utilized within and between these approaches. This will help to develop a more inclusive understanding of the cultural canvas associated with communities and individuals in the past and present.

[118] SYMPOSIUM · **SEEDS OF CHANGE: EARLY HOLOCENE SUBSISTENCE DIVERSIFICATION AND TECHNOLOGICAL CHANGE ACROSS THE DESERT WEST**

Stimuli behind technological change and marked shifts in subsistence economy are central questions in archaeology whose explanations often appear linked. One example, the shift toward diverse and low ranked food resources, has been identified through changes in floral and faunal assemblages and increased numbers of grinding tools around 8-10,000 years ago. The goal of this symposium is to present new field and laboratory research concerning the advent of subsistence diversification and its relationship to corollary technological change in arid western North America. Particular attention is given to the adoption of small seed resources, whose intensive exploitation ultimately led to the domestication of cereals.

[119] SYMPOSIUM · **ARCHAEOLOGY IS ANTHROPOLOGY: CELEBRATING 50 YEARS WITH LEWIS R. BINFORD**

Lewis Binford is one of the most influential archaeologists in the world, whose intellectual explorations span most continents and human societies from the Pliocene to the 21st century. As the father of New Archaeology, he brought processualism, middle range theory, ethnoarchaeology, hunter-gatherer studies, and global scales of analysis center stage. His living legacy includes students and colleagues who have contributed cutting-edge research for five

decades. Session presenters will discuss the impact Lewis Binford had on their education and professional careers, and offer perspectives on the ways his work and mentorship have permanently transformed the science of archaeology.

[120] GENERAL SESSION • **ARCHAEOLOGY OF THE WESTERN UNITED STATES**

[121] POSTER SESSION • **ADVANCE IN EXCHANGE STUDIES THROUGH COMPOSITIONAL ANALYSIS**

The future of archaeology will rely increasingly on analytical techniques requiring the smallest quantities of material to gather the largest quantity of information to address questions related to the diffusion of goods, people and ideas. Over the past decade, the development of laser ablation – inductively coupled plasma – mass spectrometry (LA-ICP-MS) has opened new avenues of research. LA-ICP-MS is able to determine in a fast and quasi-non-destructive manner the concentration of a large range of major, minor and trace elements within inorganic materials. In this session, advantages and limitations of LA-ICP-MS will be emphasized through the description of different successful archaeological applications.

[122] POSTER SESSION • **AN INTEGRATIVE VISION: PAPERS IN CELEBRATION OF THE LIFE AND WORK OF PHILLIP L. WALKER (1947-2009)**

Phillip Walker embodied the best of anthropological principles and practices, and as a prolific researcher was instrumental in interdisciplinary studies within bioarchaeology, producing contextualized skeletal biology and interpretations of human life integrating biological and archaeological data. He was involved in regional research such as collaborative works with the Chumash and co-directing the Mosfell Archaeological Project. Nevertheless, he also promoted truly comparative approaches as a co-director of the Global History of Health Project. The papers in this symposium celebrate the interdisciplinary and integrative work that Phil avidly nurtured by bringing together new ideas that speak to the spirit of his research.

[123] POSTER SESSION • **ARCHAEOLOGICAL SCIENCE 2010: PART I (SPONSORED BY SOCIETY FOR ARCHAEOLOGICAL SCIENCES)**

The astonishing growth in archaeological science during the past decade, driven in large part by advances in technology, has culminated in an increasingly interdisciplinary "type" of archaeology that has allowed archaeologists to address a wider range of questions than previously considered possible. Increasingly, these questions are focused on prehistoric social interactions, cultural exchanges, migrations, trade, and the dynamic nature of group identifications. This session highlights analytical approaches and case studies in which science-based interdisciplinary approaches are used to explore questions grounded in modern archaeological science, i.e., archaeobiology, bioarchaeology, and archaeometry (e.g., dating methods, provenance studies, and prospection).

[124] POSTER SESSION • **THE UWM MILWAUKEE COUNTY INSTITUTION GROUNDS CEMETERY RESEARCH INITIATIVE: PROGRESS AND PROSPECT**

Fieldwork in 1992 and 1993 on the grounds of the Milwaukee County Regional Medical Center resulted in recovery of some 1600 individuals originally buried in the institutional cemetery. In December of 2007, the Director of the Wisconsin Historical Society determined that materials associated with excavations, including human remains, be transferred to the University of Wisconsin-Milwaukee (UWM) for final disposition. UWM has been involved in inventory and stabilization as well as identification of problems associated with the collection with the twofold goal of providing information to descendants and access to interested researchers. This session details the many aspects of that process.

[125] SYMPOSIUM • **HISTORICAL ARCHAEOLOGY OF THE MIDDLE AND UPPER MISSISSIPPI VALLEY**

Around 1700, French colonists and enslaved African Americans

began establishing military forts, missions, and villages in this region, basing their economy on fur-trading, agriculture, lead-mining, and salt production. After France's defeat in 1763, and especially after the Louisiana Purchase in 1803, British colonists, Anglo-Americans, and German immigrants settled among the French descendant communities in the region. By the 1820s, free people of color began settling in the region in greater numbers. The papers in this session address all of these groups, revealing a rich and varied history of occupation in the middle and upper Mississippi Valley from 1700 to 1900.

[126] FORUM • **QUIET CRISIS IN AMERICAN ARCHAEOLOGY**

The often dysfunctional relationship between archaeology, anthropology and the natural sciences in North America will be discussed in light of the recent paper by David Killick and Paul Goldberg in the SAA archaeological Record on the growing gap between North America and Europe in innovations in archaeological science. Each discussant will give brief 5-10 minute opening comments in response to a number of practical and ethical issues that Killick and Goldberg have argued urgently need to be addressed, and the ideas they have put forward to remedy the current situation. This will be followed by a discussion with the audience.

[127] SYMPOSIUM • **PLACE AS POLITICAL: ARCHAEOLOGICAL VIEWS ON LANDSCAPE, RITUAL AND SPACE**

Humans often use and view space and landscape differently, their interactions with their surrounding environments being dynamic and flexible as they change through time. The use of space, whether a localized feature or a massive regional landscape, can be a medium in which to express social cohesion, political identity, power relations, and/or ritual ideology. In this session we employ diverse archaeological data sets from the Americas and the Pacific in a discussion of worldwide perspectives on landscapes, viewsheds, and politically and ritually charged spaces.

[128] SYMPOSIUM • **RITUAL DEDICATION AND TERMINATION OF ARCHITECTURE AND MATERIAL CULTURE IN THE PREHISPANIC SOUTHWEST**

Archaeologists are increasingly aware of ritual acts conducted during the construction and retirement of architectural structures and spaces. Such actions are often manifested in the archaeological record by burned features, ritual deposits, and dedication or termination objects. Papers in this session will present examples of ritual dedication and abandonment from several regions of the Southwest. The interplay between the mode and materiality of ritual abandonment, settlement mobility and migration, and regional ecological and demographic contexts provides an intriguing area of inquiry and offers new and innovative ways to interpret the archaeological remains of past settlements and societies of the Southwest.

[129] GENERAL SESSION • **PLEISTOCENE AND EARLY HOLOCENE IN AFRICA**

[130] FORUM • **FACING UP TO AVOIDANCE: A HARD LOOK AT FLAG-AND-AVOID ARCHAEOLOGY**

(SPONSORED BY NATIONAL TRUST FOR HISTORIC PRESERVATION)

A common method for avoiding adverse effects to cultural resources during Section 106 compliance is to "flag and avoid" archaeological sites and route development around them. While this may be appropriate on a small scale, its use for large, or large numbers of, undertakings in specific areas may lead to serious cumulative impacts to cultural landscapes. In addition, future site preservation is not guaranteed. Furthermore, flag and avoid yields little information that can further public knowledge and facilitate long-term site management. Panelists in this forum will discuss case studies and explore theoretical and methodological alternatives to flag and avoid archaeology.

[131] SYMPOSIUM · PUEBLO BONITO MOUNDS RESEARCH: FORMATION PROCESSES AND ARTIFACTS

The session reports ongoing analytical results from the re-investigation of archaeological trenches original excavated at Pueblo Bonito in Chaco Canyon by the National Geographic Society in the 1920s. The contributions to this session focus on characterization of artifacts recovered from University of New Mexico excavations between 2005 and 2007 in two large earthen mounds, and the reconstructed formation history these features.

[132] FORUM · QUANTIFICATION AND PRESENTATION: EFFECTIVE MEANS OF PRESENTING PLANT EVIDENCE IN ARCHAEOLOGY

Archaeobotany is being applied to an ever-expanding set of archaeological research questions beyond subsistence, including those surrounding farming strategies, crop choice, harvesting styles, ritual, identity, daily practices, movement across and meaning of landscape, semiosis, valuation, agency, object biography, modern-day conservation and ecology, and materiality. These questions are leading scholars into new ways of quantification and representation of the archaeobotanical data, as well as new ways to link multiple datasets, with more exploratory data analysis employed. This forum brings together a wide range of active, international archaeobotanical scholars to discuss the current situation, compare and contrast effective analyses and open up new ways of presenting botanical data. After brief presentations by the participants, this forum will open up the floor to all attending so that a wide range of scholars can participate in the discussion.

[133] FORUM · SOUTHERN VERACRUZ CHRONOLOGY: ASSESSING THE IMPLICATIONS OF NEW EVIDENCE

Recent years have witnessed several new projects in the southern Veracruz Gulf lowlands that beg for a reassessment of existing chronological frameworks and a renewed dialogue that explores the implications for local and regional cultural change. This forum is an opportunity to begin discussing the new data from stratigraphic excavations, including radiocarbon dates and artifact technological styles, and regional surveys. We will compare the cross-correlation of new dates and artifact trends between sites and river drainages. Moreover, we will explore what new chronological evidence suggests about larger demographic transformations and consider some revisions of existing chronological and classificatory frameworks.

[134] GENERAL SESSION · CERAMIC AND LANDSCAPE STUDIES IN THE MAYA AREA**[135] POSTER SESSION · LEGACIES OF RESILIENCE: THE LAKE PATZCUARO BASIN ARCHAEOLOGICAL PROJECT**

As the core of the Prehispanic Purépecha (Tarascan) Empire the Lake Patzcuaro Basin, Michoacán, Mexico has long been recognized as a core Mesoamerican region. This session presents preliminary results from the on-going "Legacies of Resilience: The Lake Patzcuaro Archaeological Project (LORE-LPB). Presentations focus on settlement patterns, ancient architecture, agricultural intensification, and socio-political development.

[136] POSTER SESSION · ARCHAEOLOGY OF MEXICO AND CENTRAL AMERICA**[137] POSTER SESSION · FROM THE MIDDLE TO LATE HORIZON IN THE PERUVIAN ANDES****[138] POSTER SESSION · GENERAL SOUTH AMERICA****[139] POSTER SESSION · MAYA ARCHAEOLOGY****[140] SYMPOSIUM · THE MOOREHEAD MOMENT: THE HISTORICAL CONTEXT OF CAHOKIA'S 13TH CENTURY REORGANIZATION**

Much attention has been devoted to the early half of Cahokia's history with its rapid growth in the mid 11th and 12th centuries. Recent archaeological excavations at Cahokia directed our attention

to the social and cultural changes that transformed this ancient city around AD 1200 centered around a highly ritualized core. Careful delineation of the site's settlement history and of changes in its material record during the 13th century evidence a shift in historical development and reorganization. The papers in this symposium address various aspects pertaining to this cultural hinge in Cahokian history — the Moorehead Moment.

[141] FORUM · TIPS, TACTICS, AND TECHNIQUES: FACILITATING INTERACTIONS BETWEEN ARCHAEOLOGISTS AND THE MEDIA (SPONSORED BY MEDIA RELATIONS COMMITTEE)

Today's archaeologist can work with a variety of media in presenting information to the public. Most deal with the media intuitively, without a clear understanding of what various media need or want. Media professionals specializing in print media, documentary, public literature, proposal, and press release production, among other areas, will discuss how archaeologists can work with media specialists in getting their message out to the public. The forum will provide attending archaeologists with an opportunity to directly query the discussants as well as discuss media relations issues which they think are important to the SAA and the profession of archaeology.

[142] SYMPOSIUM · NEW FRONTIERS IN CENTRAL AMAZONIAN ARCHAEOLOGY

Historically, the Central Amazon has been portrayed alternatively as central and peripheral to cultural development in pre-Columbian Northern South America. Over the last 20 years, methodologies developed and successfully applied within the Negro-Solimões confluence region, an important location within the Central Amazon, have prompted a revision of proposed occupational models. New data allow for a theoretical elasticity that goes beyond dichotomies erected by early models. Scholars are developing methodologies to deal with new kinds of data, deepening knowledge of site variability. Equally, this surge of theorizing has prompted scholars to expand research into adjacent geographical regions to evaluate new models.

[143] SYMPOSIUM · CROSSING THEORETICAL FRAMEWORKS AND FIELDS WITHIN FEMINISM: AMERICAN/HISPANIC CONTEXTS OF THOUGHT

This session aims to present how different theoretical traditions (with especial emphasis on Latinamerican and Hispanic ones) and fields of research (archaeological and rock art studies) intersect within feminism, and have been integrated in it. Bringing together scholars from those different contexts, we intend to show how feminism has been developed in them, and what are the potential contributions for a general feminist practice in archaeology.

[144] GENERAL SESSION · FROM ANCIENT ROASTING PITS TO MODERN K-RATIONS: NEW STUDIES IN SOUTHWEST ARCHAEOLOGY**[145] SYMPOSIUM · INTERREGIONAL INTERACTION AND SOCIAL CHANGE IN PERU FROM 550-1000 AD**

The period between 550-1000 AD was marked in many parts of Peru by rapid social change and increasing interregional interaction. Although these trends are commonly associated with the expansion, or lack thereof, of the Wari State, there has been insufficient attention given to both tracing the period's dynamic, complex long-distance relationships and demonstrating the different ways that these relations impacted local developments. In this session, scholars moved us past simplistic labels like 'Transitional' or 'Wari-related' by detailing the links during this period between interregional interaction and social change in different regions of Peru.

[146] SYMPOSIUM · NEW PERSPECTIVES ON KIMMSWICK, MODOC, AND THE PLEISTOCENE-HOLOCENE TRANSITION

The Kimmswick Clovis-Mastodon killsite and the Modoc Rockshelter are world-renowned sites located along the Mississippi Valley near St. Louis. While both sites were last investigated some 30 years ago, they continue to play a key role in interpretations of early lifeways in North America. In this symposium, these two sites are placed within a regional context by reviewing recent investigations at other early

sites in the Middle Mississippi Valley and adjacent uplands. These recent investigations not only provide new perspectives on these two important sites but also provide new perspectives on human-land interactions during the Pleistocene-Holocene transition.

[147] SYMPOSIUM · FURTHER CONTRIBUTIONS TOWARDS AN INTERNATIONAL INVENTORY OF PREHISTORIC MINES AND QUARRIES (SPONSORED BY PREHISTORIC MINES AND QUARRIES GROUP)

Despite the widespread presence of prehistoric extraction sites in the historic environment, many are overlooked or their importance unrecognized, thus placing them at risk. Currently, catalogues are restricted to certain countries or particular stone types, but this is not universal. This session will build upon initial contributions in the construction of an international inventory of prehistoric quarry and mine sites to enlarge and broaden the database and work towards achieving a directory for those working in the field: contributions will provide an overview by country, region, or stone type, to begin to build an international inventory.

[148] SYMPOSIUM · SEDUCED BY THE DARK SIDE, PART 2: NEW INVESTIGATIONS IN MESOAMERICAN CAVE ARCHAEOLOGY

Mesoamerican cave archaeology is a relatively new and rapidly expanding area of investigation. Its vigor is reflected in the large number of ongoing field projects investigating diverse questions with a multitude of techniques and methods. Increasingly cave investigations are carried out as part of larger surface projects and there is an ever greater integration of the cave component into the larger project goals. Due to the field's youth, theory, methodology and focuses of interest in cave archaeology are developing and changing rapidly. This session brings together results of the most recent studies from across Mesoamerica.

[149] SYMPOSIUM · TRAJECTORIES OF CONTACT IN THE CARPATHIAN BASIN: SPECIALIZATION AND THE CHANGING SOCIO-ECONOMIC DIMENSIONS OF BRONZE AGE TRADE

"Trajectories of contact" describe the influx of peoples, goods, and cultural connections associated with trade networks across the Carpathian Basin from the 3rd to 1st millennium BC. This session explores specialization and trade and their relationship to markets, labor organization, and social relationships during vast changes in the political economy. Research from multiple projects samples a spectrum of settlements - agrarian societies to polities - to examine variability in the Bronze Age experience. A strong understanding of specialization and the local and regional markets highlights interconnectivity as settlements aggregate, expand, specialize, and stratify, and continually negotiate individual and group identities.

[150] SYMPOSIUM · ARCHAEOLOGY OF THE ROCKIES EXPRESS PIPELINE PROJECT MISSOURI AND ILLINOIS

Archaeological work was conducted for the Rockies Express Pipeline Project from 2006-2009. The project consisted of a 639-mile long corridor that crossed portions of Missouri, Illinois, Indiana and Ohio. Data recovery excavations were conducted on 48 National Register eligible sites that could not be avoided by construction activities. The purpose of this session would be to provide information to the professional community regarding the results of these data recoveries, efforts to avoid eligible sites and overall project information concerning all Phases of the archaeological work focusing on Missouri and Illinois.

[151] SYMPOSIUM · ISSUES AND METHODS IN ARCHAEOBOTANY

Focusing on new methods of inquiry in archaeobotany, this symposium's case studies will highlight some of the methodological problems (and solutions) in current archaeobotanical research. Examples will be drawn from a variety of different regions and ecological zones that address problems of sampling, taphonomy, and identification, as well as issues concerning data dissemination.

[152] SYMPOSIUM · THE LARGO-GALLINA: PREHISTORIC INHABITANTS OF THE AMERICAN SOUTHWEST

Extant literature generally has characterized the prehistoric Largo-

Gallina (ca. A.D. 1050 to 1300) of north central New Mexico as conservative, isolated and prone to violence. Although the Largo-Gallina have been classified as a branch of the Ancestral Puebloan culture, archaeologists have not researched it as extensively as other better-known branches, such as Chaco and Mesa Verde. As a result the Largo-Gallina have been relatively ignored or briefly mentioned in prehistoric American Southwestern literature. Current research and findings presented in this symposium are redefining existing perceptions of the Largo-Gallina and creating a better awareness of these distinctive prehistoric people.

[153] SYMPOSIUM · TROPICAL FOREST LOW-DENSITY URBANISM IN THE SOUTHERN MAYA LOWLANDS AND SOUTHERN ASIA: PAST AND PRESENT SUSTAINABILITY

(SPONSORED BY ARCHEOLOGY DIVISION OF THE AMERICAN ANTHROPOLOGICAL ASSOCIATION)

Since the 1950s and 60s, comparisons have been made between agrarian-based 'low-density' urban centers of the Maya lowlands and those of Southern Asia. We explore how people have lived in tropical forests given the landscape, climate, and noticeable wet and dry seasons. We compare the impact of urbanism, land-clearing and the built environment on local ecology, and the role of climate change in the demise of political systems and the re-organization of people across the landscape. In doing so, we set the stage to appreciate how past and present strategies inform on future issues of sustainability.

[154] SYMPOSIUM · ARE WE WHAT WE EAT? CONTINUITY AND CHANGE IN FOOD DURING CULTURE CONTACT IN NORTH AMERICA

Food preferences have always been strong elements of cultural identity and social interaction. English and Spanish colonies in North America had strong influences and sometimes deleterious effects on aboriginal populations. This symposium presents these influences and effects on Native populations as manifest in their subsistence practices. In doing so, the papers offer the unique insights from the colonial and aboriginal perspectives on consumption and adoption of foods. Together, these two arenas, Native and Colonial food practices, will offer insight into culture contact during times of strong culture change across North America between the 1500s and early 1800s.

[155] SYMPOSIUM · CURRENT PROGRESS AND NEW RESULTS IN INTERNATIONAL COLLABORATIVE FIELDWORK IN CHINA

Twenty years ago, international archaeological collaborations became possible in China. Soon after, a number of collaborative projects began (Murowchick 1997), and these have had a positive impact on the development of archaeological methods and questions in Chinese archaeology. Recently, international collaborative projects have proliferated [see SAA Archaeological Record 9(3)] – from Xinjiang in the northwest to Liaoning in the northeast, Sichuan in the southwest to Fujian in the southeast. This panel brings together participants in such projects to present new data produced by these collaborative efforts. These projects represent the diversity of Chinese archaeology in the 21st Century.

[156] SYMPOSIUM · MESOAMERICAN POLITICAL ECONOMY AND THE POLITICS OF PRODUCTION: PAPERS IN HONOR OF KENNETH G. HIRTH

From his early studies of interregional exchange in Central Mexico to his groundbreaking analyses of lithics at the urban center of Xochicalco, for close to four decades Ken Hirth has been making important contributions to how archaeologists study political economy, craft production, households, and urbanism in Mesoamerica. The papers in this session highlight Hirth's many theoretical and methodological contributions to archaeology and also present new research that has been influenced by his impressive body of work. Presenters in this session include many of Hirth's longtime collaborators and colleagues, as well as past and present graduate students.

[157] SYMPOSIUM · **THE AURIGNACIAN OF THE SWABIAN JURA, SOUTHWESTERN GERMANY**

The caves of the Swabian Jura in southwestern Germany have long been regarded as key Paleolithic sites. The recent discovery of a female figurine and musical instruments in the basal Aurignacian deposits at Hohle Fels have drawn attention to the region's unique assemblages of symbolic artifacts and confirm southwestern Germany's importance in our understanding of the appearance and development of the Upper Paleolithic in western Eurasia. The current multidisciplinary research program focusing on fauna, genetics, technology, and paleoenvironments allows for the reconstruction and contextualization of Upper Paleolithic economic, subsistence and settlement systems within a broader European setting.

[158] SYMPOSIUM · **THE PERFORMANCE OF MORTUARY RITUAL IN THE AMERICAN SOUTHWEST**

Mortuary rituals are performances that engage participants in physical dialogues about life and death. This session emphasizes the examination of full mortuary programs in interpreting the mortuary record of the pre-Hispanic American Southwest. Contributed papers address whole sets of ritual practices surrounding death in different times and places in the prehistoric Southwest. These case studies consider how mortuary practices created new identities for the deceased, and defined spaces and places for the dead. In addition, they begin to highlight the many relationships people in the prehistoric Southwest maintained with the dead.

[159] FORUM · **REFLECTING CRITICALLY ON THE GOALS AND METHODS OF ARCHAEOLOGICAL PRACTICE**

Many archaeologists advocate community-based and indigenous archaeologies that embrace multivocality while others focus on archaeological responsibility to the past. Responding to increasing fissures over what constitutes good archaeological practice, this forum: (1) openly discusses tensions inherent to the archaeoscape; and (2) takes stock of collaborative methodologies. Why do some researchers embrace community-based models, while others distance themselves? Is the concept of "community" flawed or is increasing knowledge of human history the purpose of archaeology? Practitioners and non-practitioners of collaborative archaeologies will have the opportunity to present their investigatory experiences in the hopes of encouraging dialogue about future methods and goals.

[160] SYMPOSIUM · **THE ARCHAEOLOGY OF PERSPECTIVE (SPONSORED BY THE ICOMOS SCIENTIFIC COMMITTEE ON ARCHAEOLOGICAL HERITAGE MANAGEMENT (ICAHM))**

The role of perspective in constructing culture goes beyond the panopticon, but is suggested by it. Even before Foucault's work and the widespread use of aerial and satellite remote sensing and GIS, archaeologists acknowledged the importance of surveillance in determining location, movement, and changing condition of resources, knowledge could be used to harvest, nurture, or defend these assets. Today, models of archaeological landscapes at many places in the world suggest that such benefits can be enhanced or undercut by relationships among people that are shaped by where, when, and how they can see and be seen.

[161] POSTER SESSION · **ARCHAEOLOGICAL SCIENCE 2010: PART II (SPONSORED BY SOCIETY FOR ARCHAEOLOGICAL SCIENCES)**

The astonishing growth in archaeological science during the past decade, driven in large part by advances in technology, has culminated in an increasingly interdisciplinary "type" of archaeology that has allowed archaeologists to address a wider range of questions than previously considered possible. Increasingly, these questions are focused on prehistoric social interactions, cultural exchanges, migrations, trade, and the dynamic nature of group identifications. This session highlights analytical approaches and case studies in which science-based interdisciplinary approaches are used to explore questions grounded in modern archaeological science, i.e., archaeobiology, bioarchaeology, and archaeometry

(e.g., dating methods, provenance studies, and prospection).

[162] POSTER SESSION · **CAREER PATHS AND THE UNDERGRADUATE MAJOR: HOW ARE WE PREPARING OUR STUDENTS IN THE SAA'S 75TH YEAR**

(SPONSORED BY SAA COMMITTEE ON CURRICULUM)

The presentations in this session provide snapshots of undergraduate programs and how they prepare archaeology students for future careers. Participants have been asked to provide information on the goals of their programs, the kinds of requirements in place, the sequencing of courses, the attention to building key archaeological skills sets and the inclusion of ethical topics as well as to consider data on the career outcomes for their graduates with bachelor's degrees emphasizing archaeology. These presentations are designed to further on-going discussion of the undergraduate curriculum among archaeologists especially in relation to career preparation for the next generation of archaeologists.

[163] POSTER SESSION · **CURATION, STEWARDSHIP, AND PUBLIC ARCHAEOLOGY**

[164] POSTER SESSION · **GOVERNMENT ARCHAEOLOGY - WORKING FOR THE PEOPLE AND THE RESOURCE**

(SPONSORED BY COMMITTEE FOR GOVERNMENT ARCHAEOLOGY)

The SAA Government Committee is sponsoring a poster session that offers examples of projects and programs currently being undertaken by government archaeologists. Projects range from working on archaeological preservation issues in the Middle East to establishing pro-active inventory and stewardship programs for tribal governments.

[165] POSTER SESSION · **ONE SIZE DOES NOT FIT ALL: INNOVATIVE SOLUTIONS TO CLIENT PROBLEMS**

Cultural resource professionals confront unique challenges forcing them to develop practical solutions to meet the interrelated requirements of the various Federal, state, and local regulations. State and Federal agencies have standard procedures; however, these cliché methods do not always meet project needs or provide the best solutions. Creative project solutions and alternative mitigation techniques are gaining acceptance throughout the industry. This symposium presents creative solutions that have been implemented and show the strength and weakness of these new approaches.

[166] POSTER SESSION · **SITE STRUCTURE AND CONSUMPTION: EXPLORING SOCIAL DIMENSIONS OF ARCHAEOLOGICAL VARIATION AT MONTICELLO PLANTATION**

This series of posters uses artifact distributions and assemblage compositions to examine the differences between socio-economic groups: enslaved African Americans, non-elite Euro-American workers, and Euro-American elites. The analytical methods employed here are all ways of understanding site structure and assemblage variation that mark patterns of artifact acquisition, use and discard, as well as identifying specialized and general activity areas on various sites. The methods include frequency seriation, correspondence analysis, and mean ceramic dates for chronological control, abundance indexes of consumer goods, and distributions of artifact frequencies and sizes.

[167] SYMPOSIUM · **THE BATTLE OF BLAIR MOUNTAIN AND THE LUDLOW MASSACRE: LABOR, ACTIVISM, AND HERITAGE IN THE WEST VIRGINIA AND COLORADO COALFIELDS**

This symposium discusses two major sites of class warfare in the early twentieth century. Research on these conflicts intersects labor concerns, social activism, and heritage preservation. Both sites deserve recognition and preservation. While Ludlow is a relatively well-known labor heritage site, Blair Mountain remains obscure. Worse, the mountain where the largest labor war in US history was fought in 1921 is currently threatened by mountaintop removal coalmining. Comparative analysis of the two sites elucidates class/labor issues, activism in archaeology, and Appalachian socio-

economic inequalities. Collaboration between researchers at both sites is creating new avenues for future political action at Blair Mountain.

[168] SYMPOSIUM · **FORENSIC ARCHAEOLOGY: RECENT CASES, CURRENT RESEARCH**

As forensic archaeology continues to be utilised more frequently by crime scene investigators and law enforcement officials, case studies are of great use to those engaged in forensic work. This session aims to highlight recent projects from those active in the field. In addition, those involved in postgraduate study have the opportunity to address areas untouched by current practitioners. This session also features research projects that will be of benefit to forensic work and criminal justice.

[169] GENERAL SESSION · **CERAMIC ANALYSES AND FIGURINE STUDIES IN MEXICO**

[170] SYMPOSIUM · **NEIGHBORHOOD ARCHAEOLOGY: VOLUNTEERS, COMMUNITIES, AND LOCAL POLITICS**

The expanding discussions of public archaeology have propelled consideration of the roles for descendant communities, both genealogical descendants and those with social ties to the peoples whose lives are being studied. Consideration of local communities has included the economic potential of heritage tourism and the dynamics of civic engagements. This session seeks to extend consideration of public archaeology as civic engagements within urban neighborhoods. The integration of volunteers, the significance of archaeological sites and historic structures for communities, and the local politics involved in historic preservation focus the papers in this session.

[171] SYMPOSIUM · **COMBAT IN THE GRASS: DIVERSE PLANS OF ATTACK FOR WARFARE STUDIES OF THE NORTH AMERICAN GREAT PLAINS, PART 1**

Research on warfare has a long-standing tradition in the Great Plains, with topics as diverse as the region itself. Recent archaeological studies of armed conflict during the precontact and early contact periods have focused on such diverse data as fortification systems, demographics, human skeletal remains, rock art, and resource availability. Challenging the dueling stereotype of the Plains Indian as ruthless warrior and peaceable ecologist, papers in this symposium reveal a complex mix of ritual warfare, territorial disputes, plunder, and taking of captives for trade and to rebuild local populations following epidemics.

[172] SYMPOSIUM · **THE AVENUE OF THE SAINTS ARCHAEOLOGICAL PROJECT IN NORTHEAST MISSOURI**

A multidisciplinary team conducted archaeological investigations at 55 sites in conjunction with the Avenue of the Saints highway project in Lewis and Clark Counties, Missouri. Extensive data recovery investigations were conducted at eight of these sites. The excavations ranged from plow zone stripping/feature excavation to hand excavated blocks within deeply buried alluvial or colluvial deposits. Early Archaic through Late Woodland and historic components were investigated. The analyses included paleolandscapes and paleoenvironmental reconstruction along with more traditional archaeological analyses. The papers in this symposium provide an overview of the major sites excavated and analyses conducted of the recovered materials.

[173] SYMPOSIUM · **THE CENTER FOR AMERICAN ARCHEOLOGY (CAA): IMPACTS BEYOND KAMPSVILLE**

For more than 50 years the CAA and collaborating institutions have conducted archaeological education, outreach, research and stewardship in west-central Illinois, serving as an entry point for hundreds of future archaeological educators, museum professionals, and archaeological researchers now distributed globally. In parallel, thousands of students of all ages have enjoyed the "Kampsville experience" and thus developed a greater appreciation of past peoples and their environments. This symposium highlights the

CAA's contributions to archaeological method and theory, especially interdisciplinary archaeology, including paleoethnobotany, zooarchaeology, geoarchaeology, and bioarchaeology. Other significant contributions include public outreach and the impact of Koster site research.

[174] FORUM · **GENDERED SELVES: EXPERIENCES IN AND OUT OF THE CLASSROOM**

(SPONSORED BY WOMEN IN ARCHAEOLOGY INTEREST GROUP)

Whether explicitly teaching about gendered topics or not, as social scientists we know that our intersecting identities -- of gender, race, sexual orientation, nationality, age, ability and other facets -- impact our classroom practices. These differences inform our presentations, influence our interactions with students (with their own intersecting identities), and affect the ways in which students interpret and assess the materials we present. This panel brings together archaeologists with a variety of experiences to discuss how gender and its intersections with other aspects of identity have positively, negatively and/or uniquely impacted experiences with students in and out of the classroom.

[175] SYMPOSIUM · **SOCIAL ARCHAEOMETRY: PROMISE AND PROSPECTS IN THE ANTHROPOLOGICAL SCIENCES**

Due to anthropology's historical ambivalence toward the natural and physical sciences, archaeologists trained in North American universities usually receive a rather narrow education in the scientific method. This unfortunate predisposition often results in researchers unable to identify the potentials and limits of theoretically-driven archaeometric methods and techniques, unequipped to utilize them in formulating testable archaeological hypotheses and ill-prepared to anticipate novel research questions and opportunities. This symposium reclaims the relevance of archaeological science to anthropological archaeology, demonstrating how international researchers are innovatively applying natural and physical science method and theory in formulating a new Social Archaeometry for the 21st century.

[176] SYMPOSIUM · **UNDERSTANDING OHIO HOPEWELL EARTHEN ENCLOSURES**

Earthworks occur throughout Eastern North America, but are densely concentrated in southern Ohio. Ohio Hopewell earthen enclosures have been recorded in a wide range of shapes and sizes. Although largely overlooked by early archaeological studies focused on mounds and mortuary remains, recent scholars recognize the significance of these ancient monuments and the massive amount of labor invested in their construction. Papers will address a wide range of topics relating to when the enclosures were built, the methods of wall construction employed, the purpose or uses of these enclosures, and the role the enclosures played in Ohio Hopewell society.

[177] SYMPOSIUM · **HUMAN RESPONSES TO YOUNGER DRYAS IN THE NORTHERN HEMISPHERE: THE OLD WORLD**

(SPONSORED BY INQUA (INTERNATIONAL UNION FOR QUATERNARY RESEARCH))

Although its causes are currently under debate, the Younger Dryas (c. 11-10.2 kya uncal) event was a sudden and regionally often severe return to glacial conditions, after the marked warming of the Last Glacial Interstadial. Whether, to what extent and in which specific ways YD may have affected human population densities and distributions, mobility, subsistence, technology, social organization and other cultural behaviors throughout Eurasia, from south to north and from west to east, will be explored by this symposium, with an emphasis on broad, comparative regional syntheses and stressing the possibility of significant variability in human responses (if any). Participants are specialists who work in Europe, Siberia, East and SW Asia.

[178] SYMPOSIUM · **THE ANCIENT MAYA OF YUCATAN: PAPERS IN HONOR OF E. WYLLYS ANDREWS V, PART I**

E. Wyllys Andrews V has made lasting contributions to our

understanding of the ancient Maya of Yucatan. The Middle American Research Institute Dzibilchaltun Project, of which Will was the last director, provided the first long duration archaeological sequence for the northern lowlands. Will's work at Komchen revealed Middle Preclassic occupation in Yucatan. His writings contributed to our understanding of the rise of Chichen Itza and the end of Classic Maya civilization in the northern lowlands. We honor Will in this session by presenting our recent research concerning the emergence of complexity in Yucatan, the rise of Terminal Classic states, and reorganization during the Postclassic and early historical periods.

[179] SYMPOSIUM · ARCHAEOLOGY OF THE ROCKIES EXPRESS PIPELINE PROJECT INDIANA AND OHIO

Archaeological work was conducted for the Rockies Express Pipeline Project from 2006-2009. The project consisted of a 639-mile long corridor that crossed portions of Missouri, Illinois, Indiana and Ohio. Data recovery excavations were conducted on 48 National Register eligible sites that could not be avoided by construction activities. The purpose of this session would be to provide information to the professional community regarding the results of these data recoveries, efforts to avoid eligible sites and overall project information concerning all Phases of the archaeological work focusing on Indiana and Ohio.

[180] SYMPOSIUM · BEYOND THE BROCHURE 2.0: PUBLIC OUTREACH IN CULTURAL RESOURCE MANAGEMENT (SPONSORED BY PUBLIC EDUCATION COMMITTEE; CONSULTING ARCHAEOLOGY COMMITTEE)

Public outreach and education in cultural resource management (CRM) moved beyond the brochure years ago yet many outside of the industry remain unaware of the range of approaches CRM uses to increase the public benefit of projects. This symposium will highlight current strategies, review what the industry has been doing, and explore new perspectives and innovations to engage the public.

[181] SYMPOSIUM · HOW ARCHAEOLOGY MAKES ITS SUBJECT(S): GROUPS, THINGS AND EPISTEMIC (IN)JUSTICES

Archaeologists have used objects as defining characteristics of what they suppose are bounded social groups, people presumably connected through a shared material culture. Such characterization tends to reduce inquiry into the dynamics of how social and cultural entities develop and engage with their social worlds because an "identity" is already pre-determined. In the contemporary world, such labels can lead to troubling 'epistemic injustices' of static identities and a resulting discrimination. This session addresses impacts of archaeological and epistemological practice on the control and construction of modern identity and how this affects descendant groups and their political, social, and economic access.

[182] POSTER SESSION · ASPECTS OF AFRICA ARCHAEOLOGY

[183] POSTER SESSION · EAST, WEST, AND SOUTH ASIA

[184] POSTER SESSION · EUROPE BETWEEN PALEOLITHIC AND MODERNITY

[185] POSTER SESSION · NEW PERSPECTIVES ON LAND, SPACE, AND IDENTITY ALONG COASTAL IRELAND

Drawing upon archaeological research, oral histories and historical records, researchers from the Cultural Landscapes of the Irish Coast project seek to develop a multi-faceted understanding of the changing social and economic context of coastal life through time. Presenters utilize comparative perspectives to draw attention to local understandings of the land and the use of coastal areas, from the prehistoric through historical periods, and shed new light upon the dynamics of cyclical abandonment and habitation of coastal Ireland. This research demonstrate the potential for developing nuanced interpretations for changing concepts about space, place and social and geographic landscapes in coastal Ireland.

[186] GENERAL SESSION · FROM THE MID PALEOLITHIC TO BRONZE AGE IN THE NEAR EAST

[187] SYMPOSIUM · FROM MOUNDS TO BRICKS: ARCHAEOLOGY OF 19TH-CENTURY ST. LOUIS

Known as the Gateway to the West, St. Louis was one of the fastest growing urban centers during the mid-1800s. The city's contributions to the development of American commerce and industry reached its pinnacle during the late-19th century, at which time St. Louis boasted perhaps the most modern infrastructure of any American city. In contrast to this rich history, historical archaeological research has largely overlooked the city and its people. This oversight has slowly been corrected over the past 15 years, but more work remains to be done. This session was organized to highlight recent work in and around the City of St. Louis, and to provide direction for future research. The papers in this session address a wide range of topics including the pre-industrial development of brass manufacturing, the archaeology of a Civil War-era hospital, the usefulness of geophysical survey on urban sites, and the material culture of working- and middle-class households.

[188] SYMPOSIUM · RECENT ARCHAEOLOGICAL INVESTIGATIONS IN SOUTHERN PERU: THE COLLESUYO REGION OF AREQUIPA

Archaeological research in southern Peru has emphasized Moquegua and Puno. Meanwhile, the neighboring region of Arequipa has received less attention over the past few decades. Recent work by archaeologists in the upper, middle and coastal sections of Arequipa, offer unique and complimentary interpretations of the interaction between different cultural traditions. This research encompasses sites ranging from the formative to the colonial period, with a special emphasis on the relationship between Wari and Tiwanaku. This session will review research from this area that challenges previous models regarding altiplano imperial expansion and local interaction in the southern Andes.

[189] GENERAL SESSION · RECENT RESEARCH IN SOUTH AND EAST ASIA

[190] GENERAL SESSION · ARTIFACT STUDIES: MODELING AND EXPERIMENTATION

[191] ELECTRONIC SYMPOSIUM · LOOKING BACK, LOOKING FORWARD: SEVENTY-FIVE YEARS OF ARCHAEOLOGY IN PACIFIC CENTRAL AMERICA

Seventy-five years ago archaeologists working in Pacific Central America were engaged in fundamental research aided by historical accounts of Mesoamerican relations in the region. Today many of the same issues persist, and while archaeological methods are greatly refined some of the same questions guide research. This symposium brings together scholars engaged in investigations in El Salvador, Honduras, Nicaragua, and Costa Rica that are specifically interested in regional interaction. Specific topics for discussion include the definition of archaeological 'cultures,' exchange interactions, political organization, settlement patterns, and external influences from the north and south. This is intended as an electronic symposium, in which participants will submit papers in advance and be prepared to discuss them in relation to specific themes.

[192] SYMPOSIUM · THE MIMBRES REGION IN THE U.S. SOUTHWEST AFTER A.D. 1130

The post-A.D. 1130 period in the Mimbres region of the U.S. Southwest is one of great diversity in a formerly relatively homogeneous area. Recent research has focused on a number of subareas defined by varied sets of geographic, ceramic, and temporal characteristics. This session brings together the disparate research on this area and time period to improve our understanding of both how traditions in these areas differ, and what similar attributes they share. Papers discuss where local traditions fall temporally within the Postclassic time period, and the nature of their connections to previous traditions and to contemporaneous and later developments.

[193] SYMPOSIUM · VECINO ARCHAEOLOGY AD 1780-PRESENT

What's in a name? Sustained scholarly interest in Hispanic communities of the northern Rio Grande, from the Bourbon reforms through New Mexican statehood, demonstrates that a name can have far reaching implications. Vecino is ethnically descriptive and action-oriented; it conceptualizes intellectual exchange and downplays unproductive debates. This session, dedicated to Frances Leon Swadesh Quintana, celebrates 75 years of the SAA. It assembles papers that establish Vecino Archaeology as a dynamic field of anthropological and historical inquiry. Current research transcends theoretical significance by contributing to grass roots initiatives, land and water legislation, and education, while engaging the traditional values of paramount concern to descendant communities.

[194] SYMPOSIUM · CONSTRUCTING AND ASSESSING EXPLANATIONS AND INTERPRETATIONS

Much of what archaeologists do is concerned with explaining and interpreting cultural events and phenomena. The explanations they give mainly focus on how things were in the past and why, as well as how we know. The goal of this session is to investigate how archaeologists actively construct and assess explanation in their work. We will engage with historical or contemporary examples to understand the history of the discipline and suggest future directions in archaeological explanation and interpretation.

[195] SYMPOSIUM · INVESTIGACIONES ARQUEOLÓGICAS ACTUALES EN MÉXICO

En esta ocasión queremos presentar algunos resultados de las investigaciones más recientes de nuestro pasado prehispánico. En la actualidad sabemos de la existencia de numerosas regiones culturales disímiles y, en muchos territorios, se están realizando diversos y complejos estudios que dan lugar a que este simposio presente un panorama general de la arqueología que actualmente se realiza en México. Debido a lo numeroso de las investigaciones que se están realizando sólo podremos abarcar una reducida muestra de algunos de los lugares donde se desarrollaron las antiguas culturas de la República Mexicana.

[196] SYMPOSIUM · SHIFTING FROM OBJECT-CENTERED RESEARCH TO PEOPLE-FOCUSED APPLICATION: CURRENT APPROACHES TO PUBLIC ARCHAEOLOGY FROM LATIN AMERICA AND THE CARIBBEAN - PART I (SPONSORED BY SAA PUBLIC EDUCATION COMMITTEE)

This symposium presents some of the different philosophies and approaches towards a public and applied archaeology as implemented in current programs in Latin America and the Caribbean. Throughout these regions, several projects have begun moving archaeology from an object-centered, academic subdiscipline to a people-focused, holistic endeavor. These projects involve working intimately with local peoples to address such issues as community development, heritage education, constructing community museums, and archaeotourism. As the significance of these projects becomes increasingly recognized, it is imperative that project members share their experiences – both best practices and challenges. We hope that this symposium will provide such a forum.

[197] SYMPOSIUM · MODELING CONTINUOUS AND DISCONTINUOUS INTENSIFICATION: IMPLICATIONS FOR SOCIOECONOMIC CHANGE

The concept of intensification figures prominently in most explanations of socioeconomic change on archaeological time scales, hunter-gatherers through complex civilization. Following Boserup, the concept of intensification has become nearly synonymous with gradual, continuous socioeconomic change. However, evidence can be found in the archaeological record for discontinuous, or abrupt socioeconomic transformation. Participants in this symposium review the role of intensification in commonly used models of continuous change, and present a series of different models that can account for discontinuous adaptive shifts. The models come from behavioral ecology and other recent developments in the evolutionary sciences. We include a discussion

of the implications of these models for the rate and character of cultural evolution, and for the means by which we identify such processes archaeologically.

[198] SYMPOSIUM · PERSPECTIVES ON THE ETHICAL ENGAGEMENT OF INDIGENOUS PEOPLES IN ARCHAEOLOGICAL PRACTICE (SPONSORED BY INDIGENOUS PEOPLES INTEREST GROUP)

There are many cooperative and collaborative work efforts between tribes and universities that address the relevance of archaeology to Indigenous peoples and the perceived lack of Indigenous voices in the telling of the history of their own ancestral places. Archaeologists in the private sector also grapple with balancing the requirements of the ethical inclusion of Indigenous perspectives and communities in archaeological work and the constraints imposed by a profit-driven enterprise. Tribal archaeology programs and archaeologists working in the federal sector contend with ethical issues that arise in the practice of inter-tribal consultation that may be hampered by historical conflicts between tribes. We invite participants in this session to reflect upon their own experiences and identify ethical issues in their practice of Indigenous archaeology and/or their work with and for Indigenous groups for discussion.

[199] SYMPOSIUM · RITUAL, RELIGION, AND IDEOLOGY OF THE AZTATLÁN TRADITION OF ANCIENT WEST MEXICO

Widely acknowledged as representing the northernmost expansion of Mesoamerican culture, the Aztatlán tradition recently has received renewed recognition as a significant prehispanic cultural development and an important link between cultures of Mesoamerica and the US Southwest. The papers in this session detail recent insights on the nature of religious beliefs during the Postclassic Period (AD 900-1521) in West Mexico. Research explores questions of how beliefs and ritual practices are variously manifested in mortuary practices, architecture, art, and symbolism, and necessarily includes discussions about how religion is inextricably intertwined with economic and political organization and interregional interaction in Aztatlán tradition societies.

[200] POSTER SESSION · CLAY, ROCKS, AND MINERALS: CURRENT RESEARCH IN THE AMERICAN SOUTHWEST**[201] POSTER SESSION · NEW PERSPECTIVES IN CARIBBEAN ARCHAEOLOGY****[202] POSTER SESSION · NICARAGUAN ARCHAEOLOGY**

Many diverse groups of peoples inhabited precolumbian Nicaragua. This session primarily focuses on the areas of Granada/Managua and the site of La Flor, in the department of Rivas. These posters illustrate the many distinct faces of these prehistoric peoples.

[203] POSTER SESSION · RECENT ARCHAEOLOGICAL RESEARCH IN NORTHWESTERN NORTH AMERICA**[204] POSTER SESSION · THE USE, ABUSE, AND LACK OF ARCHAEOLOGY IN HERITAGE TOURISM AND DEVELOPMENT IN THE BAY ISLANDS OF HONDURAS**

The Bay Islands of Honduras have a long history of economic development and ethnic conflict, stretching back to the 1600s when English, Spanish, and Dutch settlers variably tried to establish settlements on Roatán Island alongside indigenous communities that had occupied the region since at least the sixth century AD. This poster symposium brings together past and current archaeological research in the Bay Islands to consider the role of archaeology in shaping and representing the island's identity for residents and visitors. The posters also address the consequences of modern development taking place on the islands and the effects of the growing heritage tourism industry.

[205] GENERAL SESSION · EUROPEAN PALEOLITHIC INVESTIGATIONS**[206] GENERAL SESSION · RECENT RESEARCH IN OCEANIA**

[207] GENERAL SESSION · SETTLEMENT, SUBSISTENCE, AND SOCIAL CONTEXTS IN THE PACIFIC NORTHWEST**[208] FORUM · CRITIQUING MICHAEL B. SCHIFFER AND HIS BEHAVIORAL ARCHAEOLOGY**

Over three decades ago (Schiffer 1972), Behavioral Archaeology was proposed to address the deficiencies of Processual Archaeology and thus complete the Kuhn-like paradigm shift in archaeology. Such a shift to Behavioral Archaeology, or any type of archaeology, never transpired as planned. Instead, Behavioral Archaeology has become but one of a number of players in an ever expanding theoretical landscape. What then has been the contribution of Behavioral Archaeology? A group of distinguished scholars, none of them self-identified Behavioral Archaeologists, have been assembled to assess the role of Michael B. Schiffer and his Behavioral Archaeology in the history of archaeological theory.

[209] FORUM · FOOTPRINTS OF THE ANCESTORS: INTERGENERATIONAL LEARNING OF HOPI HISTORY AND CULTURE

Archaeological sites and the oral history surrounding them cultivate an understanding of past cultural traditions that are linked to today's Hopi people. Hopi youth, elders, and archaeologists participate in cultural activities at ancestral sites sharing knowledge and stories about these places. Hopi youth produce a "Digital Hopi Youth Guide" for each site in the form of DVDs and websites. Service projects also help Hopi youth take responsibility and give back to their communities. This forum discussion among Hopi youth, elders, archaeologists, and multimedia developers presents our intergenerational collaboration that assists Hopi communities in preserving and perpetuating Hopi culture.

[210] SYMPOSIUM · CLOVIS CACHES: WINDOWS INTO EARLY PALEOINDIAN TECHNOLOGICAL ORGANIZATION AND LAND USE

First recognized 45 years ago as a distinctive component of Clovis, caches of flaked stone and bone artifacts continue to be found and to fascinate archaeologists. While it is likely that caches reflect multiple behaviors ranging from ritual to mundane, they are united by offering glimpses of artifacts set aside at early stages in their histories of use. These papers focus on both recently discovered caches and current research on more familiar caches, offering new insights into Clovis lithic technological organization, mobility and land use patterns, and the colonization of late Pleistocene North America.

[211] SYMPOSIUM · NEW DISCUSSIONS ON SOUTHERN NEVADA ARCHAEOLOGY

The session brings together archaeologists who study the prehistory and history of southern Nevada and nearby regions. Information about on-going research, recent discoveries, and innovative approaches set the stage for discussions, promote interest in the region, and help to frame future investigations. Following the presentations, our discussant will lead an open forum in which participants may join in.

[212] SYMPOSIUM · SHIFTING FROM OBJECT-CENTERED RESEARCH TO PEOPLE-FOCUSED APPLICATION: CURRENT APPROACHES TO PUBLIC ARCHAEOLOGY FROM LATIN AMERICA AND THE CARIBBEAN - PART II

Despite the countless advancements in our scholarly understandings of prehispanic cultures and societies, this knowledge is not often actively shared with or presented to the local peoples, with whom archaeologists work in the field to obtain the data on which our interpretations are based. Certainly this is not always the case, as attested to by the growing awareness that is manifested in the projects and programs that exist, whose primary aims are to include and integrate local people in the process of creating and applying archaeological knowledge.

[213] GENERAL SESSION · SUBSISTENCE, RITUAL, AND SOCIAL ORGANIZATION IN THE DESERT SOUTHWEST**[214] SYMPOSIUM · CURRENT RESEARCH ON ISOTOPIC ANALYSES IN ARCHAEOLOGY AND ZOOARCHAEOLOGY**

Isotopic Analyses continue to provide insights into past human behavior. Archaeologists use isotopic data from both human and non-human animals to address a wide range of questions including how humans interact with their environment, changes in subsistence, climate change and adaptation, seasonality and astral mobility, and social and political organization.

[215] SYMPOSIUM · THE CENTER FOR AMERICAN ARCHEOLOGY (CAA): CURRENT RESEARCH AND EDUCATION

Grounded in a rich history of cutting edge research and education, programs at the CAA continue to inspire generations of students and scholars. This symposium highlights a suite of ongoing CAA programs including fieldwork at the Woodland Period Mound House site and the historic African-American community of Rocky Fork, macrobotanical and starch analyses of Archaic material from the multi-component Koster site, geomorphology of Koster landscapes and related landforms, constructing a baseline for current lead pollution studies, a historic images database project directed toward environmental research, and award winning programs in archaeological and environmental education for students of all ages.

[216] SYMPOSIUM · UNDERSTANDING THE USES OF GROUND STONE TOOLS: NEW DIRECTIONS AND DEVELOPMENTS

This symposium brings together the results of new research aimed at improving our understanding of ground stone tool use. Ground stone is one of the major components of the archaeological record worldwide. Four main strands of investigation are considered including experimental, ethnoarchaeological, use-wear, and organic residue studies. These strands are contextualized within an overview of the significance and current status of ground stone studies in Old and New World archaeology. Initiatives to improve web-based digital data sharing among ground stone researchers are also discussed.

[217] GENERAL SESSION · WOODLAND AND MISSISSIPPIAN PERIOD RESEARCH IN THE SOUTHEASTERN US**[218] SYMPOSIUM · AMONG THE MAYA AND THEIR NEIGHBORS: PAPERS IN HONOR OF E. WYLLYS ANDREWS V, PART II**

Links from the Maya heartland extend in all directions. In this session, the Maya experience is reexamined by present and former students of E. Wyllys Andrews, V. A range of theoretical vantage points are presented, focusing on recent advances in ceramic analysis, household and landscape archaeology. The dialogue about Maya political organization continues with the development of complex society under scrutiny. Models and data come from excavation, survey, ethnohistory and personal reminiscence at Copan, sites in Belize, El Salvador and even further afield.

[219] GENERAL SESSION · ARCHAEOLOGY OF THE HISTORIC PERIOD: NORTHEAST, SOUTHEAST AND MIDWEST**[220] SYMPOSIUM · COMBAT IN THE GRASS: DIVERSE PLANS OF ATTACK FOR WARFARE STUDIES OF THE NORTH AMERICAN GREAT PLAINS, PART 2**

Research on warfare has a long-standing tradition in the Great Plains, with topics as diverse as the region itself. Recent archaeological studies of armed conflict during the precontact and early contact periods have focused on such diverse data as fortification systems, demographics, human skeletal remains, rock art, and resource availability. Challenging the dueling stereotype of the Plains Indian as ruthless warrior and peaceable ecologist, papers in this symposium reveal a complex mix of ritual warfare, territorial disputes, plunder, and taking of captives for trade and to rebuild local populations following epidemics.

[221] SYMPOSIUM · OBSIDIAN REFLECTIONS: EXAMINING THE SYMBOLIC AND RITUAL DIMENSIONS OF OBSIDIAN FOR INTERPRETING THE ARCHAEOLOGICAL RECORD OF ANCIENT MESOAMERICA

Over the past 20 years, Mesoamerican scholars have begun to more

deeply explore the meaningful associations of obsidian in terms of ideology, world view, religion, and social life. Nonetheless, much of this work has remained largely divorced from interpretations of archaeological patterns of obsidian procurement, distribution and consumption. In this symposium, participants will assess the degree to which obsidian's symbolic and religious connotations may have affected decision making in the selection, trade and utilization of obsidian in Mesoamerica.

[222] SYMPOSIUM · CARAVANNING ACROSS THE AMERICAS: RESEARCH INSPIRED BY THE WORK AND MENTORSHIP OF DAVID L. BROWMAN

This session is dedicated to the archaeology and ideas of David L. Browman. Browman has conducted archaeological research in North and South America since 1963 and has mentored many PhD, Master's, and undergraduate students during his nearly 40-year tenure at Washington University in St. Louis. This collection of papers represents: 1) current research building upon themes he advanced in the Andean region of South America (camelid pastoralism, iconography, Formative and Tiwanaku periods) and 2) research throughout the Americas that was inspired by his academic mentorship (craft production, paleoethnobotany, historical ecology, and peopling of the Americas).

[223] SYMPOSIUM · CELEBRATING A DECADE OF DISCOVERY, ARCHAEOLOGY, HERITAGE EDUCATION, AND OUTREACH ON THE BUREAU OF LAND MANAGEMENT'S NATIONAL LANDSCAPE CONSERVATION SYSTEM

In the ten years since the creation of the National Landscape Conservation System, the Bureau of Land Management, its partners, and researchers have created a body of work that has contributed to the science of archaeology and a better understanding of BLM resources; BLM has been a leader in Native American involvement in planning, research, and outreach; and broadened the field of heritage education. This symposium explores the strides that have been made and the steps for the future.

[224] SYMPOSIUM · HUMAN RESPONSES TO YOUNGER DRYAS IN THE NORTHERN HEMISPHERE: THE NEW WORLD (SPONSORED BY INTERNATIONAL QUATERNARY ASSOCIATION (INQUA))

Whatever its causes, the abrupt, sharp Younger Dryas climatic event (ca. 11-10.2 kya uncal.) was a major reversal of the warming trend that had been underway since the beginning of the Late Glacial Interstadial, with all the consequences this had for regional habitability, vegetation and fauna. This symposium will explore whether, to what extent and how specifically humans may have responded to environmental and resources changes in terms of their distributions, mobility patterns, subsistence strategies, technologies, social relations and even belief systems in North America. Speakers will present specific case studies and syntheses from particularly well-studied regions of the continent.

[225] SYMPOSIUM · MEMORY, MATERIALITY, AND ARCHAEOLOGY IN THE INDIGENOUS AMERICAS

Objects, bodies, places, and landscapes have increasingly become important in archaeological research in regards to the time transcendent role they have in social memory. Serving as points of active social engagement in processes of re/creation, re/appropriation, and conflict/resolution the significance of these material expressions allows archaeologists to develop deeper understandings of the processes in which continuities, transformations and discontinuities occur. Yet these processes are not simply an issue for past understandings but may also inform present interactions. Focusing on Indigenous communities in the Americas, this session explore these processes and their significance to both past understandings and contemporary archaeological practice.

[226] GENERAL SESSION · MORTUARY ARCHAEOLOGY IN THE AMERICAS

[227] FORUM · ETHICAL ISSUES IN GLOBAL ARCHAEOLOGY (SPONSORED BY COMMITTEE ON ETHICS AND THE REGISTER OF PROFESSIONAL ARCHAEOLOGISTS)

The Forum's goal is to expand discussion of ethical issues in archaeology from a global perspective. Archaeologists grapple with issues including relationships with descendent communities, commercialization of archaeology, and looting and vandalism, among others. How do these issues affect practice outside the US? Which issues matter most to those working or educated in other countries? How do the relationships between archaeologists and descendent/local communities differ globally? How do ethical issues of commercialization vary? In an increasingly globalized world, in archaeology and in life, it is valuable to gain a broader understanding of ethical issues that arise in different archaeological contexts.

[228] SYMPOSIUM · ENGINEERING MOUNTAIN LANDSCAPES: AN ARCHAEOLOGY OF SOCIAL INVESTMENT

Since the early Holocene, humans have occupied mountain environments and relied on mountain resources throughout the North American continent. We explore the archaeology of mountain dwellers and habitual users of high-elevation resources as representative of "social investment." Social investment, or the intergenerational commitment of individuals and groups to particular landscape uses, left material imprints that are archaeologically visible in unique ways, from anthropogenic fires to vision quest sites. However subtle or definitive, heartlands or hinterlands, engineered landscapes found in remote locales and seemingly inaccessible mountains, in principle, should reflect both the fully intended and unintended consequences of social investment.

[229] SYMPOSIUM · VALLEYS OF STONE, RIVERS OF JADE: NEW INVESTIGATIONS ALONG THE ANCIENT MAYA WESTERN EXCHANGE ROUTES AND IMPLICATIONS FOR POLITICAL ECONOMY AND TRADE

The northern Verapaz and southern Pasión valley and river system formed a principal exchange route for the ancient Maya world, connecting highlands and lowlands, linking the valleys to the Pasión and Chixoy lowland river highways and intersecting with the east-west Caribbean-to-Mexico "transversal". These routes transported to Maya cities not only obsidian and salt, but their most precious sacred goods, including Pacific shell, pyrite, quetzal plumage and, above all, jade. Yet this critical region has remained virtually unstudied. Now recent international projects and findings, described here, are changing our understandings of ancient Maya production, exchange, and political economy.

[230] SYMPOSIUM · THREE DIMENSIONAL ARCHAEOLOGICAL MODELING: NEW DIRECTIONS IN RESEARCH, METHODOLOGY AND THEORY

Three dimensional site/artifact modeling draws much attention in the field of archaeology. Advances in technology are opening this field up in new and exciting ways. The benefits of these models for presentation to a general audience are apparent, however, how these new and evolving technologies are being used to enhance academic research is less so? Moving beyond aesthetic modeling this session looks at how 3D models are creating testable interfaces. Papers will present various uses of three dimensional models to answer research questions; as well as comment on the methodological and theoretical developments that come with these developing analytical techniques.

[231] SYMPOSIUM · CURRENT INTERDISCIPLINARY APPROACHES TO NORTH-CENTRAL TEXAS PREHISTORY

Recent interdisciplinary investigations along the upper Trinity River within north-central Texas have shed new light on geoarchaeology, subsistence patterns, paleoenvironment and chronology for the region.

[232] POSTER SESSION · ARCHAEOLOGY OF THE WESTERN UNITED STATES

[233] POSTER SESSION · GEOPHYSICAL INVESTIGATIONS IN WESTERN PENNSYLVANIA

Undergraduate and graduate students from Indiana University of Pennsylvania have conducted research during this past year on historic and prehistoric sites in western Pennsylvania using a variety of geophysical instruments. Through this research we have gained new insights into the regional archaeology as well as much experience in the use of the instruments. This session provides examples of our research and results.

[234] POSTER SESSION · LARGE GAME PROCUREMENT STRATEGIES**[235] POSTER SESSION · WHAT'S NEW IN SOUTHWESTERN ARCHAEOLOGY?****[236] GENERAL SESSION · PALEOINDIAN, ARCHAIC & LITHIC STUDIES IN THE SOUTHEASTERN US****[237] SYMPOSIUM · MODALITIES OF VALUE(S): EXPRESSIONS OF HERITAGE IN CURRENT ARCHAEOLOGICAL DIALOGUE (SPONSORED BY HERITAGE VALUES INTEREST GROUP)**

The language used to describe, label, and conceive of (in)tangible archaeological heritage fluctuates with changing modalities of value. This session confronts issues of "value" that are increasingly significant in the representation of past material objects, landscapes, and cultures. It offers perspective on the ascription of value: How is heritage value attributed, recognized, and/or officially endorsed? By whom? What occurs when values do not cohere? Session participants pose these and other questions in addressing why an understanding of heritage—and of how value is ascribed—within differing cultural contexts is fundamental to current archaeological dialogue.

[238] FORUM · SAVING THE PLANET . . . AND ARCHAEOLOGY! (SPONSORED BY PUBLIC EDUCATION COMMITTEE)

More than a decade ago, adult natural resource education and volunteer service programs began with the Texas Master Naturalists. Since then, thousands of participants in 35 states began volunteering in similar programs. Panelists in this forum will describe how they incorporate archaeology into natural resource programs. Along with teaching the volunteers, we need to work with professional managers, some of who view archaeological site preservation as an impediment to restoration efforts. This session will involve panelists and the audience in discussing approaches to working with local to national-level environmental stewards, an audience that is vital for the future of public archaeology.

[239] GENERAL SESSION · NEW PERSPECTIVES ON MISSISSIPPIAN IN THE GREATER CAHOKIA SPHERE**[240] SYMPOSIUM · SEARCHING FOR STRUCTURE IN CERAMIC ANALYSIS: APPLYING MULTI-SCALAR FRAMEWORKS AND TECHNIQUES TO THE INVESTIGATION OF POTTERY PRODUCTION**

This session is intended to provoke thinking about ceramic structure—specifically, the analytical relevance of structure to the study of production and the necessary instrumentation for such investigation. By re-examining pottery structure from micro-, meso-, and macro-scales, the participants support the idea that the analysis of formation techniques, firing procedures, and decorative technologies can significantly contribute to the holistic analysis of past ceramic economies. When coupled with innovative instrumental techniques, this approach generates detailed ceramic production data that serve as a full and rich partner to the exchange dynamics illuminated by various forms of compositional analysis.

[241] SYMPOSIUM · PALEODEMOGRAPHY: ADVANCES AND NEW TRENDS IN AGRICULTURAL POPULATION IN MESOAMERICA

As a demographic subdiscipline, paleodemography includes a variety of phenomenon of concern to archaeology, physical anthropology, ethnohistory, and human ecology. This session reconnects the archaeological phenomenon of population with its demographic baggage, at the same time encouraging uses of

paleodemographic information from different disciplines for a better comprehension of agricultural populations of the past in Mesoamerica. Through this perspective, papers deal with topics such as the size and distribution of ancient populations, as well as their origins, migration patterns, and resource use. They also compare the results of different sampling techniques or methods of demographic analysis within the study of agricultural populations in Mesoamerica.

[242] SYMPOSIUM · LANDSCAPE LANDMARKS AS SOCIAL AGENTS

Most of the time the landscape has been understood as a space, with a symbolic content. This does no more than reproduce the Cartesian division between object and subject. It is necessary to look toward traditional societies where a defined separation of it doesn't exist. Animals, plants, rocks or mountains can be understood as part of the social world. So the landscape is the thing that structures the human action and at the same time is structured by it. This session will present works of theoretical reflections on landscape, identity and agency, as well as practical applications.

[243] SYMPOSIUM · NEW APPROACHES IN THE ARCHAEOLOGY OF MEDIEVAL EUROPE

This session highlights contemporary research projects being conducted on the archaeology of medieval Europe (c. AD 500-1500). Medieval archaeology is experiencing a renaissance of innovative, sophisticated theoretical and methodological approaches, thanks to a new generation of scholars who are drawing on a variety of models from the natural sciences, social sciences, and humanities. The overall goal of this session is to bring medieval archaeologists into greater communion with the wider American archaeological/anthropological community, by showcasing the groundbreaking work being done in the Middle Ages by scholars from both the US and Europe.

[244] SYMPOSIUM · PAPERS IN HONOR OF WILLIAM S. DANCEY

The papers in this session are presented in honor of Dr. William S. Dancey, who recently retired after a distinguished career of over 30 years in the Department of Anthropology at The Ohio State University. The session participants represent a selection of Dancey's Ph.D. students. The papers reflect the theoretical, methodological, and empirical influence which Dancey imparted upon us as archaeology students at OSU. Dancey concludes the session with comments and a discussion of how he sees it all "fitting together".

[245] SYMPOSIUM · RECENT ADVANCES IN THE ZOOARCHAEOLOGY OF THE LAKE TITICACA BASIN

The waters and surrounding high plains of the Lake Titicaca Basin have recently become the geographic focus for a number of zooarchaeological specialists. Data derived by these researchers contribute to a diachronic understanding of human-animal interaction from the Archaic Period to the Late Horizon. Papers in this session will explore various modes of primary and secondary resource extraction for subsistence and ritual activities. This symposium provides unique opportunities to discuss the role of terrestrial, aquatic, and avian species in the development of social complexity within a discrete region.

[246] SYMPOSIUM · SETTLEMENT PATTERNS OF VIKING AGE ICELAND: THE METHODS AND RESULTS OF THE SKAGAFJORDUR ARCHAEOLOGICAL SETTLEMENT SURVEY

The Skagafjörður Archaeological Settlement Survey (SASS) has developed and refined methods to complete a survey of Viking Age and Medieval farmsteads over a small area of Northern Iceland. The subsurface survey employed coring, electromagnetics, and test pits to identify, date, and assess the settlements. Several farmsteads were selected for resistivity, GPR, and excavation. In this symposium we will outline the methods and results. We find that the end of the Viking Age in Iceland is marked by a change from widely spaced self-sufficient farms to a mosaic of manors and dependent farmsteads, suggestive of the transition from chieftdom to state.

[247] GENERAL SESSION · **ARCHAEOLOGY OF THE EASTERN UNITED STATES**

[248] SYMPOSIUM · **BEING OR BECOMING? LATE HOLOCENE RESEARCH ON FORAGERS AND EARLY FARMERS IN THE DESERT WEST**

The US Southwest and Great Basin share environmental characteristics, including aridity, topographic variability, and widely distributed resources. At a broad scale, much of their archaeological record is similar, too; featuring long periods of mobile foraging and an uneven incorporation of farming into the suite of subsistence strategies. Despite these commonalities, regional archaeologists often employ different approaches to examine prehistoric lifeways. The papers in this session emphasize new theoretical perspectives and methods to examine Late Holocene foragers and early farmers across the arid West, with the hope of stimulating dialogue among western archaeologists.

[249] SYMPOSIUM · **BEYOND THE MINIMUM, CONTRIBUTIONS TO ARCHEOLOGY**

Many archeologists work for the government or as private contractors. They provide a specific service as part of their job, often this does not require much in original research; however, many exceed their job requirements. They provide useful cultural resource research, going beyond the minimum required by their job. This symposium illustrates and recognizes their work.

[250] SYMPOSIUM · **COASTAL SEASONALITY: METHODOLOGIES AND SUBSTANTIVE APPLICATIONS**

Archaeologists working in coastal settings typically recover multiple biological proxies for human seasonal behavior. Questions of archaeological seasonality are uniquely linked to settlement patterns, resource availability, environmental relationships, landscapes, and social complexity, such as: Why is seasonality important to the study of human behavior? What does this knowledge tell us about life in dynamic estuarine systems? What methodologies are available to address fundamental questions? Papers in this symposium will discuss methodologies appropriate for assessing seasonality in common biological proxies and substantive applications with particular reference to the archaeology of St. Catherine's Island and the Georgia Bight (USA).

[251] SYMPOSIUM · **CURRENT RESEARCH ON THE POVERTY POINT CULTURE**

In the last few years archaeologists have conducted a wide range of new field and laboratory research on the Poverty Point culture. This includes excavations at the Poverty Point site and Jaketown, remote sensing of plaza and ridge features at Poverty Point, and a variety of analyses of lithics, ceramics, poverty point objects, and other artifacts. This symposium will present the results of these studies and discuss their implications for new understandings of one of the most important and renowned archaeological complexes in North America.

[252] Symposium · **Lessons Learned and Advances Made: Looking Back Over the New York State Millennium Pipeline Project, 1997-2009**

At inception, the Millennium Pipeline required one of the largest corridor surveys ever completed in the northeast. Millennium understands the value of these studies and reaches out to the professional community with the results of over a decade of work encompassing the prehistory and history of New York's southern tier. This session is diachronic, beginning with the methods and models employed in the archaeological survey, progressing to detailed information gained from the project about historical development, cultural landscapes, and the environment, and culminating in the management and dissemination of public information at project's end.

[253] SYMPOSIUM · **ARCHAEOLOGY OF THE ARIZONA STRIP**

Archaeological evidence indicates that the Arizona Strip was heavily

utilized in prehistoric times, most notably by farmers associated with the Virgin and Kayenta puebloan traditions. Despite its rich archaeological heritage, the area remains one of the most understudied areas in U.S. Southwestern archaeology. This situation is beginning to change, largely as a result of several field schools and other large-scale projects during the last a few years. Using information obtained from these projects, this symposium explores such questions as, interaction of the Arizona Strip occupants with adjacent populations, the role of long-distance exchange in the area, and the subsistence strategies.

[254] SYMPOSIUM · **REGIONAL AND INTERREGIONAL IMPLICATIONS OF ARCHAEOLOGY ON THE MEXICAN GULF COAST**

The Mexican Gulf Coast possesses a rich, diverse cultural heritage. The cultural traditions and historical trajectories of the area provide important information concerning regional and interregional socioeconomic trends across Mesoamerica. This symposium covers a broad geographic range from the Northern Huasteca to the Southern Gulf Lowlands, spanning the Formative period to the Early Colonial period. Recent projects contribute new insights into Classic period political organization, Postclassic period economic development, and Colonial period interregional interaction. These studies add to our broader understanding of state formation, diverse regional political forms, and local impacts of social and technological changes.

[255] SYMPOSIUM · **TECHNOLOGICAL TRANSFORMATIONS ON THE COLONIAL FRONTIER: NEW WORLD CONTACT AND EARLY HISTORIC PERIOD TECHNOLOGIES OF INDIGENOUS AND HISTORIC POPULATIONS**

New World Colonial exploration and expansion generated new cultural interactions within and between Native Americans and Europeans. The transference and transformation of technologies was an important component of these interactions. European goods (metals, glass, high-fired ceramics, etc.) were introduced to native populations, and these native groups modified new materials for specific purposes and often attempted to learn and adapt new transformative technologies (e.g., smelting and metalworking). Symposium participants will present new data illuminating and contextualizing the technological, social and economic conditions of the use, adoption, adaptation and spread of new materials and their associated technologies in the New World.

[256] SYMPOSIUM · **RECOGNIZING SKILL-LEVEL ARCHAEOLOGICALLY AND WHAT IT REVEALS CULTURALLY**

The recognition of how skillfully material culture is manipulated has tremendous implications for how we interpret the archaeological record. Are two objects two distinct types, or the same type produced by a master and novice? Do broad technological changes through time reflect an increased ability to skillfully manipulate material mediums? Can archaeological skill-level recognition lead to broader inquiries such as the identification of individuals and their age, socio-economic status, or social grouping? These are just a few of the questions the contributors in this symposium will examine, while also attempting to formulate how to recognize skill in different material mediums.

[257] SYMPOSIUM · **IN THE FOOTSTEPS OF GLENN BLACK: NEW RESEARCH AT THE ANGEL SITE**

The Angel site (12VG1), a Mississippian town on the Ohio River near Evansville, Indiana, is best known through the important work of Glenn Black, published posthumously in 1967. New research undertaken during the past few decades has greatly expanded our understanding of the site. This research includes studies of ceramic seriation and technology, geophysical mapping of buildings and the interior of mounds, an enhanced and more detailed site occupation history based on AMS dating of structures and earthworks, isotopic and DNA studies of the Angel people and, finally, several years of excavation of structures that spanned occupation at the site.

[258] SYMPOSIUM · **ON THE VALLEY FLOOR: REGIONAL VARIATION AND CULTURAL DIFFERENCE IN SOUTHEAST MESOAMERICA**

The Ulua, Chamelecon, and Motagua rivers carve out extensive valleys where ancient Southeast Mesoamerican cultures flourished. While their inhabitants share elements of construction techniques, architectural forms, and artifact assemblages, there is considerable variation: sites with Copan-style Maya characteristics alongside centers with local architectural canons; settlement sizes ranging from 15 to over 450 structures; and widespread ceramic systems where design elements are re-worked to suit local ideals. This session explores these contrasts, comparing landscape use, ceramic production, storage, architecture, and intra- and inter-site planning patterns during the Late and Terminal Classic periods with an eye to their implications for socio-political practice.

[259] SYMPOSIUM · **GEOARCHAEOLOGICAL RESEARCH**
(SPONSORED BY GEOARCHAEOLOGY INTEREST GROUP)

The interface between the earth sciences and archaeology encompasses a plethora of research avenues, the pursuit of which has enriched both fields. This session is intended as a forum for researchers in all aspects of geoarchaeology (geochronology, soil science, materials science, sourcing, taphonomy, geomorphology, etc.) working in any region or any time period to share results and methodologies.

[260] SYMPOSIUM · **COSTUME, DRESS, AND ORNAMENT IN FORMATIVE PERIOD MESOAMERICA AND THE ISTHMO-COLOMBIAN ZONE**

This session considers aspects of dress, adornment, and ritual costume among the Formative period cultures of ancient Mesoamerica and adjacent areas. It was during this period that many of the costuming practices of this region originated; however, this topic has not yet been addressed synthetically in Precolumbian archaeology or art history. The papers in this session consider a variety of issues relating to this topic including the reconstruction of clothing and non-fabric ornamentation practices, their symbolic dimensions, and aesthetics. These topics are interrogated through case studies that focus on particular sub-regions, sites, monuments, or individuals known through the archaeological record.

ABSTRACTS OF INDIVIDUAL PRESENTATIONS

Abbott, David (Arizona State University) and Katherine Spielmann (Arizona State Univ.)

[100] *Alliance and Landscape on Perry Mesa, Central Arizona*
Compelling evidence for endemic warfare has been documented in many areas of the Southwest. Among them is the Verde Confederacy, described as a highly coordinated alliance that encompassed much of central Arizona. In the late 1200s, pueblos were built above the sheer cliffs of Perry Mesa and overlooking access routes onto the mesa top. Was this migration a strategic deployment to create an integrated "castle defense" atop the mesa and bolster the western flank of the confederacy? Or did climatic change attract migrants to a landscape with improved agricultural capacity? Multiple lines of evidence are mustered to evaluate these ideas.

[100] *First Organizer; [100] First Chair*

Abrams, Elliot [30] *see Weaver, Sarah A.; [241]* *see Freter-Abrams, AnnCorinne*

Abramson, Corey [181] *see Modzelewski, Darren*

Acuna, Mary Jane (Washington University in St. Louis), Carlos Chiriboga (Yale University), Marcello Canuto (Tulane University) and Tomas Barrientos (Universidad del Valle)

[54] *Outlier, Port of Trade, or What? New Preclassic evidence from El Achiotal in Western Peten, Guatemala*

Little is known about the Preclassic in the western Maya Peten lowlands. Recent research at the site of El Achiotal begins to shed light on this important time period, when early Maya states were emerging. Unlike many Preclassic sites in the central Peten lowlands, El Achiotal does not fit within the pattern. Its distinct features and its location suggest the center played a significant role with other regions to the west. Its individuality also raises questions about the archaeological understanding of the central Peten lowland Preclassic Maya.

Adair, Mary (University of Kansas), Donna C. Roper (Kansas State University) and Jack L. Hofman (University of Kansas)

[72] *Pawnee Life and Technology at 1800: A Perspective from the Kansas Monument site, 14RP1*

The interrelated systems of material culture, technology, economy, group interactions, gender roles and status changes are variously expressed in the archaeological record of the Pawnee during the contact and fur trade period. Many traditions apparently persisted, perhaps in modified form, through this period of change, others may have been greatly modified or lost completely. We address the potential relationships between technological changes and other aspects of Pawnee life using material culture from the Kansas Monument site (14RP1) to explore the implications for changes in value systems, status differentiation, gender roles, social organization, and intertribal relationships.

Adam, Jagich [184] *see Kindler, Lutz*

Adams, Christopher D. [42] *see Big Owl-McArdle, Germaine F.*

Adams, E. (University of Arizona)

[128] *Termination Ritual and Migration at Chevelon Pueblo, Arizona*

This paper explores the material patterns of structure and village abandonment of the ancient Hopi village, Chevelon Pueblo, located on the Little Colorado River in northeastern Arizona. Excavation of 8% of the structures of the 500-room village revealed repeated and extensive practices of structural burning and object placement related to abandonment of individual structures and of the village as a whole. These patterns are discussed in terms of individual, household, and corporate ritual practices. It is argued that these practices are part of lengthy Pueblo tradition related to closure or termination practices associated with long distance migration.

[110] *Discussant*

Adams, Jenny (Desert Archaeology, Inc.)

[40] *Editing Kiva: 75 years of Past Participles and Future Tense*

Some of the biggest names in southwestern archaeology began their careers as KIVA editors. In the early days of KIVA, most editors were graduate students in the Anthropology Department at the University of Arizona. Since 1935, the size, complexity, and stature of KIVA has grown, as have the responsibilities of the Editor. It now requires several people to shepherd an issue through, from article acquisition to final production. This poster outlines the progression of editors with commentaries from some about their tenure, the issues-of-their day, and their vision for the journal.

[216] *Discussant*

Adams, Kenneth [224] *see Goebel, Ted*

Adelsberger, Katherine (Knox College), Benjamin W. Porter (University of California, Berkeley), Bruce Routledge (University of Liverpool), and Danielle S. Fatkin (Knox College)

[259] *Geoarchaeology at Dhiban: Research Potentials of a Multiperiod Site in Central Jordan*

The multiperiod site of Dhiban, west-central Jordan, is situated on the semi-arid Dhiban Plateau. Remains from the Iron Age, Classical, and Islamic periods indicate prolonged habitation despite environmental challenges due to limited water availability as well as probable environmental degradation, as indicated by evidence of slope erosion and stabilization measures. Cisterns and a small wadi system provided the only water sources throughout Dhiban's occupation, making agriculture a challenging prospect and water-catchment a necessity. Geoarchaeological approaches to understanding the influence of these environmental stresses on populations at Dhiban provide the most promising avenues of investigation into human-environment interactions in this region.

Adelsberger, Katherine [92] *see Fatkin, Danielle S;*

Adkins, Larry (Cerritos College, Norwalk, California) and Robert A. Benfer (University of Missouri)

[89] *Lunar Standstill Phenomena at the Preceramic Buena Vista Site in Perú*

We have previously reported lunar standstill alignments from the site of Buena Vista, Perú. Two principle observing centers in the complex are aligned with horizon markers, which identify the onset of the major southern standstill seasons. Here new data show there is an alignment from the temple entryway stairs to the highest nearby mountain peak (Apu) which also correlates well with the extreme limit of the major standstill azimuth. The results are consistent with both a flat horizon moonrise and the "visible" moonrise over a ridge line which blocks off approximately 26° of the eastern sky.

Adler, Michael (Southern Methodist University)

[128] *You're Fired: Abandonment Signatures in Ancestral Pueblo Village Contexts*

This paper reviews the diversity of abandonment signatures from a northern Rio Grande pueblo, Pot Creek Pueblo, with a focus on destructive burning. Archaeological models of site abandonment tend to particularize strategies of site occupants, but we can't lose sight of forces outside the control of those occupants. This paper expands considerations of prehistoric practice to include physical parameters modeling cultural practices and natural forces. Evidence at Pot Creek Pueblo supports a relatively brief, possibly violent set of "burning events" involving domestic and ritual architecture associated with the demise of occupation, followed by a period of scavenging and artifact recycling.

Adovasio, James (Mercyhurst Archaeological Institute)

[86] *Forensic Sedimentology: Past, Present, and Promise*

During the 1970s, high-resolution analytical and descriptive protocols were developed for the characterization and description of microstrata

at Meadowcroft Rockshelter, Washington County, Pennsylvania. Beginning in the 1980s, these same protocols—collectively subsumed under the rubric forensic sedimentology—were applied in a succession of successful ARPA prosecutions. The ability to essentially “fingerprint” sediments was a critical element in all of the cases, which included both open and closed archaeological loci. Highlights of past cases are presented and current descriptive/analytical methodologies are discussed. New developments in instrumentation are also detailed in terms of their applicability to future cases.

[90] *see Illingworth, Jeff*

Aguero Reyes, Adriana (Independent)

[260] *Stone or Clay?: The Significance of Power Elements in the Olmec Ballgame Attire Iconography*

The ballgame is one of the most important ritual events in ancient Mesoamerica. This paper discusses the sociopolitical importance of ballgame in Olmec society. We will review the iconographic elements that identify ballplayer attire and analyze their context to interpret the ritual. In Classic period Mesoamerica, ballplayers are considered to have been high ranking individuals, but during the Formative, ballplayers were also represented in clay figurines, a medium generally related to the domestic context in Mesoamerican archaeology. Depending on the medium and the context, we can interpret the sociopolitical importance of ballgame in different, contrasting ways.

Aguilar, Ana (Ecodesarrollo Papagayo S.A.) and Elisa Fernández León (Universidad de Costa Rica)

[191] *Questioning the Historical Sources from a Linguistic and Archaeological Perspective in Lower Central America*

In 16th century Pacific Nicaragua, languages from the Mesoamerican and Isthmo-Columbian linguistic areas were spoken. We believe the stories regarding migration have a strong historical basis; however, there hasn't been an agreement among the archaeologists regarding the fact that these historical descriptions reflect the actual reality of the archaeological societies or if what Kirchhoff once suggested about Pacific Nicaragua being a part of Mesoamerica is true. Here we conduct a conceptual exercise, using already documented cases from Northeastern Costa Rica and Pacific Nicaragua, to present an interpretative model of how this process could have taken place.

[191] *First Chair*

Aguirre Molina, Alejandra [64] *see* López Luján, Leonardo

Ahler, Steven (University of Kentucky)

[146] *Settlement Pattern Correlations in Dalton and Early Archaic Period Site Use in Southwestern Illinois*

Initial settlement pattern analyses conducted near Modoc Rock Shelter in southwestern Illinois showed strong spatial correlation of Dalton and Early Archaic components. An expanded site sample was analyzed using finer temporal ranges to determine if Dalton components correlated better with early or late Early Archaic period segments. Assuming that environmental changes provide the impetus for settlement pattern shifts, the correlations provide information about the timing of changes in resource distributions and use of the Early Archaic landscape. A shift in settlement locations to valley margins that characterizes the Middle Archaic period may have started in the late Early Archaic.

[146] *Second Chair* [146] *Second Organizer*; [146] *see* Koldehoff, Brad

Ahlstrom, Richard [248] *see* Roberts, Heidi

Ahrens, Corrie (Colorado State University), Christopher Fisher (Colorado State University), and LORE-LPB Team

[135] *Thresholds and Tipping Points: The Origin of the Late Postclassic Purépecha (Tarascan) Empire*

The Origin of the Purépecha (Tarascan) State has been a long-standing archaeological question. Here I present basic questions, methodologies, and new directions for the Legacies of Resilience:

The Lake Pátzcuaro Basin Archaeological Project.

Aimers, Jim (SUNY Geneseo)

[218] *Stockholm Syndrome and Maya Archaeology*

When I arrived at Tulane in 1992 I was obsessed by Maya architecture and planned to write a interdisciplinary dissertation on that topic. By 1996 that dream had been crushed by the Department of Anthropology and I realized that to graduate from Tulane I would have to find another topic. Unexpected Postclassic period finds at Baking Pot, Belize, sparked my interest in ceramics and since then most of my research has been about Maya ceramics. In this paper I discuss some current debates and approaches in Maya ceramic analysis with reference to the work of E. Wyllys Andrews.

[258] *Discussant*

Aiuvalasit, Michael (Geoarcheology Research Associates), Donald M. Thieme (Valdosta State University), Joseph Schuldenrein (Geoarcheology Research Associates), and Suanna Selby Crowley (Geoarcheology Research Associates/Massachusetts Archaeological Society)

[252] *Alluvial Geoarchaeology of the Susquehanna River sites*

Geoarchaeological investigations undertaken as part of the Millennium Pipeline Project culminated in a stratigraphic model of the alluvial stratigraphy of the Susquehanna River near Windsor, New York. Examining the Susquehanna crossing sites through phased resource assessments afforded an opportunity for staging geoarchaeological research within the structure of the CRM process. This cross section provides an important connection between the better understood segments of the basin further upstream and segments located downstream along Upper Main Stem of the Susquehanna Basin.

Aiuvalasit, Michael [252] *see* Schuldenrein, Joseph

Akai, Fumito [177] *see* Nakazawa, Yuichi

Akoshima, Kaoru (Tohoku University)

[119] *Technological Organizations and Lithic Use-wear: Impacts on East Asian Prehistory*

This paper investigates one of Binford's wide ranging theoretical concepts, "organization of technology", in the context of microwear analysis in general. The examples also shed light on impacts of Binford's work on archaeological scenes of East Asia, especially in Japan. Ambivalent relations between the processual archaeology and historical orientation of archaeology there are discussed. The theoretical standpoint of technological organizations would alleviate inadequacy in use-wear research strategy which has been influenced by "behavioral reconstruction schools" since 1970s. Observed use-wear traces must be recognized as palimpsest phenomena to understand cultural systems movements, rather than as traces from individual behavioral episodes.

Akridge, Glen [38] *see* Davis, Hester A.

al Sakhel, Heba [58] *see* Boeda, Eric

Alconini, Sonia (University of Texas At San Antonio) and Lynn Kim (University of Texas at San Antonio)

[45] *The Province of Kallawayá: Forms of Interaction with Tiwanaku and the Inkas*

In this paper, we will explore the evolution of the Kallawayá province in the eastern Bolivian valleys. This region, located to the east of the Titicaca Basin and nearby the tropical piedmonts, was an important node of interaction between two distinct environments. Based on a regional survey and excavations, we will present data showing the different ways in which Tiwanaku and the Inka sought to gain access to such valuable valleys, the nature of their control, and the complex relations that Inkas and Inkas-of-privilege from the Titicaca Basin maintained with the Kallawayá.

[45] *First Chair*

Aldeias, Vera (University of Pennsylvania), Dennis Sandgathe (Simon Fraser University), Harold Dibble (University of Pennsylvania), Paul Goldberg (Boston University) and Shannon McPherron (Max Planck Institute)

[8] *The Mousterian Combustion Features at Roc de Marsal*
Recent excavations have revealed numerous hearths in the lower levels of the sequence, especially in archaeological layers 7 and 9. These surprisingly well-preserved fire residues, rare in Mousterian contexts, are comprised of cm-thick lenticular features composed of couplets of ash resting on organic-rich substrates, which are between 20 cm up to ~100 cm across. Their detailed study in the field and in the lab (e.g., micromorphology, FTIR) can potentially provide important insights into past human activities and behavior. This paper outlines methods of excavation and documentation in the field and laboratory, and presents preliminary results about their possible uses.

Alenderfer, Mark (University of Arizona)

[245] *Animal utilization during the Late Archaic-Early Formative Transition: The Evidence from Jiskairumoko*
Faunal materials as well as complex archaeological features from Jiskairumoko during the Late Archaic-Early Formative transition (ca. 2200-1800 BCE) suggest the presence of herded, possibly domesticated, animals at this critical period. The evidence for this assertion is presented, and the implications of these data within a context of increasing sedentism and emerging sociopolitical complexity are explored.

Alex, Lynn (University of Iowa) [238] Discussant

Alexander, Rani (New Mexico State University)

[178] *Maya Collapse or Resilience? Lessons from the Spanish Conquest and Yucatan's Caste War*
Recent calls to extricate the Maya from the stereotype of collapse have singled out cultural resilience as the viable new brand for the political present. In this paper I examine two episodes of Maya collapse and resilience in Yucatan—the Spanish invasion (1511-1546) and the Caste War (1847-1901). I compare archaeological evidence of the strategies and resistances enacted before each catastrophe with those of the aftermath. My evidence suggests that some of the things the Maya did to survive, resist, and accommodate the Spanish colonial regime and Mexico's 19th-century progressive agenda were similar to what they did before.

Allard, Francis (Indiana University of Pennsylvania) [95]

Discussant; [95] First Chair, [95] First Organizer

Allen, Mark (California State Polytechnic University, Pomona)

[127] *Of Earth and Stone: Landscapes of Power in New Zealand and the Western Mojave Desert*
Lush, yet marginal by the standards of Polynesian horticulture, prehistoric New Zealand saw Maori chiefs' tactical and strategic use of terrain and earthwork fortifications to vie for political and economic influence. California's Mojave Desert, arid and forbidding, offers cultural landscapes of greater time depth. More subtle, they nevertheless reveal hunter-gatherers' concerns with economics, fertility, and social power. Here, it is rock and stone that tell of place and power. Both regions have seen much archaeology, but usually with a focus on specific sites. It is argued that a contextual approach brings fresh insights to these contrasting natural and cultural landscapes.

Allgood, Jessica

[172] *Analysis of Faunal Remains from the Carskadon Site (23LE348), a Middle Woodland Havana Hopewell Site in Lewis County, Missouri*

Significant Middle Woodland (Havana Hopewell) and minor Late Woodland occupations were represented at the Carskadon Site (23LE348). Of note from the recovered materials was a very large and remarkably well-preserved sample of faunal materials. The site offers a unique opportunity to better understand faunal subsistence activities from a Middle Woodland Havana Hopewell occupation, as

well as identifying shifts in subsistence behavior through time. This paper summarizes results of the faunal analysis and explores the Middle Woodland subsistence adaptation through comparison with contemporaneous sites in the region.

Allison, James (Brigham Young University)

[253] *Puebloan Sites in the Hidden Hills*
In 2006 and 2007, the Brigham Young University Archaeological Field School worked in the Hidden Hills area of the Shivwits Plateau, in the western part of the Arizona Strip. The field school mapped, surface collected, and tested a number of Puebloan habitation sites dating from about A.D. 800 to the late 1200s. Architecture includes surface roomblocks, stand-alone circular structures, and pit structures, including one deep masonry-lined pit structure that may be a kiva. Ceramic analysis shows that the Hidden Hills residents participated in ceramic exchange networks encompassing other parts of the Arizona Strip as well as more distant places.

Ameida, Francisco [177] see Bicho, Nuno

Alonso, Alejandra [17] see Ardren, Traci

Alt, Susan (Indiana University Bloomington)

[15] *How Many People Does it Take to Change a Polity: Immigration, Complexity and Cahokia*
Migration helped Cahokia grow into the largest pre-Columbian center in North America. There are confounding issues in identifying migrants, as persons, objects, places, and identities interact in complex and interdependent ways. However, based on pottery evidence, a significant number of those who would become the Cahokians originated from points within a 200-300 km radius to the south and east. Preliminary estimates of Cahokia's immigrant community size are provided.

[15] *First Chair, [225] see Buchanan, Meghan E.*

Altizer, Valerie (University of Tennessee, Glenn A. Black Lab) and Timothy Baumann (Glenn A. Black Laboratory of Archaeology, Indiana University)

[62] *Revisiting Gourd Creek Cave (23PH14) in the Northern Missouri Ozarks*
Complexes of caves, rock art, and cairns in the northern Ozarks have been interpreted as ceremonial centers and markers for the Late Woodland Maramec Spring-phase. Gourd Creek Cave underwent excavations in 1918 and the 1960s; however, these investigations did not undergo detailed analysis. A revisit revealed that it may be the center of a similar Late Woodland complex. Artifacts obtained in earlier excavations were analyzed to determine the cave's cultural history and to better understand Ozark settlement. The placement of these complexes on the landscape may be a reflection of cosmological principles by which prehistoric peoples viewed their universe.

Altschul, Jeffrey (Statistical Research, Inc./SRI Foundation) and William M. Graves (Statistical Research, Inc.)

[14] *Chasing our Tails: A Look Forward in Southwest CRM*
We will focus on the practice of CRM in Southwest archaeology over the next 10 years. We begin with how many dollars will be spent on Southwest archaeology, where these dollars will be spent, and the types of projects that will be performed. Next, we point out that in large parts of the Southwest method and theory have followed practice with the findings of CRM often dictating theoretical and methodological research objectives. We see this trend continuing and providing a foundation for envisioning the role of CRM in the archaeology of the future.

Altschul, Jeffrey [253] Discussant; [130] Discussant; [164] see Heilen, Michael

Alvarado, Carlos [229] see Popenoe Hatch, Marion

Alvarado, Claudia [195] see Garza, Silvia

Alvarez, Jose (University of Arizona)

[136] *Art on Rejoneado Walls: Reexamining Symbolism, Expression, and Ideology*

Iconographic works of art (e.g., frescoes, sculptures or retablos), and other forms of colonial art during the seventeenth-eighteenth centuries suggest that the process of cultural interactions between Spaniards, missionaries, and indigenous peoples after European exploration of present-day central and northern Mexico and southern Arizona was gradual. A type of indigenous artwork that has not received the attention it merits is rejoneado panel art, also referred to as panel art, paneling, folk art, or rejoneado (Eckhart 1975:56-57; McAndrew 1965:190). Exploring whether rejoneado panel art is explained by the process of ethnogenesis and/or syncretism is the principal topic of this study.

Amadio, Ayla (Southern Illinois University-Carbondale)

[13] *Ritual Use of Animals at Formative Period Tayata*

Zooarchaeology encompasses more than subsistence when it is used to study ritual activity including seasonal celebrations, feasting, funerary observances and autosacrifice. My analysis focused on faunal remains excavated from Early and Middle Formative contexts at the Mixteca Alta site of Tayata, Oaxaca, and comparisons with contemporary sites elsewhere in Mesoamerica. The context of non-exotic fauna provided insight into their use in rituals; when compared regionally, the patterned use of animals in Mesoamerica is pervasive. This study provides a more thorough understanding of the multidimensional utility of faunal analysis within Mesoamerican archaeology.

Amador, Edgar [162] see Davis-Salazar, Karla L.**Amador, Fabio (National Geographic Society), Dominique Rissolo (Waitt Institute for Discovery), Jeffrey Glover (Georgia State University) and Joe Ball (San Diego State University)**

[109] *Who Were the Middle Preclassic Settlers of Quintana Roo's North Coast? New Evidence from Vista Alegre*

Recent research by the Proyecto Costa Escondida at the coastal site of Vista Alegre has revealed surprising new data about the island's earliest inhabitants. Current models of population movements during the Middle Preclassic have that the original ceramic producing populations moving into the northeast corner of the Yucatan from the west. Evidence for this is based on the similarities between ceramic traditions across the peninsula. The Middle Preclassic materials from Vista Alegre, however, present a more complex picture of these early population movements and show strong affinities to the Mamom tradition of the eastern Petén-Belize area.

Amador, Julio (UNAM) and Julio Amador Bech

[22] *Self-images or Images Beyond the Self? Anthropomorphic Figures in the Rock Art of Northwestern Sonora*

The meaning of many rock art depictions belonging to disappeared cultures eludes us. In the main Trincheras rock art site of northwestern Sonora (La Proveedora-Cerro San José), while anthropomorphic figures are just 10 percent of all petroglyphs, they are nonetheless, intriguing: their corporal attitudes, gestures, apparent movement, and facial dispositions constitute a source of invaluable information about some of their potential cultural and symbolic meanings. As some specialists have attributed a shamanistic ritual origin to the figures, an origin that implies the representation of supernaturals, shamans' spirit helpers, visions of "the world beyond", we raise questions regarding these interpretations.

Amaroli Bertolucci, Paul [191] see Bruhns, Karen O.**Ambrose, Stanley (U. Illinois, Urbana-Champaign), Aimee Carbaugh (University of Illinois, Urbana-Champaign) and Elizabeth Arnold (Grand Valley State University)**

[214] *Identifying Birth Seasonality in Masai Sheep and Goats with Tooth Enamel Oxygen Isotopes*

Masai pastoralists in southwest Kenya allow goats to breed anytime because their browsing diet is available all year. Mating of sheep is restricted to July and August in order to optimize access to fresh grass during gestation and weaning. Variation in enamel oxygen isotopes within teeth is controlled by rainfall, and can reflect seasonality of birth. Teeth of goats from one Masai herd show a non-modal pattern of isotopic variation, reflecting birth in all seasons, while sheep teeth show a unimodal pattern, reflecting a single birth season. This method can be used to investigate prehistoric African caprine herd management strategies.

[214] *Discussant*

Ambrose, Stanley [214] see Betts, Colin; [214] see Dong, Yu; [214] see Waskiewicz Pugh, Christina

Ames, Kenneth (Portland State University) and Cameron Smith (Portland State University)

[203] *Ground Stone, Metallurgy and Embedded Specialization on the Southern Northwest Coast*

Specialized production has long played an important role in theories on the evolution of cultural complexity. It is often associated with high levels of artisanship and extra-household exchange and consumption. Artifact replication and morphological and distributional analyses of large artifact assemblages recovered from three large contemporaneous Northwest Coast corporate households shows specialization in ground stone production in elite residential areas. The same tools are concentrated in lower status areas thought to be copper working locales. This consistency contrasts with other production emphases that vary from household to household. These patterns suggest the presence of embedded specialists.

Amici, Randy [89] see Scardera, Francis**Amick, Daniel S. [146] see Morgan, Brooke M.****Amirkhanov, Hirzi [161] see Blickstein, Joel IB****Amrhein, Laura (University of Arkansas-Little Rock)**

[109] *Priests, Warriors, and Captives: The Platform Benches and Ritual Spaces at Chichén Itzá, Yucatán*

Five platform benches at Chichén Itzá contain similar stylistic and iconographic programs. They are located in similar structures, have the same basic architectural configurations, and depict processional figures. However, variations in the clothing of the figures and objects accompanying them make them distinct enough to raise certain questions about their function within particular structures. An in-depth analysis reveals that they likely served symbolic purposes which refer to ancient Maya cosmology and rituals involving priests, warriors, and captives. Further, they likely demarcated sacred spaces that have historical relevance at the site.

Anaya Hernandez, Armando (Universidad Autonoma De Campeche) and Lorraine A. Williams-Beck (Centro de Investigaciones Históricas y Sociales, Universidad Autónoma de Campeche)

[241] *Jaina: Gateway to the Underworld*

In this paper we postulate a series of hypotheses that reconsider fundamental aspects regarding the creation, function, and geographical location of Jaina during pre-Columbian times. Recent review of burial contexts and the number of individuals interred in them shows that the vast majority documented to date is infants and children placed in a fetal position, within large unslipped jars or alone and with few grave goods. These contexts tend to be found in terrain-leveling platform fill, low platforms, and in close proximity to the ballcourt. While other authors have emphasized the nature of a high pressure demographical situation for the pre-Columbian residents there and in other surrounding areas within the Yucatan Peninsula as an answer to this problem, it would be a worthwhile endeavor to consider another interpretation which revolves around a mythical them frequently found in Maya iconography. If this be the case, then the myth could have been restaged during specific annual time frames

through ritual infant sacrifice at Jaina. Including information from urban design elements and the surrounding natural and cultural environments to the former helps better explain the ideological reason for building an island in this definitive place, instead of other former functional interpretations to date.

Anchukaitis, Kevin [153] see Buckley, Brendan M

Anderson, Christine B. (University of Massachusetts Amherst)

[117] *Scottish Space: A Multidisciplinary Approach*

Attempts to understand the rural transition of Scotland during the 18th and 19th centuries has been approached archaeologically, historically and geographically with research positioned mainly in the Highland and Island regions. I argue that space should be used as a critique to address the failure of researchers to incorporate the regional variation of Scotland in terms of the process of transition and is the common ground upon which multidisciplinary research should be carried out. I believe this involves exploring how populations in the past understood, created, and manipulated space as well as how present researchers have interpreted changing spatial dimensions.

Anderson, David A. (University of Wisconsin-La Crosse) and Timothy L. McAndrews (University of Wisconsin-La Crosse)

[162] *Structure and Choice: Undergraduate Education in Archaeology at the University of Wisconsin-La Crosse*

The Archaeological Studies Program at University of Wisconsin-La Crosse has been extremely successful in ushering undergraduate students into employment upon graduation and into some of the top graduate programs in the country and abroad. This poster presents the curricular parameters within which undergraduate students explore the fundamentals of archaeology while making individual choices that tailor their experience to their individual interests and career goals.

Anderson, David (Tulane University)

[178] *The Middle Preclassic Ballgame: Yucatan and Beyond*

The Mesoamerican Ballgame is a subject that has received a great deal of attention by scholars, largely focusing on the game's political and societal role amongst Classic and Postclassic period Mesoamerican cultures. Discussions of the game's antiquity often focus simply on the oldest known Early Preclassic examples of ballcourt architecture, and assume the courts held a similar role as their later counterparts. Recent discoveries of more than 20 examples of Middle Preclassic ballcourts from Maya sites in Northwest Yucatan, Mexico, provide a new source of data on the early Mesoamerican ballgame and a new perspective on its societal role.

Anderson, David (University of Tennessee)

[61] *The Development of Complex Society in Eastern North America: Lessons from Temperate Europe*

Complex societies characterized by cemeteries and elaborate ceremonialism were present in Eastern North America as far back as the terminal Pleistocene. The construction of massive mound complexes appeared in many areas in the Mid-Holocene, a tradition that persisted until contact. Unlike temperate Europe, domesticated animals were rare, and agricultural food production only became important late. While state societies like those in western South America and Mesoamerica did not develop in the East, most scholars believe they would have eventually. Indeed, some believe that a state did emerge briefly at Cahokia in the central Mississippi Valley around AD 1050.

[61] *First Organizer*, [90] *Discussant*

Anderson, David [24] see Johanson, Erik N.; [224] see Meeks, Scott C.; [224] see West, Allen

Anderson, Derek (University of Arizona)

[21] *Paleoindians and Power Laws*

The Paleoindian Database of the Americas (PIDBA—<http://pidba.utk.edu>) is a large online database that can be used to explore patterns of land use and demographic trends during the Late

Pleistocene and Early Holocene. This paper examines the structure of the PIDBA projectile point data as a whole, showing that it conforms to a power law distribution. This suggests that areas of high and low densities of projectile points should be expected rather than problematic, and that they provide evidence of preferential attachment to certain areas on the landscape both in prehistoric hunter-gatherer groups as well as in modern collectors.

[24] see Johanson, Erik N.

Anderson, Gail (Center for American Archeology)

[215] *Rocky Fork, a Rural Free Black Underground Railroad Community in Southwestern Illinois*

Written histories of the Underground Railroad detail the self-identified contributions of the primarily white stationmasters. Although the exploits of a few black heroes like Harriet Tubman have been documented, the actions of many black participants in the UGRR, for whom discovery might result in enslavement, have remained unknown. Rocky Fork was a rural free black community near Alton, IL, whose origins stretch back to the early 1800's. This vibrant community lasted over 150 years, but today is represented by archeological remains. Oral histories, government records and abolitionist evidence point to Rocky Fork as a way-station on the UGRR.

Anderson, J. Heath (Shippensburg University)

[156] *The Tepeaca Marketplace and the Distribution of Postclassic Polychrome Ceramics*

One of Ken Hirth's enduring interests has been the interpretation of archaeological signatures that reveal past economic behavior. His well-known distributional approach predicts that goods procured through marketplace exchange should be distributed homogeneously among household assemblages. In this paper, I explore the distribution of polychrome ceramics in the Tepeaca area. Tepeaca was the capital of an Aztec tributary province and site of an important prehispanic marketplace. The distribution of polychrome pottery within the survey area suggests that most households would have had access to polychromes through marketplace exchange during the Late Postclassic (AD 1200 – 1519).

[156] *First Chair* [156] *Third Organizer*

Anderson, Jamie (RLAHA University of Oxford)

[175] *Dating the Interaction between Human Settlement and the Climatic/Environmental Change in the Norse North Atlantic, AD 800-1600*

At two archaeological sites, Snusgar, Orkney, and Vatnsfjörður, Iceland, I employ several geochronological methods, including tephrochronology, radiocarbon dating, and OSL, and integrate these within a Bayesian framework to align the timing of environmental conditions with archaeological data about human settlement patterns. The environmental data that I use comes from interdisciplinary collaboration with researchers studying palynology and Quaternary sea-level change, while my own research draws upon the geosciences, landscape archaeology, and anthropology. The ultimate outcome of developing detailed chronological models for each site is to describe the inhabitants' coping strategies from climatic impacts, related to changing sea-level and coastline conditions.

Anderson, Karen

[94] *Late Formative through Late Horizon Occupations Patterns in the Central Valley of Cochabamba*

The site of Piñami was a long term habitation site in the Central Valley of Cochabamba, occupied from the Formative through the Late Horizon. In this presentation I present evidence of changes in domestic patterns during more than 1000 years of occupation at Piñami with special focus on the ceramic evidence. I then discuss the implications of this information for our understanding of social and political changes in Cochabamba and the larger region.

Andonie, Oscar [23] see Falabella, Fernanda

Andrade, Agustin (Zona Arqueológica de Monte Albán, INAH)

[103] *El Análisis Espacial del Conjunto Monumental de Atzompa*
La presente ponencia versa sobre el análisis espacial del Conjunto Monumental de Atzompa, el cual, con su zona nuclear y área periférica, abarca casi la totalidad de la superficie del cerro El Bonete. Ubicado al Norte de la Plaza Principal de Monte Albán, sus constructores generaron conjuntos arquitectónicos monumentales, asociados a terrazas culturales, unidades habitacionales y áreas de acceso, en las laderas y estribaciones del mismo cerro, cuyas funciones probablemente fueron como área administrativa y puntos de observación hacia los valles.

Andrefsky, William (Washington State University), Jennifer Ferris (Washington State University), Justin Williams (Washington State University) and Nathan Goodale (Hamilton College)

[120] *Geologic Context and Diagnostic Provenance of Chert*
Geochemical characterization of cherts has generally been ineffective for determining small scale provenance of tool-stone source locations. This is typically due to large scale formation ranges of cherts and multiple phases of genesis in submarine contexts. Recent geochemical characterizations of cherts in the Owyhee Uplands of southeastern Oregon and southern Idaho show promise for diagnostic source locational distinctions. Our study suggests that chert sources that originated as a result of localized volcanic venting through sedimentary parent materials result in reliable geochemical provenance. Differentiating between chert provenance will ultimately increase our knowledge of archaic peoples procurement patterns.

Andrefsky Jr, William [232] see Fisher, Philip R.

Andres, Christopher (Indiana University - Purdue University Fort Wayne), Gabriel D. Wrobel (University of Mississippi) and Shawn Morton (University of Calgary)

[112] *Introducing Tipan Chen Uitz: A Major "New" Civic-Ceremonial Center in the Cayo District, Belize*

In this paper, we discuss Tipan Chen Uitz— a large pre-Hispanic Maya center recently documented by the Caves Branch Archaeological Survey in central Belize. Previously known only to local hunters, the site lies in a strategic zone between the Caves Branch and Roaring Creek drainages. In this presentation, we consider issues of site location, scale, configuration, and access to nearby caves and rockshelters relative to implications for regional political, economic, and ritual organization in the southern Maya Lowlands.

Andres-Lacueva, Cristina [55] see Lamuela-Raventos, Rosa M.

Andrews, Anthony (New College of Florida) [178] Discussant

Andrews, Bradford (Pacific Lutheran University)

[156] *Calixtlahuaca Obsidian: Initial Reflections of Lithic Technology on the Western Aztec Periphery*

This paper discusses the initial technological impressions identified during the ongoing analysis of flaked stone artifacts from the city of Calixtlahuaca. At present, three notable patterns are evident. First, households appear to have provisioned themselves with finished blades and flake blanks via some form of exchange. Second, many households appear to have produced their own finished bifaces. Third, an intensive bipolar technology was ultimately applied to many of the obsidian artifacts. Finally, the sources represented imply a measure of economic independence even after Calixtlahuaca became part of the empire. These data provide important new comparative information on Central-Mexican lithic technology.

Andrieu, Chloé (Université Paris X Nanterre) and Olaf Jaime Riveron (University of Kentucky)

[229] *A History of Jade: A Diachronic Approach to the Lowland Importation of Jade along the Chixoy-Pasion Routes during the Maya Classic Period*

The Chixoy-Pasion river system was one of two principal routes employed to transport highland goods such as jade or obsidian to the

lowland Classic Maya cities, yet contrarily to the obsidian little is known about the specific way each jade source was distributed and transported. This paper proposes a first diachronic understanding of the jade exchange systems in that region, based on geochemical information source analysis of Classic period jade found at three principal sites along this trade route (Cancuen, Tres Islas, and Seibal). It also shows how the trade of this symbolic material impacted local political and economic organisations.

Andrieu, Chloé [229] First Organizer

Andrus, C. Fred T. [250] see Keene, Deborah A.; [5] see Rich, Kelley W.

Angel, Jules (The Ohio State University, Dept. of Anthropology) [244] *Location, Location, Location: Earthwork Placement within the Central-Ohio Landscape*

Using aerial photography, environmental data and a GIS, this research finds some significance regarding where Pre-historic persons built their earthworks in Central Ohio. A comparison between nine large known earthwork sites and nine randomly placed points shows some choice of certain environments to build in. Soil rarity, elevation difference within 1km of the sites, underlying glacial settings, and soil drainage all show significance when the nine known sites are compared to the nine random points. Thus, earthwork placement within a landscape containing a specific suite of environmental traits may well have been intentional.

Anschuetz, Kurt F. [19] see Bellorado, Benjamin A.

Anselmetti, Flavio [153] see Brenner, Mark

Anselmi, Lisa (Buffalo State College) and William Engelbrecht (Buffalo State College, SUNY)

[38] *Jack Holland, Chert Expert*

Jack Holland's lifelong interest in archaeology began as a boy collecting arrowheads along the flood plains of the West Branch of the Susquehanna River near Lockhaven, Pennsylvania. Upon early retirement from his job as an industrial electrician at the Ford Stamping Plant south of Buffalo, NY in 1985, he began amassing a comparative lithic collection. The collection is now housed in the Buffalo Museum of Science and consists of 22,000 samples from more than 1,500 lithic types from the U.S. and Canada. In recognition of his contributions, Jack received the Crabtree Award from the SAA in 2001 and most recently was named a Pioneer of Science by the Hauptman-Woodward Institute of Buffalo.

Anthony, David (Hartwick College)

[32] *Before the Argonauts: Long-distance Exchange between the Black Sea and the Aegean in the Copper and Early Bronze Ages*

The Aegean and the Black Seas were two separate cultural and economic spheres throughout prehistory. The Aegean Bronze Age opened with the rise of citadels in the northern Aegean, usually interpreted as owing their wealth to control over trade with the Black Sea. But hard evidence for this trade has been lacking. This paper reviews the evidence for trade between the Aegean and the Black Seas prior to the Aegean Bronze Age, between 5000-3000 BC, with emphasis on the Usatovo culture in the Dniester-Danube steppe corridor, which seems to have been a center for such trade beginning 3300 BC.

Anti-Weiser, Walpurga [184] see Bosch, Marjolein D

Antón, Susan C. [206] see Quinn, Rhonda L.

Antonaccio, Carla (Duke University)

[78] *Feast or Famine? Cross Cultural Analogy in Mediterranean Archaeology*

In the last decade much attention has been focused on ritual drinking and feasting behavior in ancient Mediterranean societies, both among the living and in funerary contexts. There has been increasing emphasis on such behavior as a vector for mutual comprehension

and exchange among elites of different cultures in an interconnected Mediterranean. In addition, comparisons have been drawn with other, very different societies in disparate places and times. This paper explores the limits of 'localized' cross cultural analogies of this type in the Mediterranean, and examines how to deploy wider cross cultural analogies effectively.

Antonelli, Caroline (University at Albany - SUNY)

[20] *Analyzing Ceramic Production and Consumption at Mayapan*
Craft production at Mayapan is well-documented, with the exception of pottery-making, about which little is known. This paper utilizes a modal approach to document the variability of production characteristics of a variety of major types and forms of Late Postclassic pottery assemblages from several Mayapan houselots. Domestic contexts come from neighborhoods near to and distant from the monumental center of the city. Most houses were inhabited by pottery consumers, although one pottery production houselot is represented. Metric and on-metric attributes of ceramic rims permit an evaluation of production standardization and variation in assemblages and types at different Mayapan residences.

Anyon, Roger (Pima County CRHPO) [192] *Discussant*; [128] see Creel, Darrell G.

Aoyama, Kazuo (Ibaraki University)

[221] *Symbolic and Ritual Dimensions of Preclassic and Classic Maya Obsidian*

The results of over 20 years analysis on over 130,000 chipped stone artifacts from the Copán region, Honduras, and the Seibal and Aguatega region, Guatemala are summarized and discussed. The objectives of this regional-scale analysis were to elucidate symbolic and ritual dimensions of (1) procurement, exchange, and production of obsidian utilitarian goods; (2) chipped stone weapons and warfare; (3) the variability of artistic and craft production; as well as (4) elite ritual as theatrical performance.

Applegate, Darlene (Western Kentucky University)

[244] *Contemporary Archaeological Systematics: Perspectives from Kentucky*

Among the many things I learned from William Dancey is an appreciation for critical evaluation and application of archaeological units. Systematics is not just a theoretical endeavor. Systematics shapes the archaeologist's formulation of research questions, selection of field methodologies, approach to artifact analysis, and, ultimately, data interpretation. In this paper, I consider the current state of archaeological systematics in Woodland research in Kentucky, focusing on Adena and Hopewell.

Arakawa, Fumi [19] see DeFrank, Laura

Arakawa, Fumiyasu (Crow Canyon Archaeological Center) and Jamie Merewether (Crow Canyon Archaeological Center)

[235] *Evaluating Chaco Influences in the Central Mesa Verde Region Using Material Culture*

Archaeologists have assumed that residents of the Mesa Verde region had a more open, frequent interaction with people outside during Chaco Phenomenon (A.D. 1050–1150), but that interaction declined afterward. To investigate this assumption, we compile several artifact types—non-local pottery and lithics, perishable materials, and ornaments—from solid contexts in the late Pueblo II, early Pueblo III, and late Pueblo III periods. Our null hypothesis is that these data support the common assumption about frequent trades during the late Pueblo II period; our alternative hypothesis is that residents of the region may have maintained their own tradition through time.

Arav, Reuma [147] see Nadel, Dani

Arazi-Coombs, Sandra (University of New Mexico)

[131] *Analysis of Decorated Ceramics from the Pueblo Bonito*

Mounds.

This presentation will provide an overview of data from the analysis of decorated ceramics from the Pueblo Bonito mounds. Approximately 50,000 black-on-white sherds were analyzed over the course of two years. Initial results regarding ceramic production and exchange are outlined, including comparisons with ceramic data from Pueblo Alto and 29SJ629.

Arbuckle, Benjamin (Baylor University)

[64] *Producing, Distributing and Consuming Animals: Evidence for Emerging Complexity in Chalcolithic Anatolia*

In this paper we explore evidence for complexity within systems involved in the production, distribution and consumption of animal resources in Chalcolithic Anatolia. Although evidence for material differentiation within early and middle Chalcolithic communities is generally lacking faunal evidence suggests that animals may have been important symbols as well as sources of inequality in these early communities. The Early Chalcolithic animal economy therefore may represent a unique 'social theater' to which the expression of inequality, competition, and emerging complexity were confined prior to their expression in other types of material culture in the later Chalcolithic.

[62] see Ereke, Cevdet Merih; [64] *First Organizer*; [214] see Meiggs, David C.

Arco, Lee (Washington University in St Louis) Anthony Ortmann (Murray State University)

[251] *Jaketown's Buried Landscape: Recent Research at a Poverty Point Settlement in the Yazoo Basin, Mississippi*

The Jaketown site in west-central Mississippi is the second largest extant Poverty Point settlement. Despite previous study, a lack of reliable chronometric data and deficient knowledge of the complex stratigraphy have led to varied interpretations of the site's cultural and geomorphologic history. Geoarchaeological datasets recently acquired through excavation and coring provide a new perspective on the chronology of Poverty Point habitation and earthwork construction at Jaketown, as well as on flood-related events associated with the end of the Late Archaic occupation.

Arco, Lee [26] see Lizarralde, Marina I.; [26] see Carignano, Micaela

Ardelean, Ciprian (University of Zacatecas, Mexico)

[139] *El Chechén Archaeological Project: General Considerations about Settlement Patterns and Cultural Dynamics in several Terminal Classic Mayan sites around the El Chechen Wetlands, Middle Candelaria River, Campeche, Mexico*

The goal of this research was to explore an area around the rich wetland ecosystem on the Candelaria River surviving in the middle of cattle-raising savannas in order to identify unknown Mayan sites. Fieldwork led to the discovery of five Late and Terminal Classic settlements sharing spatial and artifactual features. Topographic mapping, surveys and surface collecting allowed us to reveal a cultural portrait of an area that used to remain blank on the Maya world maps. An extensive rescue digging exposed a funerary complex of simple pit burials that probably connect to the phenomena usually referred to as the "collapse".

Ardren, Traci (University of Miami) and Alejandra Alonso (Instituto Nacional de Antropología e Historia/ University of Calgary)

[17] *Engendering Craft Producers During a Period of Economic Change: The Shell, Textile, and Lithic Artisans of Terminal Classic Xuenkal, Yucatan, Mexico*

Economic intensification is a key component in theories used to explain the rise of the later Maya city Chichen Itza. Recent excavations at a site along trade routes that connected Chichen Itza to its port have revealed evidence for intensification of craft production within the elite domestic sphere. Goods traditionally gendered female, such as textiles, but also those overlooked in engendered research were produced at an elite residential platform

within Xuenkal. This paper attempts to more fully engender craft production and thus to explore the involvement of women's labor within the economic intensification that drove Terminal Classic Chichen Itza.

Argo, Lindsay [54] *see Jackson, Sarah E.*

Ariztegui, Daniel [153] *see Brenner, Mark*

Arkush, Elizabeth (University of Virginia)

[1] *Precolonial Warfare and the Problem of Rationality*
Archaeologists debate whether decisions in warfare are driven by necessity or shaped by culture. This paper discusses the results, methods, and theoretical underpinnings of an archaeological project on late pre-Columbian hillforts in southern Peru. Several seasons of survey and mapping have given fruitful information about conflict and political process in the region. The project has also made fundamental assumptions about the rationality of past populations at war, for instance in the use of GIS analysis, which implicitly privileges environmental over cultural factors. I discuss this and alternative visions of pre-Columbian warfare, and speculate on the ways we arrive at them.

[220] *Discussant*; [127] *see Plourde, Aimee M.*

Armitage, Ruth Ann (Eastern Michigan University) and Suzanne Baker (Archaeological/Historical Consultants)

[62] *Cueva La Conga: First Cave Archaeology in Nicaragua*
Cueva la Conga is the first limestone cave with paintings and modified speleothems found in Nicaragua and is the furthest south in the Mesoamerican periphery that such a cave has been reported. It is thus of major significance for Nicaraguan and regional archaeology. Charcoal paint samples from some of the images in the cave have thus far produced radiocarbon dates spanning from ~1200 B.P. to ~300 B.P. Rock art motif comparisons are being made to attempt to better establish the cultural associations of the cave. The results of these studies provide some of the first archaeological information for northern Nicaragua.

Armstrong-Fumero, Fernando (Smith College)

[212] *When Does it Stop Being Heritage?: Pre-Hispanic Ruins and Contemporary Vernacular Architecture in Yucatán, Mexico*
The re-use of pre-Hispanic materials to construct house platforms, fences and other everyday structures has a deep history in the lives of rural Yucatec Maya communities, with evidence of selective re-use and transformation of structures spanning from the Pre-Hispanic period to relatively recent times. However, this involves a series of practices that are coded as looting or illegal excavation in the official legal frameworks of the INAH. Reconciling the kind of cultural tradition embodied by the re-use of stone with the demands of contemporary antiquities laws offers a particular series of challenges for thinking about cross-cultural dialogues on heritage.

Arnould, Charlotte (CNRS)

[229] *New Models to Address an Old Question*
Classic Maya Highland-Lowland trade relations developed along routes to be defined geographically, but also in socio-political terms. Topography was determinant, but "centers" operated exchange mechanisms. As it now appears, in both Highlands and Lowlands large settlements were each internally organized according to the atepetl model, an alliance of distinct groups united under one king in one head-city located where their respective territories intersected and where the king lived. Such capitals were "gateways" locally, some of them were also "gateways" regionally between Highland and Lowland entities. Such a novel view helps integrate distinct trade modes at several spatial and social scales.

[229] *Discussant*

Arnold, Elizabeth [214] *see Ambrose, Stanley H.*

Arnold, Philip (Loyola University Chicago) [133] *Discussant*

Arnold, Phillip [85] *see Thompson, Victor D.*

Arnold III, Philip J. [254] *see Wilson, Nathan D*

Arntzen, Kristen (Washington University - St.

Louis) and Julieann Van Nest (New York State Museum)
[259] *A Case Study of Mid-Holocene Landscape Evolution and Archaic Lifeways in the Midwestern Uplands: The Allscheid Rockshelter in Monroe County, Illinois*

Attempts to model the long-term trajectories of economic and social intensification among Midwestern hunter-gatherers are intricately tied to understanding a series of post-Pleistocene paleoenvironmental shifts in climate, seasonality, vegetation, sedimentation and soil regimes. The general landscape picture is one of long-term paraglacial response superimposed by numerous short-term deviations. Unraveling geogenic causes of observed stratigraphic changes from equally plausible anthropogenic causes remains a challenging task for geoarchaeological research. We focus on the small, upland Allscheid section, close to the bluff-base Modoc Rock Shelter, for a measure of independence in evaluating some of the choices made by the region's Archaic inhabitants.

Arratia Velasco, Elizabeth (UMSA)

[245] *The Economic Role of Fish in Mollo Kontu, Tiwanaku, Bolivia (600-1100 AD)*

This paper offers an introduction to the study of economic organization and ichthyological resource management at Tiwanaku, Bolivia, where fish was an important food source in both quotidian and ritual society during the years AD 600-1100. The author presents preliminary results of an ichthyoarchaeological analysis of residential and mortuary contexts from Mollo Kontu, conducted by the Jach'a Marka Archaeological Project, and will discuss patterns of state participation in resource management and processes of socio-political centralization in a Tiwanaku neighborhood.

Arribalzaga, Victor (INAH)

[242] *El Agente Social en el Paisaje del Monte Tláloc, Estado de México*

En el edificio prehispánico ubicado en la cima de la montaña de 4150 metros sobre el nivel del mar, rodeado de volcanes nevados, se encuentran las huellas de los agentes sociales que dejaron sus mensajes en la arquitectura, donde con ciertos detalles plasmaron su forma de ver el mundo, su culto a la montaña, que al parecer se venía construyendo desde la época neolítica, específicamente el integrar la agricultura a su vida.

Arroyave Prera, Ana Lucia [77] *see Navarro Farr, Olivia C.*

Arroyo-Cabrales, Joaquin (Instituto Nacional De Antropología E Historia), Alejandro López-Jiménez (Instituto Nacional De Antropología E Historia, México), Guadalupe Sánchez-Miranda (Instituto Nacional De Antropología E Historia, México) and Vance T. Holliday (University Of Arizona)

[235] *"Fin Del Mundo" Pleistocene Fauna, Sonora, México*
Locus 1, at "Fin del Mundo" Clovis site, Sonora, México, has an interesting species complex, which could be divided in two faunules. The upper stratum, dated at 11,040±580 cyBP, contain a juvenile gomphothere (*Gomphotheridae*, tapir (*Tapirus haysii*), and mammoth lamellae, probably meaning humid, warm forested habitat at the site. The lower stratum, relatively dated between 11,000 and 15,000 cyBP, may have formed on different conditions (cold, dry grassland habitat), with mastodont (*Mammuth americanum*), and horse (*Equus sp.*). Small vertebrates were also found at Locus 1, including hare (*Lepus sp.*), woodrat (*Neotoma sp.*), desert tortoise (*Gopherus sp.*), and frog (*Amphibia*, *Anura*).

Arroyo-Kalin, Manuel (Durham University), Cristiano Nicosia (University of Milano), and Yannick Devos (Centre de Recherches Archéologiques, Université Libre de Bruxelles, Belgium)

[259] *The Geoarchaeological Study of Anthropogenic Dark Earths*

Until recently dark earths embedding archaeological remains have been considered as homogeneous, dark-colored, poorly-stratified deposits of secondary interest for archaeological understandings. However in past years geoarchaeology has begun to show the enormous potential of studying these soils. In this paper we offer a perspective on the subject based on the comparison of soil micromorphological, textural and geochemical evidence compiled in independent studies of Amazonian and European dark earths. A discussion of questions and observations unpacks the importance of our findings and outlines a framework for the future study of these and other archaeological soils.

Arthur, Kathryn (USF St. Petersburg)

[17] *Reevaluating Gender Roles and Stone Tool Technology in Prehistoric Economies*

Paleolithic studies continue to describe Stone Age women's labor as low-skilled, expedient, and homebound including their lithic technologies. This paper reveals a detailed ethnographic study of women and stone tools focusing on the lives and histories of a select group of Konso women, who procure high quality stone from long distances, produce formal tools with skill, and use their tools efficiently and effectively. These Konso women are skilled knappers, who developed their expertise through long-term practice and apprenticeship. Konso stone tool-using women serve as an alternative to the man-the-toolmaker model redefining Western naturalized gendered division of labor in craft production.

Artz, Joe [150] see Scholl, Nathan C.

Asbury, Sophia (Washington State University)

[200] *Rim Arcs of Cibola: Feasting on the Pueblo/Mogollon Interface*
In the Southwest, feasting has been characterized as either communal or aggrandizing. In the Mogollon area it is thought to have been communal, while in the Pueblo world it seems to be aggrandizing. Located in the Southern Cibola region, the Chaco era (A.D. 1050-1130) great houses of Cox Ranch Pueblo and Cerro Pomo provide the opportunity to characterize feasting at the border of the Pueblo and Mogollon worlds. Rim arc analysis of plain and painted wares from the great houses and surrounding communities provide inferences about the intra- and inter-site feasting dynamics of Cibola communities.

Asch, David (New York State Museum) and Nancy Asch Sidell (Center for American Archeology)

[173] *Lower Illinois Valley Archeobotany: 1970-1985*

By 1970 the Illinois Valley Archeological Program's flotation system was recovering carbonized plant remains in prodigious quantities. But how was one to use these materials? Between the performance of a prehistoric activity and preservation of an archeobotanical assemblage, so many events of selection, reduction, and disorganization intervene that inferences from excavated remains to prehistoric behavior or environment may seem scarcely feasible. Nevertheless, as sampling, analytical, and interpretative methods advanced, patterns emerged that almost certainly are signals of behavior and environment. Investigation of the economic potential, systematics, and morphology of key species contributed significantly to interpretations of the region's archeobotanical record.

Asch, David [215] see Asch Sidell, Nancy

Asch Sidell, Nancy (Center for American Archeology Research Associate) and David Asch (New York State Museum)

[215] *Early Archaic Archaeobotany of the Koster Site, Illinois*
Archeobotanical studies of lower Illinois Valley components span more than 8000 years and record a sequence of plant utilization at first involving minor levels of plant-food harvesting and food storage, followed by major reliance on (managed?) nut masts and (over several millennia) gradually increasing reliance on an annual-plant horticulture. Significant changes in the region's vegetation (anthropogenically induced in part?) occurred during this time. Multiple stratified occupations at the Koster site open a window on

long-term trends at one locality. This paper reports new archaeobotanical analyses from Koster Horizons 11-12, the site's earliest major occupational unit (8700-8100 RCYBP).

Asch Sidell, Nancy [173] see Asch, David L.

Ash, Richard [161] see Inanez, Javier G.

Asher, Brendon (University of Kansas)

[111] *Historic Pawnee Chipped Stone Technology*

Chipped stone materials from two Kitkahahki sites are considered; site 14RP1 in Republic County, Kansas, and the Hill site (25WT1) in Webster County, Nebraska. These two assemblages represent the only Kitkahahki chipped stone collections from known contexts with substantive documentation and adequate recovery for analysis. Stone sources and artifacts types are reviewed, and significant changes in chipped stone technologies are reviewed. Research at these two sites will provide a foundation for future studies in Kitkahahki chipped stone technologies and beyond.

Ashmore, Wendy (University of California, Riverside)

[218] *Just the Facts, Ma'am*

A consistent theme across Will Andrews' career is his insistence (like Joe Friday's) on interpretive rigor, on a just and thoroughly critical evaluation of all available evidence in each and every case. In this paper, I examine Andrews' interpretations of evidence from two places he's worked in southeastern Mesoamerica—at Quelepa and later, at Copan—and discuss some of the impact his thinking continues to have on work elsewhere in the region. My choice of analytical focus is spatial organization, as expressed in architecture, settlement patterns, and landscape. Andrews' findings have profoundly constructive implications for modeling ancient lifeways.

Asner, Greg [230] see McCoy, Mark D.

Atalay, Sonya (Indiana University)

[7] *Grandmothers and Grandfathers[Culturally Unidentifiable: NAGPRA and The Power of Naming]*

In 20 years NAGPRA has resulted in the repatriation of ~31,995 ancestral remains. Still ~120,000 individuals remain in possession of Federal Agencies or museums; having been labeled "culturally unidentifiable". Many Native American communities view these as ancestors— naming them "grandmothers and grandfathers". The power to determine cultural affiliation and the data required to make such determinations is the central focus of this paper. I argue that if we take repatriation and the intent of NAGPRA seriously, the next 20 years requires focused effort to erase the cultural space existing between naming these individuals "culturally unidentifiable" and restoring their status as "grandparents".

[66] *Discussant*; [159] *Discussant*

Atherton, Heather (Columbia University) and Jun Sunseri (University of California, Berkeley)

[193] *Vecino "Status" in Two 18th-Century Border Communities*

This paper explores vecino identity as it was expressed in two 18th-century villages: LA917 (or "Casitas Viejas") in the Northern Rio Grande and San José de las Huertas in the Middle Rio Grande. Although these settlements were a product of similar historical forces (such as the Bourbon Reforms), archaeological, archival and oral historical research on the two communities reveal that some degree of diversity existed at the local level. As such, villagers in both communities employed a variety of strategies to deal with the precariousness of frontier life.

Atherton, Heather [181] see Rothschild, Nan A.

Atici, Levent (University of Nevada, Las Vegas)

[64] *Animal Bones vs. Clay Tablets: Zooarchaeology of the Kultepe/Kanesh and Kaman-Kalehyuk sites, Turkey*

This paper probes whether there is a correlation between patterns of sociopolitical organization and animal exploitation using

archaeofaunal assemblages from two Turkish sites. Developing a picture of animal exploitation at Kultepe/Kanesh and Kaman-Kalehöyük, a major urban center and a small town, respectively, I seek to identify zooarchaeological signatures of socioeconomic inequalities. A large number of cuneiform tablets unearthed at Kultepe/Kanesh offer direct evidence for many aspects of life and hint about food production and consumption during the Middle Bronze Age (2000-1750 BC) in central Anatolia, providing us with a unique opportunity to test the relationships between textual and zooarchaeological evidence.

Atkins, Ashley (College of William and Mary), Christopher Shephard (College of William and Mary) and Martin Gallivan (College of William and Mary)

[225] *Memory and Social Reproduction in the Algonquian Chesapeake*

Native communities in the Chesapeake have recently invoked memories of places and events of the precontact past in more public ways. We draw connections between these invocations and the circa AD 1300 establishment of several communities with prominent landscape features that served as centers of social construction. During the colonial-era Chesapeake Algonquians continually revisited and reconfigured these places to bury ancestors, sacrifice animals, and inter objects, even after the residential population departed. We conclude by discussing the roles that memory, materiality, and landscape play in precontact social reproduction and the social engagement of contemporary Native communities with the deep past.

Atkins, Victoria (Bureau of Land Management)

[75] *Beyond NAGPRA: Native Voice Interpretation at the Anasazi Heritage Center & Canyons of the Ancients National Monument*

This presentation will describe the interpretation/consultation template which has been used successfully on such projects as Ancient Images & Pueblo Perspectives, the Visit With Respect film project, and the 2009 Sand Canyon Trail brochure. This poster will illustrate the critical roles of partnerships, developing trust relationships with American Indians and partners and working together on common ground by making presentation to tribal cultural preservation offices and advisory teams.

Audouze, Françoise (CNRS- France)

[104] *Mobility and Social Organization in the Late Magdalenian of the Paris Basin (France)*

Comparing several Magdalenian settlements of the Paris Basin and the two Swiss settlements of Champprévères and Monruz sheds light on the part played by reindeer and horse hunting in organizing the regional mobility system. In the Paris Basin, family units move around from one residential hunting camp to the next according to a system of varying mobility with more durable settlements during the winter and camps of shorter duration during the other seasons. Residential hunting camps occupied by one to less than half a dozen family units are the only known type of settlement without base camps or logistic camps.

Auerbach, Benjamin (The University of Tennessee) and Thaddeus Bissett (The University of Tennessee)

[15] *One from many? Mississippian Morphological Variation in Body Shape and Proportions*

This study compares body shape variation reconstructed from skeletal remains among and within three broadly stylistically distinct Mississippian regions. We hypothesize there is no significant morphological variation among the regions, assuming gene flow accompanied cultural exchange regardless of stylistic regional differences. Results show significant differences between western Caddoan populations and groups from the east, which did not differ from each other. There is significant variation in morphology within the two eastern regions. Comparisons of Mississippians with samples from neighboring Plains Village and Fort Ancient cultural regions, however, indicate relative homogeneity in Mississippian peoples' morphologies, with the exception of the Caddoans.

Aura, J. Emili (Universitat de València), Jesús F. Jordá (Universidad Nacional de Educación a Distancia, Madrid), Lourdes Montes (Universidad de Zaragoza) and Pilar Utrilla (Universidad de Zaragoza)

[177] *Younger Dryas in Eastern Spain: The Ebro Basin and the Mediterranean Zone*

There are two macro-biogeographic regions represented on the Iberian Peninsula: the Mediterranean and the Eurosiberian. Prehistoric hunter-gatherer societies have been well-studied in both, generally from the perspective of linking cultural changes with paleoenvironmental shifts. Between these two regions is the basin of the Ebro River, which flows NE to SW along the southern edge of the Cantabrian-Pyrenean mountain chains and down to the Mediterranean Sea. Its importance as an avenue of communication has long been understood in Spanish prehistory. The goal of this presentation is to compare the Ebro and Mediterranean regions during Greenland Stadial 1--Younger Dryas--focusing on the record of the transition between the Upper Palaeolithic and Epipaleolithic, drawing notably on site distributions, radiocarbon chronology, paleoenvironmental reconstructions and the sequence of archaeological evidences for human adaptations in this southerly part of Europe the end of the Pleistocene.

Ausel, Erica and Della Cook (Indiana University Bloomington)

[30] *Sit Like a Lady: Sexual and Temporal Dimorphism of Femoral Morphology of Midwest Prehistoric Native American Sites*

Markers of occupational stress are understood to be caused by repetitive and long-term mechanical stress loads on the skeleton. Previous archaeological, ethnographical, and osteometric analysis of two Illinoian prehistoric Native American sites has suggested temporal and sexual dimorphism of femoral morphology related to culturally influenced postural habits. This study expands on the previously presented data to include analysis of femora from the Angel Mounds site, located in Southern Indiana. The presented research works to expand our knowledge of the effects of continued behavior and mechanical stress on the skeleton.

Ausel, Erica [257] see McGill, Dru

Austin, Robert (Southeastern Archaeological Research Inc.)

[170] *Doing Archaeology Publicly: The Bayshore Homes Project*

The Bayshore Homes archaeological site is a large mound and midden complex located in the Parque Narvaez subdivision of St. Petersburg, Florida. Over the past decade, archaeological excavation and research has been conducted in a very public environment: the front and back yards of the subdivision's residents. Involving the residents as partners in the process of discovery about the neighborhood's ancient past has been an essential component of the project since its inception. This paper discusses the results of such involvement, from the use of volunteers to educating residents about the importance of preserving the neighborhood's Native American heritage.

[170] *First Organizer; [170] Discussant*

Authier, Martin (Southern Methodist University) and Manuel Perales Munguía

[114] *Processes of Architectural Intrusiveness at the Castillo de Huaricanga (PV38-333), Fortaleza Valley, Peru, during the Formative Period (~1800 BC – 200 AD)*

We seek to define several processes of architectural intrusiveness that can be identified in the archaeological record, such as excavation, remodeling, and redesigning, as a first step toward explanation. We will offer examples from archaeological sites from around the world, while focusing on the architectural intrusiveness at an early stone monument on the Peruvian coast. The Castillo de Huaricanga (PV38-333) was constructed in the middle Fortaleza Valley during the Initial Period (~1800-900 BC). Following its construction, massive alterations were made to the architecture of the monument, ranging in both degree and nature of architectural intrusiveness.

Avery, George [73] *see Ernenwein, Eileen G.*

Avery-Quinn, Samuel (University of Tennessee, Knoxville)

[219] *Seeking the Tents of Zion: Landscape and Performance in an Archaeology of Camp-Meeting Revivalism*

This presentation explores the landscapes and material culture of a late 19th century revivalist organization, the National Camp-Meeting Association for the Promotion of Holiness, at three sites in Pennsylvania, New Jersey, and New York. Differences in landscape, historical reports, and material culture deposits at the sites have important implications for the archaeology of "ritual" at historic period "religious" sites in North America.

Awe, Jaime (Institute of Archaeology, Belmopan, Belize)

[107] *Messages from the Dark: The Ideological Significance of Ancient Maya Cave Art in Belize*

A decade of intensive research by the Western Belize Regional Cave Project recorded substantial evidence of ancient Maya cave art in Belize. Our research also established that the corpus of cave art in this area was produced on diverse mediums, and that the images represented were executed in styles that may range from the abstract to the real. Despite the diversity in style and execution, however, a careful study of the corpus indicates the recurrence of particular images, and notes that much of the subject matter is intrinsically associated with pervasive underworld themes in the Maya area.

[54] *see Powis, Terry G.*; [107] *Second Organizer*; [153] *see Iannone, Gyles*; [159] *Discussant*; [221] *see Stemp, William James*

Ayers, Harvard (Appalachian State University)

[167] *Blair Mountain Archeology and Listing Defense*

I led the first professional archeological research effort at the site of the 1921 Battle of Blair Mountain in 2006. I co-authored the successful nomination for the site to the National Register of Historic Places, and led the fight to prevent the delisting of the site by the state of West Virginia and the coal industry. This paper will discuss these activities.

[167] *First Chair* [167] *Second Organizer*

Ayers-Rigsby, Sara (The Public Awareness in Archaeology Group)

[24] *Issues of Access-Does Publicly Available GIS Information Help or Hinder the Archaeological Record?*

This paper deals with issues between security and open access to scientific information. Many State Historic Preservation Offices, such as the NYSHPO, the PHMC, and IHPA, have made archaeological data and GIS maps of site locations available online. In many cases, access to these databases is limited to archaeology professionals, and the general public can only view a soft version where site locations are not given, and artifacts are not specifically mentioned. These databases are an invaluable tool for the CRM professional, as they limit the need to go physically to an office and pour through past reports, but they also seem to limit the information they provide, often only giving an abstract of prior reports for the area. In addition, while they inform the general public about loosely defined 'archaeologically sensitive areas,' they do not go further than that and provide no guidance for the avocational archaeologist or history buff that is acting in accordance with the law. This paper addresses who the current users of systems like HAARGIS or CRGIS are, and how they can be improved to promote archaeology and attract a wider audience.

Ayvaz, Melissa [26] *see Ruhl, Donna L.*

Baca Marroquin, A. Emily

[137] *Political Transformations in the Central-South Coast of Peru, Asia Valley*

Political changes and social transformations occur when imperial and non imperial societies meet and this can be observed when Incas conquered regions along the Tahuantinsuyo. However, everything is not rigid in politics and different situations in between take place determining the strategy of domination. This situation can be

observed in Central-South coast of Peru where particular policies were employed during the Inca conquest of Asia Valley. In this presentation I will explore this problematic in the archaeological site of Uquira, Asia Valley and attempt to reconstruct the political scenario of the conquest of this area.

Baena Preysler, Javier (Professor of Prehistory), Elena Carrión Santafé (Subdirección General de Museos Estatales; Ministerio de Cultura. Madrid) and Felipe Cuartero Monteagudo (Universidad Autónoma de Madrid)

[58] *North Iberian affairs: Neanderthals at the End of Mousterian*

The particular ecological and physiographic conditions of Cantabria draws an especially interesting picture of human adaptations in the final part of the Mousterian. The Esquilieu Cave site shows one of the most complete chronological sequences of the Cantabrian Mousterian, beginning in early OIS 3, including OIS 3c and the OIS 3b and the environmental events H5 and H4, until the H3. All of this reinforces the "Cantabrian singularity", namely the possible co-existence of the earliest Aurignacian of southern Europe and some of the most recent Mousterian.

Bailey, Katri (PARC) and John Kelly (Washington University)

[140] *The Moorehead Moment and the Medium is the Message: the Historical and Distributional Significance of Wells Incised Plates*
Ceramics provide a medium conveying messages that extend well beyond their use in the construction of chronologies. In this paper we will explore the Moorehead Phase ceramic assemblage and the nature of continuity, change and the way in which social and ritual messages are contained and displayed by focusing on Wells Incised Plates and the shift away from the decorated jar, Ramey Incised. Incised plates are an important horizon marker over a broad geographic area of the Southeast and, as a serving vessel accentuate the way in which the Mississippian world of the 13th century is connected.

Baillie, Hal [13] *see Joyce, Arthur A.*

Baine, Keelin (University of Iowa) and Matthew E. Hill, Jr. (University of Iowa)

[234] *Procurement on the Plains: An Analysis of Large Bodied Mammals at the Scott County Pueblo*

Excavations of the Scott County Pueblo, a Protohistoric-age site in western Kansas, has recovered large quantities of faunal remains of large bodied mammals, namely bison and antelope. This analysis examines the bison procurement and processing strategies used by the site's inhabitants. Documentation of the faunal remains and taphonomic life history of the assemblage are also discussed. Conclusions are made pertaining to the relative importance of hunting in the group's subsistence strategy, preferential selection and transport of certain carcass parts, and the cultural adaptation of the people living on the plains.

Bair, Daniel [20] *see Terry, Richard E.*

Baitzel, Sarah [226] *see Johnson, Kent M.*; [226] *see Plunger, Elizabeth*

Baker, Bryan [135] *see Batista Martinez, Raquel*

Baker, Larry (San Juan County Museum Association/Salmon Ruins) and Brooks M. Marshall (San Juan County Museum Association/Salmon Ruins)

[213] *The Anatomy of an Ancient Observatory at Salmon Pueblo*

The implications that observations made by prehistoric astronomers were incorporated into the construction of Ancestral Puebloan structures have been suggested. It has been proposed that architectural floor plans of several buildings in Chaco Canyon, New Mexico and its outliers are the result of astronomical geometry being used. Such relationships have been interpreted for Salmon Pueblo, a Chacoan satellite on the San Juan River. Continuing research on archaeoastronomy at the site has revealed a single room that

functioned as an observatory for making celestial observations. Data on the room's constructional features as related to astronomy are presented to support this conclusion.

Baker, Lori [138] *see Benz, Bruce*

Baker, Suzanne (Archaeological/Historical Consultants)

[22] *Classification, Quantification, and Regional Comparisons of the Rock Art of Ometepe Island, Nicaragua*

Maderas Volcano on Ometepe Island, Nicaragua, has the largest concentration of petroglyphs yet reported in Central America. Motifs on over 700 boulders—a small portion known on the island—were subjected to typological and quantitative analyses. Abstract curvilinear designs are predominant. Representative images exist but in far fewer numbers. Comparisons with petroglyph motifs in regions to the south and north indicate that Ometepe petroglyphs were more affiliated with a widespread abstract curvilinear tradition found in rock art in lower Central America and probably associated with Chibchan cultural. Indicators of Mesoamerican contact and influence were found, but are a relatively weak presence.

[62] *see Armitage, Ruth Ann*

Balam, Pakal [212] *see Ishihara, Reiko*

Baldia, Christel [255] *see Levine, Mary Ann*

Baldwin, Derrick [75] *see Martin, Dan W.*

Balkansky, Andrew K. [169] *see Meissner, Nathan J.*

Ball, Joe [109] *see Amador, Fabio E.*

Ball, Stephen (USDANRCS)

[257] *Forty Years in the Wilderness: Sporadic Excavations at the Angel Site (1965-2005)*

The Angel Site is known primarily from the excavations of Glenn Black (1939-1962) posthumously assembled and published by James Keller in 1967. After 1965 there was a hiatus in excavations at the site but, several Indiana University field schools were conducted at the Angel site prior to resumption of annual excavations by Indiana University in 2005. This paper will present the findings of these neglected field schools (1976, 1977, and 1989) and discuss their relevance in light of both Glenn Black's work and the greater understanding of the Angel site that has developed over the last forty years.

Ballenger, Jesse (University of Arizona), C. Vance Haynes, Jr (University of Arizona) and Vance T Holliday (University of Arizona)

[21] *Palominas Arroyo: A 13 ka Paleoenvironmental Record from the Upper San Pedro Valley, Southeastern Arizona, USA*

Three cores and a suite of 20 14C dates show that wetlands occurred in the inner valley at 13-9.44 ka, bracketing Clovis occupations and "black mat" formation. At 9.44 ka the wetland was catastrophically buried. This event was prefaced by a switch to C4 grasses (9.95 ka). Nearly 4 m of sediments accumulated in the arroyo between 9.44-7.34 ka. Clovis-age pollens and environmental isotopes are compared to a nearby high-resolution speleothem record. The paleoecology and archaeology of the valley is discussed in relation to the BA/YD transition and the development of the N.A. Monsoon.

Ballenger, Jesse [234] *see Zedeno, Maria N.*

Baltus, Melissa (University of Illinois Urbana-Champaign)

[15] *Community in Conflict? Warfare and Violence in Cahokian History*

Construction of a palisade at Cahokia in the mid-twelfth century signals to many archaeologists the initiation of conflict. However, aside from a handful of fortified sites, some burned structures, and warrior iconography (created at and dispersed from Cahokia), more conclusive evidence for conflict is lacking in the American Bottom.

This contrasts with the larger region within Cahokia's influence where there is unquestionable evidence for violence. This paper will explore possible sources and directions of conflict with the goal of understanding how violence became reiterated throughout Cahokia's history, and, in fact, may have been written into the Cahokia's history from its inception.

Balzotti, Chris (Brigham Young University), Richard Terry (Brigham Young University), Ryan Jensen (Brigham Young University) and Steven Peterson (Brigham Young University)

[160] *Modeling the Maize Agriculture Potential of Landforms in the Sierra del Lacandon and Tikal National Parks, Guatemala*
Models provide a means to better understand spatial patterns found in and around archaeological sites. With much of the Sierra del Lacandon National Park currently inaccessible due to illegal settlement, an agricultural potential model was created. The model identifies areas with varying potential for maize agriculture. The model is based on data derived from the AIRSAR digital elevation model (DEM). We tested the model against ground-referenced soil and vegetation data collected in the Sierra del Lacandon and Tikal National Parks.

Bamforth, Douglas (University of Colorado)

[220] *What Do We Know About Warfare on the Great Plains?*

Archaeological data from the Plains unambiguously document a long history of community-level violence in the region. The fact of war, though, opens a wide range of other questions. Who was fighting? How was violence organized? Why did communities get along at some times and attack each other at other times? This paper identifies a series of important aspects of war on the Plains and considers what we do and do not know about them.

[256] *Discussant*

Bandy, Matthew (SWCA Environmental Consultants)

[222] *Titicaca Basin Archaeolinguistics and Farming/Language Micro-Dispersals*

David Browman made an early and important contribution to the study of the linguistic history of the Titicaca Basin with his 1992 article "Titicaca Basin archaeolinguistics: Uru, Pukina and Aymara AD 750-1450". In this paper, he explored relationships between archaeological cultures and protohistoric language distributions in more depth than had previously been attempted. I revisit this issue from the perspective of the Farming/Language Dispersal Hypothesis. I hope to demonstrate that protohistoric language distributions in the South-Central Andes can be adequately explained by a combination of Farming/Language Micro-Dispersals and sociolinguistic processes associated with the Tiwanaku state.

[87] *see Railey, Jim A.*

Banffy, Eszter (Archaeological Institute Has, Budapest, Hungary)

[61] *Same People, Different Environment: The Neolithic Transition in the Carpathian Basin*

The first farmers, originally part of a large Balkanic cultural complex, separated into well distinguishable groups in the northernmost part of their distribution (6th Mill. BC). The group in Transdanubia distributed in hilly woodlands, while east of the Danube, they lived along flat riversides. Soon, profound changes appear in the Western, woodland culture. These changes can partly be explained as adapting to the new, temperate environmental and ecologic conditions. However, the changes also resulted in different cultural habits, as in differences of their group identities. The reasons may help understanding, why various Neolithisation models existed within a rather small region.

Baram, Uzi (New College of Florida)

[170] *Organizing Archaeology: Community Outreach and Civic Engagements in the Commemoration of the Past*

Looking for Angola, an interdisciplinary research project seeking material remains of an early nineteenth century maroon community, has faced the challenges of locating archaeological remains in an urban environment. Public outreach and community involvement in Bradenton, Florida, since 2004 has intersected with public

archaeology as applied anthropology, service learning, and civic engagement. The role of the archaeologist in these endeavors deserves continuing attention. One of the survey areas faced development that threatened historic structures and the homes of its working-class inhabitants; its implications suggest a model for the outreach in terms of community organizing, with its implications for the scholar/citizen.

[170] *First Chair*; [170] *Second Organizer*

Barba, Luis (Nal University Of Mexico)

[156] *The Role of Phosphate Analysis in Mexican Archaeology*

For many years, Eidt's procedure for phosphate analysis was the most widely used chemical technique in archaeology. Ken Hirth was the person who brought this technique to Mexico and successfully applied it. During his visit to Mexico City in 1978 he provided a brief training to the personnel working in the Chemistry Laboratory, IIA, UNAM. For the last three decades, this laboratory has been intensively using this technique that is presently providing important information concerning the chemical residues preserved in the pores of floors and ceramics and allowing the interpretation of the use of architectonic surfaces and ceramic containers.

[23] *Discussant*

Barbaza, Michel (Université de Toulouse-CNRS)

[177] *Glacial Rhythms and Cultural Changes in the Terminal Upper Paleolithic of the northern Pyrenees*

The global warming marking the end of the last finishing glaciation, not without reason, considered as the main factor which had changed the behavioral, technological and cultural customs of hunters during the terminal european Upper Palaeolithic. Recent data established from sites in the north hillside Pyrenees allow to specify and to qualify connections between the people and their environment during the moderated oscillations contemporary with the last magdalenian and during the Younger Dryas damage which puts an end to the ultimate palaeolithic culture with the classic azilian accomplishment.

Barber, Sarah [13] see Joyce, Arthur A.

Bardolph, Dana (University of California Santa Barbara)

[151] *Finding Food in Features: A Spatial Analysis of the Lamb Site*

Regional comparisons of plant subsistence can obscure understandings of food production, consumption, and disposal by lumping contexts together into site assemblages. This paper presents an intrasite analysis of the Lamb site in the Central Illinois River Valley, where little is known about Mississippian-period subsistence. Exploratory data analysis is used to tease stages of the food process apart by using plant refuse to define feature function. As the Lamb site has no visible architecture, such an analysis can ultimately lend a better understanding of site function as well as everyday subsistence practices in the region.

Bardolph, Dana [110] see Wilson, Gregory D.

Baret, David [206] see Kahn, Jennifer G.

Barham, Larry [27] see Shuttleworth, Andy

Barkai, Ran [58] see Shimelmitz, Ron; [58] see Gopher, Avi

Barker, Alex (University of Missouri)

[115] *Spatial Patterning and the Circulation of Iconographic Forms in the Southeastern Ceremonial Complex*

Iconographic and stylistic details of SECC gorgets from the American midcontinent exhibit statistically significant spatial patterning. These style divisions, to borrow an apt term from Jim Brown's earlier work on the broad corpus of SECC materials, suggest that despite widespread exchange of SECC objects there were specific and discrete centers of circulation of individual iconographic or stylistic forms. Analysis of these patterns--both spatial and iconographical--provide opportunities to better understand both the role of SECC objects in antiquity and, more generally, how meaning is conveyed,

construed and constrained by individual iconographic objects.

Barker, Andrew (University of North Texas), Barney Venables (University of North Texas), Stanley Stevens (University of South Florida) and Steve Wolverton (University of North Texas)

[4] *Exploring Protein-Ceramic Interactions Using TOC Analysis, Protein Assays and LC-MS*

Despite studies demonstrating the potential for proteins to bind to, and theoretically preserve within, ceramic matrices, consensus is lacking regarding the exact nature of this interaction. In order to improve understanding of this topic, we employ a novel methodology based on total organic carbon analysis, protein assays and LC-MS to test experimentally prepared, protein-spiked pottery. Further, we evaluate several extraction protocols to determine an optimal approach. In addition to independently replicating previously reported results, our data shed new light on the nature of protein-ceramic interactions and enable us to provide methodological suggestions for future proteomics-based studies.

Barker, Thomas [73] see Douglass, Matthew J.

Barlow, K. Renee (College of Eastern Utah Prehistoric Museum)

[248] *Farming and Foraging in Range Creek: Shifting Strategies of Maize Cultivation, Residential Mobility and Remote Storage in Cliff Granaries among the Fremont of the northern Colorado Plateau*

Foragers and farmers began cultivating and storing maize in Range Creek, a deep tributary of the Green River below Desolation Canyon, circa AD400. Maize farming and storage strategies are modeled within the context of behavioral ecology, and granaries are examined as another dimension of subsistence. By the 800s these people had acquired all the hallmarks of "Fremont" culture and occupied small, seasonal household farms on benches and knolls overlooking Range Creek. A dramatic change in farming and storage practices is indicated circa AD1000, when Fremont began storing large quantities of maize in remote cliff granaries, along with some wild crops.

Barnard, Hans (Cotsen Institute of Archaeology at UCLA), Alek Dooley (Integrated Gulf Biosystems), Kym Faull (UCLA Pasarow Mass Spectrometry Laboratory)

[55] *The Search for Molecular Evidence of Ancient Wine*

Reports on the presence of archaeological residues of ancient wine have often been based on indirect evidence, most notably indications for added resins. New methods and techniques, including tandem mass spectrometry after liquid chromatography, may be able to show the presence of components of wine in samples of archaeological pottery and thus allow more firm conclusions to be drawn.

Barnard, Hans [55] see Barnard, Hans; [188] see Nigra, Benjamin T.

Barnes, Monica (Andean Past)

[94] *The Life and Work of an Andean Archaeologist: Craig Morris' Contributions to our Understanding of the Inca*

Given its status as an expansionist state, the Inca polity cannot be viewed only from its center. Craig Morris pioneered the study of Inca provinces, concentrating for many years on Huánuco Pampa. Then, for almost two decades, he focused on the coastal site of La Centinela, capital of the Chincha kingdom, a very different part of Tawantinsuyu. In 1993-94 he explored the Inca occupation of Cochabamba, Bolivia. Prior to his 2006 death his field research encompassed Tambo Colorado, in Peru's Ica Valley. This paper highlights Morris' contributions to our understanding of Inca culture and administration.

Bar-Oz, Guy (University of Haifa), Mina Weinstein-Evron (University of Haifa) and Reuven Yeshurun (University of Haifa)

[16] *Trends in Ungulate Exploitation in the Epipalaeolithic of the coastal plain, Israel*

Mountain gazelle (*Gazella gazella*) is the main hunted ungulate species in the Natufian, a late Epipalaeolithic culture of the southern Levant (13-11.5 ky BP). We present a broad chronological view of the

development of gazelle dominance in the Natufian while examining zooarchaeological data from six Epipalaeolithic assemblages from the northern coastal plain, Israel, altogether spanning the period between ca. 20-11.5 ky BP. Natufian ungulate assemblages are more heavily dominated by gazelles than preceding assemblages. These differences are not consistent with climatic fluctuations or climatically-driven landscape changes to which Natufian populations were responding. Thus, our results accord the cultural filter hypothesis.

Barr, W. Andrew (University of Texas at Austin) and Denné N. Reed (University of Texas at Austin)

[129] *Taphonomy and Paleoecology of La Grotte des Contrebandiers (Témara, Atlantic Coast, Morocco): Evidence from the Pleistocene Rodent Fauna*

La Grotte des Contrebandiers is a Middle Stone Age site preserving hominin remains in an Aterian context. The rodent sample exhibits gastric etching and extensive fragmentation; this evidence is consistent with the activity of a small mammalian carnivore. The rodent fauna is dominated by *Meriones* cf. *maghrebianus*, a taxon indicative of a xeric habitat, but not true desert. The presence of *Dipodillus campestris* reinforces the xeric habitat interpretation. The murine *Mus spretus* is also present, but is relatively uninformative in regards to habitat. This taxonomic composition suggests a Mediterranean biome comparable to that of the present-day site.

Barrett, Jason W. [139] see *Dickson, D Bruce*

Barrientos, Gustavo (Facultad de Ciencias Naturales y Museo, Universidad Nacional de La Plata), Cecilia Panizza (CONICET, Universidad Nacional de La Plata; República Argentina), Fernando Oliva (Universidad Nacional de Rosario, Universidad Nacional de La Plata; República Argentina), Luciana Catella (CONICET, Universidad Nacional de La Plata; República Argentina) and Rodolfo Barrientos (Universidad Nacional de Salta; República Argentina)

[138] *Late Holocene Hunter-Gatherer Population Dispersal in Central-Argentina: Evidence from the Southern Pampean Region*

An increasing number of evidence suggests a population dispersal from northeastern Patagonia (ca. 40° S, 63° W) towards northern regions beginning shortly after 1000 cal years BP. Such a dispersal purportedly reached areas situated as far as 500 km away from the most likely dispersal center, well deep into the Pampean Region. The aim of this paper is to review the available evidence about this process, as well as to present the first results of simulation models intended to estimate dispersal rates under different scenarios defined on the basis of various demographic and ecological assumptions.

Barrientos, Gustavo [47] see *Belardi, Juan B.*

Barrientos, Rodolfo [138] see *Barrientos, Gustavo*

Barrientos, Tomas [54] see *Acuna, Mary Jane; [229]* see *Popenoe Hatch, Marion*

Bartelink, Eric (California State University, Chico) and Phillip Johnson (American Samoa Power Authority)

[161] *Paleodietary Patterns on Tutuila Island, American Samoa: Evidence from Stable Carbon and Nitrogen Isotope Analysis*

In this presentation, we examine temporal and regional variation in prehistoric diet on Tutuila Island, American Samoa. The study sample includes 32 burials recovered from six archaeological sites, excavated by the Archaeology Department of the American Samoa Power Authority. Using stable carbon and nitrogen isotope data derived from bone collagen in conjunction with carbon isotopes of bone apatite, we examine the relative importance of marine versus terrestrial resources to the diet (ca. 1200-100 B.P.). Nonhuman archaeofaunal remains were also analyzed to provide baseline data for interpreting the human diet. Preliminary data indicate geographic differences in diet on Tutuila.

Barton, C. Michael [205] see *Miller, Alexandra E.*

Barton, Loukas (National Park Service)

[197] *Disaster and density-dependent habitat selection in southwest Alaska*

Prehistoric sites in southwest Alaska are strongly clustered around spatially delimited, resource-rich areas characterized by high taxonomic diversity today. Yet severe ecological turnover driven by volcanoes, tsunamis, and tectonic uplift or subsidence characterize the environmental history of the region. These punctuated disasters frequently force local populations of people, plants and animals into prolonged exile. Because re-colonization episodes are commonplace, the region is an ideal setting to evaluate and refine the logic and assumptions of density-dependent habitat selection and the ideal free distribution. This is an effort to examine the patterns of resource intensification in a spatially-structured but temporally volatile environment.

[27] see *Chisholm, Linda C.; [155]* see *Morgan, Chris*

Barton, Michael [184] see *Bergin, Sean M.*

Bar-Yosef, Ofer (Harvard University)

[155] *The origin(s) of East Asian Pottery*

Pottery making emerged in East Asia began at least by 18 ka cal BP as established by a joint project with the Hunan Institute of Archaeology. The early appearance of pots within the context of hunting and gathering societies in well-dated in South China, Japan, North China and East Siberia and stands in contrast to the record of Western Asia where the making of such clay recipients began long after the emergence of full agricultural system. The presentation discusses alternative interpretations of East Asian records and whether pottery was invented independently or spread from a "core area".

[126] *Discussant; [177]* *Discussant*

Basalik, Kenneth

[180] *Dressing Up the Public Dissemination Document: Do We Go "Off the Rack" or "Tailor-Made"?*

Dissemination of archaeological data to the public has been an important part of cultural resources management archaeology. The inexpensive standby for a public dissemination document has been the brochure or the booklet. Newer technologies that continue to become available allow for more sophisticated and elaborate public dissemination documents to be produced for substantially less money. The use of these tools is limited more by our imagination and our ability to communicate with the general public than the cost outlay. Booklets, pamphlets, brochures, web pages, video productions, exhibits, signs, posters, lectures, etc. are all means of providing the public with information concerning archaeological resources. Each of these mitigative elements, or a combination of several, may be the most appropriate mitigation measure on a specific project. It is important to identify whether the archaeological story can be appropriately disseminated with an "off the rack" solution, or whether a "tailor-made" approach is more appropriate. This paper provides examples of varying uses of media and products that have been successfully employed in an effort to appeal to the varying levels of knowledge and interest represented by the potential target audience. The work is considered within the context that of how the dissemination document can meet the needs of the project, be produced at a reasonable cost, as well as provide information and insights into the past that resonate with the public.

Bate, Emma (Indiana University)

[97] *Lucayans and Spaniards: Early Contact at the Long Bay Site, San Salvador, Bahamas*

The Long Bay Site, San Salvador, Bahamas, was the location of early contact between the Lucayan inhabitants of the Bahamas and early Spanish explorers, yet the circumstances and effects of this early interaction are poorly understood. This paper will discuss the Lucayan settlement at Long Bay and the effects that contact with Spanish explorers had on the native way of life at the site. Particular emphasis will be placed on understanding the ceramic assemblage recovered

during excavations at the site.

Bates, Lynsey (University of Pennsylvania)

[201] *GIS-based Analysis of Provision Grounds on Jamaican Sugar Plantations*

The provision ground system, which required enslaved laborers to cultivate perishable foodstuffs, was an integral part of labor control in British colonial Jamaica. By quantitatively analyzing the spatial characteristics of provision grounds using GIS-based modeling, this poster explores the factors influencing variability among Jamaican sugar plantations. Specifically, comparisons drawn between two historic estates based on the size, location and quality of the provisioning land shed light on the relative importance of several factors governing a plantation's economic productivity, including the plantation's proximity to large market centers, the number of acres planted in cane and the size of the workforce employed.

Batista Martinez, Raquel (Colorado State University/LORE-LPB), Bryan Baker (Frontier Precision), Christopher Fisher (Colorado State University), and LORE-LPB Team

[135] *Measuring Space: The Application of Geo-Spatial Technologies to Full-Coverage Survey*

As part of the LORE-LPB project recent full-coverage survey encountered dense occupations with intact architectural concentrations in rugged topography and heavy vegetation cover. Here we present the methodologies and hardware we utilized including GPS equipment, Trimble Terra-Sync and Pathfinder software, GIS development and use, basic categorization, and database management.

Battillo, Jenna (Washington State University)

[74] *An Investigation into the Preservation of Saw Marks and Cut Marks on Burnt Bone*

This experiment was conducted to examine preservation of tool marks in burnt bone. Twenty-four specimens from six *Sus scrofa* forelimbs were cut using three saws and a knife. Specimens were weighed, photographed, and tool marks were analyzed before and after burning. They were burned in an outdoor fire (277- 770°C) or in a kiln at 600, 800, or 1000°C. Preservation of saw marks was scored on a scale of 1 to 3 (3 being least preserved) using photographic comparison. As hypothesized, higher temperature correlated to degradation. However, retention of saw marks was adequate for some analysis up to 1000°C.

Bauder, Jennifer [83] see Wilson, Jeremy J.

Bauer, Andrew (University of Chicago)

[11] *An Archaeology of 'Nature': South Indian Landscape History and the Construction of the Natural*

A series of environmental features (e.g., rock pools, weathering pits, and soil distributions) were produced during the South Indian Iron Age as a means of appropriating space for politically instrumental ritual activities and privileged access to agro-pastoral production. Yet, despite a long history of human-environment interaction, 19th and 20th century colonial naturalists would later classify many of these same objects as characteristic elements of an a-priori people-less "Nature." What were politicized objects to Iron Age inhabitants became equally political (sensu Latour's "political epistemology") in a different context when natural science paradigms began categorizing them as "natural" elements of tropical landscapes.

Bauermeister, Ann (NPS, Midwest Archeological Center)

[176] *The Riverbank Site: A Non-Earthwork Hopewell Site in Ross County, Ohio*

The Riverbank site is a non-earthwork site that contains archeological materials that are dated to the Middle Woodland period and consistent with use by those of the Hopewell Culture. This important site is located adjacent to the renowned Hopewell site, a large earthwork complex. The site's location on a high terrace overlooking a river and next to an earthwork may have attracted many different types of uses by the Hopewell. A recent data recovery project

undertaken at the Riverbank site was a significant opportunity to comprehensively investigate just what was happening outside of those walls some 2000 years ago.

Baumann, Timothy (Glenn A. Black Laboratory, Indiana University) and Andrew Hurley (University of Missouri-St. Louis)
[187] *Brick by Brick: Building Sustainable Communities in St. Louis with Archaeology*

Archaeology has assisted two St. Louis neighborhoods, Old North and Jeff-Vander-Lou, in their efforts to build sustainable communities. St. Louis, like many established cities, has been impacted by failed urban renewal programs and by the development of the interstate system, which fostered "white flight" and the suburbanization of America. Archaeological research has attempted to create a "sense of place" for those that remain, providing a link between the past and the present. Neighborhood residents have guided and assisted in various heritage projects (e.g., oral histories, exhibits, a documentary, excavations, K-12 programming) with a desired outcome of economic and cultural revitalization.

Baumann, Timothy E. [62] see Altizer, Valerie; [257] see Marshall, Joel

Bausch, Ilona (Leiden University) [95] Discussant

Baxter, Carey [164] see Carlson-Drexler, Carl G.

Baxter, Erin (University of Colorado, Boulder) and Ruth Van Dyke (Binghamton University)

[51] *Cynthia Irwin-Williams Augers the Dirt Ceiling*

Fifty years ago, Cynthia Irwin-Williams collided with the "dirt ceiling" in the form of a closed Harvard classroom door. Cynthia persisted — a trademark throughout her career -- with equal parts, gumption, panache, and doggedness. Along the way, in spite of the status quo, she became a professor, directed seminal excavation work, contributed a groundbreaking model of the Archaic sequence, defined the Chaco Phenomenon, and headed the SAA. Throughout, she befriended, entertained, and enthralled all with her joie de vivre and colorful character. Cynthia left an indelible mark on the field that still resonates. Her story is one of achievement on her own terms.

Baxter, Jane Eva (DePaul University)

[225] *Becoming Bahamian: Constructing Native Identities in the Recent Past*

The Bahamian Archipelago was depopulated in the 16th century when Spanish colonizers removed the native Lucayans to Hispaniola and elsewhere in the new colonies. In the late 18th and early 19th centuries, British Loyalists moved with their slaves to the Bahamas and repopulated the archipelago. The descendants of these slaves are now the majority population of the Bahamas and consider themselves and present themselves as the native population of the island. This paper explores how history, archaeology, and memory are integral parts of establishing a native identity for a population who came to the Bahamas within the past 150 years.

Baxter, Jane Eva [51] see Neal, Lynn A.

Bayham, Frank [120] see Ramirez, Nicole A

Bayman, James [163] see Euber, Julie K. .; [68] Discussant

Beach, Timothy [91] see Luzzadder-Beach, Sheryl

Beahm, Emily L. [115] see Smith, Kevin E.

Beasley, Virgil (Geo-Marine Inc.), Duane Peter (Geo-Marine Inc.), Myles R. Miller (Geo-Marine Inc.) and Tim Graves (Geo-Marine Inc.)

[235] *Madera Quemada Pueblo: Investigations of a Fourteenth-Century Jornada Mogollon Pueblo on Fort Bliss Military Reservation, South-central New Mexico*

Excavations at Madera Quemada pueblo were sponsored by the Environmental Division of Fort Bliss and provided a rare opportunity to investigate a Jornada Mogollon pueblo in southcentral New Mexico. The pueblo consisted of a single roomblock of 13 rooms. Several rooms were burned, and deposits of burned roofing debris and support beams were present on floors. Floor and subfloor features were in an outstanding state of preservation and contained intact floor assemblages. The excavations provided important information on architecture, room function, social organization, and ritual abandonment of the pueblo.

Beaubien, Harriet (Smithsonian / Museum Conservation Institute)

[77] *Burial Offerings Made of Painted Perishable Materials at Waka'*
Ornate objects once made of painted wood, gourd and other organic materials were among the special offerings recently found in several elite tombs at El Perú-Waka'. What has challenged our understanding and appreciation of these types of artifacts is their degraded state when found – typically as dense concentrations of paint flakes resulting from complete degradation of the organic substrates. At Waka', field conservation techniques used to recover some of the deposits and technical study of paint flakes from a range of objects are yielding important new data about how they were produced and what kind of offerings they might have been.

Beaver, Joseph (University of Minnesota Morris)

[73] *Hunter-Gatherer Ethnology and the Tyranny of Linear Analysis (with Apologies to H.M. Wobst)*
Large-scale analyses of ethnographic data are an important source of insight into hunter-gatherer adaptations and social organization. Such analyses almost invariably involve regression or correlation. Even with multiple regression and partial correlation analyses, there is an implicit assumption that causal variables act independently of one another—that their contributions to outcome variables can be combined linearly. Much recent research in and outside of archaeology suggests that many aspects of human organization and adaptation behave non-linearly. This paper applies fuzzy-set theory to a large ethnographic data set compiled by Lawrence Keeley, demonstrating an alternative to linear analyses.

Bech, Julio Amador [22] see Amador, Julio A.

Beck, Brenda (ITARP - University of Illinois), Amanda Butler (Illinois Transportation Archaeological Research Program) and Madeleine Evans (Illinois Transportation Archaeological Research Program)

[83] *Distance Makes the Rocks Grow Fonder: A Comparative Look at the Cahokian Influence (or Lack Thereof) on the Orendorf Lithic Assemblage*

The relationship between the Mississippian population of the Central Illinois River valley and that of Cahokia has been of longstanding interest to area researchers. Roughly 100 miles separate the Orendorf site, a Mississippian town, from the American Bottom, and evidence of Cahokian influence is seen in assemblages from more distant Mississippian sites. This paper compares the lithic assemblage from settlement "D" at the Orendorf site with those of American Bottom Mississippian sites, including Cahokia. We address raw material use, a lack of centrally organized and rigid production standards, and the relative obscurity of interregional exchange in the settlement "D" assemblage.

Beck, Brenda [83] see Butler, Amanda

Beck, Charlotte (Hamilton College), David B. Madsen (University of Texas, Austin) and George T. Jones (Hamilton College)

[118] *The Crescent and the Millingstone: Early Holocene Technological Changes in the Eastern Great Basin*
North American Paleoindian populations long have been characterized predominantly as hunters, but contemporaneous populations of the intermountain region are known to have been generalists, particularly emphasizing dietary resources associated

with shallow water settings. With diminished mesic landscapes owing to early Holocene climate change, human populations adjusted by diet breadth expansion. The surface lithic record of the eastern Great Basin is used to monitor two corollaries: shifts in the scale and configuration of mobility and a simplification of stone tool technology.

Beck, Margaret (University of Iowa)

[200] *Current Investigations at the Scott County Pueblo (14SC1)*
Scott County Pueblo (14SC1), otherwise known as El Cuartelejo, is an unusual site in western Kansas with a 7-room stone and adobe pueblo dated to the period around 1700. Originally investigated in 1897-1898, previous researchers attributed the site to either Puebloan refugees from Taos or Picuris or to Plains Apache groups who had significant interaction and exchange with these pueblos. This poster summarizes ongoing research at 14SC1, including updated ceramic data from analysis of the Kansas State Historical Society collection. In addition to Dismal River sites and painted southwestern ceramics, some sand-tempered sherds suggest local manufacture of southwestern vessel forms.

Beck, Robin (University of Michigan), Chris Rodning (Tulane University), David Moore (Warren Wilson College)

[52] *The Architecture of Contact: Comparing Burned Structures at the Berry Site, North Carolina*

In January 1567, a Spanish expedition under Captain Juan Pardo arrived at the native town of Joara, located at the Berry site in the upper Catawba Valley of western North Carolina. Here, Pardo established Fort San Juan and manned it with 30 soldiers who lived at Joara for a year and a half. From 2007-2008, excavations at Berry focused on two of the five burned buildings that are believed to have housed Pardo's soldiers. This paper compares these buildings and links architectural distinctions between them to deteriorating relations between Joarans and Spaniards during the eighteen months of the garrison's occupation.

Beck, Robin [52] *First Organizer*; [52] see Moore, David G.; [52] see Rodning, Christopher B.

Beck, Jr., Robin A. [52] see Sanders, Merritt M.

Becker, Mark [161] see Daniels, James T.

Becker, Rory (USDA-NRCS)

[249] *Lasers on the Landscape: Using LiDAR Data in Cultural Resource Management*

This paper provides a brief discussion of how LiDAR works and some of the potential uses/benefits it may provide to the cultural resource management community. Specifically, the use of LiDAR data to assist with site recordation during Emergency Watershed Planning in northeastern Wyoming will be discussed.

Beebe, Caroline (Digital Library Consulting)

[24] *Digital Chau Hiix: Principles, Problems and Simple Cost Effective Solutions*

Digital recordkeeping has become ever more complex and its security no longer protected by paper-based archival methods. For fifteen years the Chau Hiix Belize Project has been applying digital collection tools, addressing problems and solutions such as cost effectiveness, training, tool maintenance, error checking, version and format establishment, controlling vocabularies, data migration, and now: where are data preserved and on what media? This paper describes Chau Hiix practices and current thinking on digital archiving as well as adopted systems and technologies providing the most likely scenario for digital data to survive the next century in a simple manner.

Begay, Timothy [235] see Marek-Martinez, Ora V.

Begley, Christopher (Transylvania University)

[65] *Traditional Questions in the Archaeology of Eastern Honduras: Misled by 'Center' and 'Periphery'*
Research in eastern Honduras has been directed by the assumption

that this 'periphery' is best understood by looking at it in relation to its larger Mesoamerican neighbors. Here, the ways in which my research in the Mosquitia of eastern Honduras had to address issues such as influence from Mesoamerica before looking at more isalient questions about sociopolitical transformations in the Mosquitia. Ultimately, I move beyond questions about cultural affiliation and explore the ways in which power is acquired, applied, and maintained by newly emerging elites beginning around AD 500, and how long-distance relationships were converted in political capital.

Beisaw, April (Heidelberg University)

[181] *Knowledge, Power, and the Cultures of Repatriation*

The Native American Graves Protection and Repatriation Act challenges archaeologists to make determinations of cultural affiliation in consultation with Native Americans. To determine affiliation, identity is reduced to a checklist of evidential sources. One loophole is given, expert opinion, but never defined. Archaeologists often rely on culture history and its labels of identity while Native Americans often rely on oral traditions and its identity labels. A case study provides a context for considering the genealogy of knowledge inherent in such a claim and the imbalance of power that may lead to epistemic injustice.

[180] *see Gibb, James G.*

Belardi, Juan (Univ Nac de la Patagonia Austral), Gustavo Barrientos (CONICET, UNLP, UNCPBA), Rafael Goñi (INAPL, UBA, UNCPBA) and Silvana Espinosa (CONICET, UNPA)

[47] *Temporal Trends in the Hunter Gatherer Occupation of the Tar-San Martín Lakes Basin (Southern Patagonia, Argentina)*

The Tar and San Martín lakes fill a glacial basin on the eastern slope of the Andes. Like in similar Patagonian environments, the first recorded occupation occurs at the beginning of the Holocene. The basin seems to have been only occasionally used until 5.5 ky cal BP, when the frequency of radiocarbon dates increases, coincident with the stabilization of the local environmental conditions. The summed probability distribution of the calibrated radiocarbon dates corresponding to Late Holocene ages differs from those recorded at neighboring areas, thus suggesting a rather decoupled pattern of occupation at the mesoscale, whose likely meaning will be discussed during the presentation.

Belfer-Cohen, Anna [186] *see Hovers, Erella*

Belisle, Veronique [145] *see Williams, Patrick R.*

Belknap, Lori (Southern Illinois University Edwardsville), James A. Brown and John E. Kelly

[140] *Moorehead Phase Ritual Landscape at Mound 34, Cahokia*

Armed with the hypothesis that Mound 34 was an area of ritual activity, Dr. Brown began a joint venture with Dr. John Kelly to investigate this inconspicuous mound on the western edge of the Ramey Plaza. A culmination of 12 years of excavations, demonstrates that Mound 34 is an exemplar of the distinct characteristics of the Moorehead Phase. This paper reports on the excavations and the sequence of ritual activity conducted at the site, and how the context of the findings makes Mound 34 an exceptional place on the cultural landscape of AD 1200.

Belknap, Lori [36] *see Holt, Julie Zimmermann*

Bell, Alison (Washington and Lee University), Alexandra Massey (Washington and Lee University) and Karen Smith (Monticello)

[166] *Material Culture and Social Liminality: Variation in Ceramic Consumption among Monticello Residents*

Our poster conveys results of recent archaeological testing at the residential site of one of Thomas Jefferson's free Euro-American overseers. Ceramic seriation and a mean ceramic date of c. 1797 suggest an occupation earlier than that indicated by historical documents (c. 1806-1822). We use data from nearby contemporary sites – including several occupied by enslaved African-American laborers – to consider whether this discrepancy reflects a flaw in

archival records or whether the seemingly early assemblage date, in this and somewhat comparable cases, reflects strategies in ceramic consumption frequent among socio-economically middling families.

[166] *Second Organizer*

Bell, Ellen (California State University, Stanislaus) and Marcello Canuto (MARI, Tulane)

[258] *Rural Settlements, Regional Ties: Administrative Strategies and Prestation Goods in the Copan Kingdom*

The El Paraíso Valley provided a vital route of access, trade, and communication in southeast Mesoamerica during the Classic period (AD 250-900). Two large centers, El Cafetal and El Paraíso, located 1.5 km apart, formed nodes in Copan's network of interaction, and together they provide insight into Copan's regional administrative strategies. In this paper, we explore these strategies to suggest that, while El Paraíso was established by Copan to exert control in the region, and El Cafetal was a local, autochthonous center, patterns seen in rural settlements suggest a complex and contested web of affiliations in the valley and beyond.

Bell, Ellen E. [65] *see Canuto, Marcello A; [258] First Organizer; [258] First Chair*

Bell, Julie A. [19] *see Glowacki, Donna M.*

Bello, Charles [60] *see Dillian, Carolyn*

Bellorado, Benjamin (Crow Canyon Archaeological Center), Kurt F. Anschuetz (Rio Grande Foundation for Communities and Cultural Landscapes) and Rory P. Gauthier (Bandelier National Monument, National Park Service)

[19] *Plant Seeds and Village Needs: Modeling Village Agriculture in the Central Mesa Verde and Northern Rio Grande Across the Dimensions of Time and Space*

There is no singular way to grow corn, beans, squash, and other economically important crops, such as cotton, in the northern Southwest. Ancestral Pueblo populations in the Central Mesa Verde (CMV) region and the Northern Rio Grande (NRG) developed diverse farming techniques to sustain their communities in the face of ever-changing natural environmental and demographic circumstances. Research undertaken as part of the Village Ecodynamics Project-II is examining the similarities and differences between the agricultural systems upon which the pre-Columbian CMV and NRG Pueblo populations relied. This presentation reviews these farming systems and outlines methods for evaluating their agricultural productivity. Three key Words: Agriculture, Mesa Verde/Rio Grande, Modeling

Bellucci, Jeremy [161] *see Inanez, Javier G.*

Belmaker, Miriam (Harvard University) and Sabrina Curran (University of California, Santa Barbara)

[205] *Paleolocomotion and Paleodietary Studies of the Cervid Guild in the Lower Paleolithic site of 'Ubeidiya, Israel: Implications of Early Homo Landscape use in Mid Latitudes*

Early Homo dispersed during the Early Pleistocene from Africa to Eurasia. 'Ubeidiya, Israel (1.6-1.2 Ma) is one of the earliest site to attest to this dispersal. The cervid guild at the site bears marks of utilization by hominins for meat consumption and may be used as a proxy for landscape use by Homo. We describe the range of environments utilized by the cervid guild using paleodietary (mesowear) and paleolocomotion (3D geomorphometrics). Results suggest a range of mosaic woodland and open environs and emphasize the role of closed habits in early hominin behavior in contrast in those in East Africa.

Bement, Leland (Oklahoma Archeological Survey, OU) and Cody Kiker (University of Oklahoma)

[210] *Construction and Destruction of the JS Clovis Cache, Oklahoma Panhandle*

Recent study of the 112 objects contained in the JS Clovis tool cache from Beaver County, Oklahoma describes the cache's composition,

origin of the implements, and postulated home of the Clovis group responsible for making the implements. Key attributes including overshot flakes, fluted preform, and ochre staining aid in identifying a Clovis affiliation for the cache contents. The various tools can be grouped according to defined Clovis lithic reduction sequences, including biface, blade, and flake technologies. Edge angle measurements hint at tool uses. Overall tool condition provides clues to use-history of certain implements and an overall history of cache utilization.

Benden, Danielle [70] *see Boszhardt, Ernie*

Bender, Susan (Skidmore College) and Ben Perlmutter (Skidmore College)

[72] *Archaic Architecture at a Forager Base Camp in South Park, Colorado*

A series of superimposed house floors dating from the Early to Middle Archaic are compared with architectural features from other Archaic sites in the southern Rocky Mountains. While the dimensions of the floors coincide nicely with other house features in the region, other elements of them are unique. These architectural features thus yield new insight into forager interaction with this mountainous landscape.

Benfer, Bob (University of Missouri-Columbia)

[89] *New Solar Alignments from Buena Vista, Peru*

Solstice orientations are widespread in architecture of Late Preceramic monumental sites in western South America. By 2,200 BC, at Buena Vista, Perú, solstice alignments were embedded in: sculptures, offering chambers, stone walls and heads, pillars, quartz mine. One line has seven reference points. Two points, at its extremes, capture light cast by the solstice sun. A personified disk gazes at the setting sun, which casts light on its face. Another line, 2,200 BC, shows helical rise of Andean water constellations over one rock, set on a ridge, and the solstice sunrise over another. Deduced alignments for nearby sites were found.

[89] *First Organizer*, [89] *see Adkins, Larry R.*

Benn, David W. [29] *see Hajic, Edwin R.*

Bennett, Gwen (McGill University)

[155] *Xianbei, Khitan, Liao or Jin? Archaeological Investigations of the Chifeng Border Regions*

The Khitans were the first northern group to conquer the Chinese Empire, establishing the Liao dynasty in 907. Their cultural accomplishments are exemplified by pagodas, tombs, and city ruins that still stand in northern China, and histories document their political and military events. Yet little is known about non-elite Khitan activities and organization. This paper presents the on-going re-analysis of non-elite ceramics dating between 200-1,200 C.E. from Chifeng Inner Mongolia that will allow us to look at changes in regional settlement patterns, activities, frontier and border interactions, and processes involved in Liao state formation.

[155] *see Flad, Rowan K.*

Bennett-Rogers, Ann (USDA-NRCS)

[249] *Forest Practices in the Douglas Fir Region and Archaeological Resources*

Forest practices have impacted the landscape and archeological sites of the Pacific Northwest for over hundred years. Changes in forest practices over the last 20 years have altered the degree of impacts to archaeological sites. This paper will look at case studies of forest practices and the no adverse impact to the archaeological sites.

Benson, Buck [175] *see Maschner, Herbert*

Benz, Bruce (Texas Wesleyan University), Lori Baker (Baylor University) and Michael Blake (University of British Columbia)

[138] *Early Maize in Latin America: AMS Dating, Morphology and Ancient DNA*

New analyses of maize macro-remains from Mexico to Chile, including morphological analysis, ancient DNA, and AMS dating are contributing fresh perspectives on the spread of domesticated maize.

Working with some of the earliest known macro-samples collected and contributed by colleagues in Mexico, Belize, Honduras, Peru, and Chile, we have recovered several domestication genes and analysed the cob morphology of AMS-dated specimens. We explore the implications of these data for understanding the spread of maize out of Mexico on its southward journey into South America.

Benz, Bruce [163] *see Blake, Michael*

Benz, Emily (Washington State Univ.), Colin Grier (Washington State University) and John Jones (Washington State University)

[201] *A Statistical Approach to Pollen: Quantifying Environmental Change on Grenada*

Analysis of a core collected from Meadow Beach in northeast Grenada reveals details of past environmental conditions. Well-preserved fossil pollen documents changes in vegetation, increased salinization, and possible episodes of human occupation in the site area reflected by increases in economic plant taxons. An applied statistical approach including the use of correspondence analysis has been used on baseline data and pollen concentration values, providing a quantified look at the apparent trends within the pollen record. The use of statistics to quantify pollen data helps to provide important archaeological details for this important but understudied island.

Berg, Caryn (Left Coast Press) and Barbara Roth (University of Nevada, Las Vegas)

[51] *Introduction: Celebrating Women in Archaeology*

In this symposium, we seek to do two things: to honor the careers of women who have helped develop the discipline, and to showcase the potential of archaeology for women early in their careers. This paper summarizes some of the highlights of the contributions of women to our discipline and celebrates the way that they paved for later generations.

[51] *First Organizer*, [51] *First Chair*

Berg Vogel, Michelle (U of Illinois Extension / McCully Heritage), Gregory Vogel (Southern Illinois University Edwardsville), and James Powers (Southern Illinois University Edwardsville)

[215] *Picturing Change: Documenting Environments and Culture of the Lower Illinois River Valley Through Historic Images*

Picturing Change documents historic-era environmental modifications and material culture in the Lower Illinois River valley through early images. The visual record in this area extends to the mid 1800s, when artists, portraitists, professional landscape photographers, and amateur photographers documented their surroundings. Images record information in fundamentally different ways from written documents, recording not only the intended subject, but also unintended material within the frame. To date, the project has digitized and cataloged over 700 images, documenting both environmental and cultural change, and providing an invaluable resource to researchers in archaeology and many other disciplines.

[238] *Discussant*

Bergevin, Jesse (Oneida Indian Nation)

[164] *The Oneida Indian Nation Archaeology Program*

The Oneida Indian Nation maintains a History program that has examined and preserved Oneida History from time immemorial through the present, engaging in the identification of historic resources on Oneida Indian Nation lands by using archaeological survey, historic building inventories, document research and oral histories. The Oneida Indian Nation maintains and preserves not only the history in the earth but also preserves materials reacquired by the Nation in a modern archival facility. The History department engages in cooperative efforts both within the Nation and with the local community to promote education and awareness of Oneida history.

Bergh, Sarah (University of Georgia)

[250] *Intra-site Variability in Seasonal Occupation at Back Creek Village, St. Catherines Island, Georgia*

It is important to investigate multiple proxies of seasonal occupation

from multiple contexts of a single site. In the past, the middens at Back Creek Village (AD 1200-1600), on St. Catherines Island, Georgia, were attributed to refuse that accumulated outside structures occupied by sedentary households. However, intra- and inter-midden variation must be evaluated to determine if these middens represent similar modes of accumulation. This study uses seasonal presence of fishes in the estuary and seasonal growth of *Mercenaria* spp. to explore seasonal patterns of midden deposition. This will facilitate an assessment of site function and seasonal occupation.

Bergin, Sean (School of Human Evolution and Social Change, ASU), Gary Mayer (Southern Illinois University Edwardsville), Hessam Sarjoughian (Arizona State University), Isaac Ullah (School of Human Evolution and Social Change, ASU) and Michael Barton (School of Human Evolution and Social Change, ASU)

[184] *Coupled ABM-GIS Modeling of Agro-Pastoral Systems in Eastern Spain*

We present results of a new approach to computational modeling of small scale farming in archaeological contexts that couples an agent-based model of farming households with GIS-based models of landscape change. Agents make decisions about farming and herding strategies based upon landscape characteristics (drawn from the GIS) and household subsistence needs. In turn, agent agricultural practices contribute to simulated landscape dynamics. This allows us to carry out 'experiments', as multiple model runs with variable initial conditions, to explore the impact of household subsistence decisions on Holocene landscape evolution in the Penaguila Valley of eastern Spain.

Berkson, Alice (University of Illinois, Urbana-Champaign)

[38] *Lifetime Volunteers in Illinois Archaeology*

The Illinois Association for Advancement of Archaeology, founded in 1969, unites all those interested in the state's archaeology – amateurs, professionals, students and the public at large. With ten chapters throughout the state, our members foster site preservation, educational projects, and research through local programs and our quarterly publication *Illinois Antiquity*, our journal *Rediscovery*, and grants from our Permanent Fund. Our poster features recipients of our Lifetime Volunteer award for the past decade, individuals who have made a lasting contribution to the archaeology of Illinois.

[238] *First Organizer*; [238] *First Chair*

Bernardini, Wesley (University of Redlands)

[100] *Ceramic Connections: Documenting Ties between the Hopi Mesas and the Verde Region in the 14th Century A.D.*

This analysis investigated contacts and movement between sites in the Perry Mesa/Verde regions and sites on the Hopi Mesas through chemical sourcing of Jeddito Yellow Ware pottery. Results indicate that all of the analyzed Perry Mesa/Verde sites shared a similar set of exchange ties with Hopi villages. These ties were dominated by Second Mesa villages, with secondary ties to Antelope Mesa. The relatively homogeneous pattern of non-local pottery acquisition across the area suggests some degree of coordinated interaction with external groups. While similar exchange patterns across Perry Mesa might seem to support the existence of the hypothesized "Perry Mesa confederacy", the fact that neighboring villages in the supposedly antagonistic Verde region share the same exchange patterns suggest that a broader regional phenomenon is at work.

Bernardo, Danilo [47] see Strauss, André

Bernbeck, Reinhard (Freie Universitaet Berlin)

[114] *Materiality as Intrusive Temporal Surplus*

Archaeology is fundamentally concerned with human actions that produce an effect lasting beyond themselves, in Aristotelian terms, with poesis. Based on our own, consumer based predilection for a world of full of things, we often assume that the making and enduring of things was desirable as well in the past. Based on an example from Neolithic Iran, I claim that we have to consider the possibility of past

societies that were opposed to what I call the temporal surplus of objects. Temporal surplus was seen as restrictive for a society that may have been based on spontaneity and immaterial production.

Berrey, Charles (University of Pittsburgh)

[73] *Domestic Activities and Social Relations: Comparing Household Artifact Assemblages using Multidimensional Scaling*

Multidimensional scaling (MDS) is an effective analytical tool in archaeology. One of its particularly useful features is the ability to examine how values for different variables might generally increase or decrease across an MDS configuration. Identifying these 'trends' and the orientations in which they are aligned provides valuable insight into the relationship between variables, and a systematic way to do so would allow for greater utility of MDS in comparative studies. One such method is presented here, and is used to compare household artifact assemblages so as to explore the nature of activities and social relations within different prehistoric communities.

Bethard, Jonathan (Mississippi State Community College)

[226] *Inka Imperialism and Biological Variation: A Bioarchaeological Perspective*

Prior to European contact, the Inka empire was unarguably the largest civilization ever to emerge in the New World; however, relatively few Late Horizon/Inka burials (AD 1400-1532) have been recovered, making bioarchaeological analyses difficult. Recent excavations, however, are beginning to change what researchers know about those who administered and lived under imperial Inka rule. The research presented here investigates intra/inter-phenotypic variability of several Inka sites in Peru. These findings are interpreted in context of the Inka's socio-political organization as an empire and will add to a growing body of literature surrounding the bioarchaeology of pre-colonial imperial societies.

Bettencourt, Nichole (Washington State University) and Melissa Goodman-Elgar (Washington State University)

[259] *All Fired Up: The Geoarchaeological Investigation of Adobes from Chiripa, Bolivia*

This paper examines adobes and the processes that affected them at the Formative tell mound site of Chiripa on Lake Titicaca, Bolivia. It utilizes geoarchaeological methods to investigate anthropogenic activity associated with the adobes, including: the manufacture of the adobes, and the design, construction, burning and razing of the structures at Chiripa. The data set is comprised of thin sections made from a soil column collected from the Chiripa mound and adobes collected at the site, as well as parallel bulk samples. This enables the paper to use more than one line of geoarchaeological data during its investigation of Chiripa.

Bettinger, Robert (University of California-Davis)

[197] *Technological Investment and Intensification*

The simplified model of technological investment developed by Bettinger, Winterhalder, and McElreath anticipates diverse trajectories of intensification. The most common is via investment that increases returns at a decreasing rate within an extant technological design. Less common is the introduction of a novel design that renders existing alternatives obsolete or fills a niche between them. As in Sewall Wright's shifting balance theory, the first trajectory is that of simple peak climbing in response to economic demand, the second that of peak shifting governed by less predictable forces including the advent of novel technologies and their match with existing sociopolitical structures.

[118] *Discussant*; [155] *see Morgan, Chris*

Bettis, III, E. Arthur [29] see Hajic, Edwin R.

Bettison, Cynthia (Western New Mexico University Museum)

[56] *Beyond Subsistence: Defining the Mogollon of West-central New Mexico*

Nearly seventy-five years after Emil Haury defined the Mogollon Culture, the debate continues—just who are the Mogollon? Building upon previous research, published data are reconsidered and new

data are incorporated to explore prehistoric social dynamics and group formation in west-central New Mexico from A.D. 200 to 1400. Through systematic analyses, co-residency, migration, architecture, settlement patterns, regional interaction, warfare, population distribution, and environment are examined to explain the unique social aggregations, community integrations, ceramic variability, and architectural expressions that contribute to the distinctive, shared identity defined as the Mogollon.

Betts, Alison [155] *see Jia, Peter Weiming*

Betts, Colin (Luther College) and Stanley Ambrose (University of Illinois)

[214] *Spatial, Temporal, and Seasonal Sources of Isotopic Variability in Plains Bison*

Bison represented an important, yet variable, food resource for indigenous groups on the Plains. Stable isotope analysis represents an important means of ascertaining the dietary importance of bison – however, its use is complicated by significant spatial and temporal variability in bison isotope values. The nature and causal factors of this variability are systematically ascertained using a large comparative set of carbon, nitrogen, and oxygen values from archaeological bison.

Betts, Matthew (Canadian Museum of Civilization), David W. Black (University of New Brunswick) and Susan E. Blair (University of New Brunswick)

[60] *Ancient Men and the Sea: Shark Remains in Prehistoric Mortuary Contexts on the Maritime Peninsula*

Shark teeth are commonly found in burial contexts throughout the Northeast. On the Maritime Peninsula, shark teeth have been identified at Cow Point, a Moorehead cemetery dating to ca. 3900 BP, Ministers Island, in an Adena-related burial context dating to ca. 2300-1900 BP, and in multiple Early Woodland ceremonial deposits in Nova Scotia. Beyond the Maritime Peninsula, shark teeth have been recovered from Adena contexts ranging from Chesapeake Bay to the Ohio River. In this paper, we explore how sharks were signified in mortuary contexts in the Maritime Peninsula, and what these human-animal relationships reveal about Late Archaic and Early Woodland Period societies. We address how local human-animal relationships were expressed in regional ritual complexes, and more importantly, how these local relationships became entangled in greater Northeastern funerary practices.

Betzenhauser, Alleen (University of Illinois)

[29] *Transforming Places and Persons: Community and Personhood at the Mississippian Transition in the American Bottom*

Researchers now recognize the active role space, architecture, and monuments play in constructing personhood and community identities. In this paper I will measure the degree to which communities and spaces were altered at the onset of the Mississippian period in the American Bottom of Illinois through analyses of settlement histories and production activities and techniques at several Mississippian transition sites located near Cahokia. These investigations will provide evidence for alterations or continuity in daily practices as demonstrated through changes in spatiality.

Bey, George (Millsaps College) and Rossana May Ciau (Universidad Autonoma de Yucatan)

[178] *The Reality and Role of Popol Nas in Northern Maya Archaeology*

Popol nas or council houses have been identified for the Early, Late and Terminal Classic periods in the northern Maya lowlands. This paper focuses on the earliest proposed examples, examining the characteristics and assumptions used to define them as popol nas and their possible role in the evolution of Classic Maya society. Examples from Ek Balam, Kiuic and Labna are discussed in detail in order to consider the reality of popol nas, their function in the development of social stratification in the northern Maya lowlands and how they may also reflect changes in social organization during the

Late Classic.

Bey, George [78] *see Galaty, Michael L.*

Beyries, Sylvie (CNRS)

[17] *Domestic Activities, Craft and Environment*

Ethnographic research has demonstrated how in many traditional communities (such as Siberian communities), craft production and domestic activities are gender specialized. The organization of craft production within these communities is both economically and socially motivated. However, when these communities are under extreme environmental and social pressures (climate, economy and crisis), the rules of gendered division labor become more flexible. These ethnographic studies enable us to be more flexible for archaeological interpretations.

Bezerra De Almeida, Marcia (Universidade Federal do Pará/Brasil)

[196] *Signifying Heritage in Amazon: A Public Archaeology project at Vila de Joanes, Ilha do Marajó, Brazil*

The paper examines what archaeological heritage means to the local communities at Vila de Joanes, in Amazon, considering a historic site assigned to a religious mission from the XVIIth Century. By reflecting about the social representations of the ruins and the role of these representations to the community's attitudes towards the site, I explore the underlying logic of looting – a common practice – and the subsequent organization of "small domestic collections". My purpose is to understand the relationship between small scale communities and the patrimony as well as to contribute to the political policy concerned to heritage preservation in Amazon.

Bicho, Nuno (FCHS), Francisco Almeida (IGESPAR - Portugal) and Jonathan Haws (University of Louisville)

[177] *The Dryas III event in central and southern Portugal: Evidence of Absence or Absence of Evidence?*

Only a small number of Portuguese archaeological sites are dated to Dryas III (12,800-11,600 cal BP). In contrast, many sites are dated prior to or after the event. Because highly flexible cultural, economic and technological systems characterize the regional Upper Paleolithic, it seems humans were able to adapt to increased aridity, lowered temperatures, and important changes in vegetation. Here we will focus on: the lack of evidence for human occupation (population decline or formation processes affecting the archaeological record?); climatic and geological processes resulting in the erosion and loss of sites; abandonment and relocation of humans as resource availability shifted.

Bicho, Nuno [16] *see Manne, Tiina H.*

Bies, Michael (BLM Worland FO), Danny Walker (Wyoming State Archaeologist's Office), Marit Bovee (Worland F. O. BLM) and Neffra Matthews (BLM National Operations Center)

[22] *Recent Research at Legend Rock Petroglyph Site (48HO4) Wyoming, USA*

This paper presents the results of recent research and recordation at Legend Rock Petroglyph Site (48HO4). Recordation efforts in 2008 documented the two localities within the site which had not been previously studied in detail. It includes an analysis of the pigments utilized to produce pictographs at the site and other sites in Wyoming. This includes analysis of pigments from several raw material sources as well as pigments recovered from site excavations in the Bighorn Basin.

Big Owl-McArdle, Germaine (Indiana University of Pennsylvania) and Christopher D. Adams (Gila National Forest-Black Range District)

[42] *Battlefield Archaeology in New Mexico: Victorio's (Chiricahua Apache) Fight For Freedom*

Several undiscovered battlefield's from the U.S. Army's campaigns against Victorio in the late 1800's were located in Southern New Mexico. We have searched the sites by using historic accounts from

both the Army and Apache participants, historic and current maps, and electronic equipment. In this poster, we will show the location of cartridge samplings that indicate a battle may have taken place. A GeoHX handheld Trimble device was used to sketch out a map. Through the use of technology and more traditional archaeological methods we hope to gain a clearer understanding of what took place during the campaign.

Bigelow, Nancy [224] *see Graf, Kelly E.*

Bill, Cassandra (Middle American Research Institute)

[218] *A Ceramic Perspective on the Culture History of Copán*

The significance of Copán's physical and cultural position on the southeast frontier of the Maya area has long been recognized and is reflected in the site's ceramic assemblages that represent an eclectic mix of different regional styles and local conventions. Over time, both subtle and salient shifts within this ceramic mosaic provide a window through which to view certain developments in the sociocultural history of Copán, including the nature of relationships between Copán and other regions, as well as the development, maintenance and character of alternative social identities associated with different phases of occupation and different elements of Copán society.

Billeck, William (Smithsonian Institution)

[102] *Seventeenth Century Glass Beads from the New Lenox Site in Will County, Illinois*

The glass bead assemblage from the New Lenox site consists of 32 beads that date to the seventeenth century. Small bead assemblages can be a challenge to precisely place in time because of limited diversity and the temporal sensitivity of the beads. Nonetheless, even small assemblages from this time period are highly significant, especially for this region. The New Lenox glass bead assemblage is compared to other contemporary assemblages to date it more precisely and to reveal its geographical relationships.

Billman, Brian (UNC & MOCHE, Inc) and Jesus Briceno Rosario (Instituto Nacional de Cultura)

[98] *Preserving Archaeological Sites by Forming Community Partnerships: A Case Study from the North Coast of Peru*

As you read these words archaeological sites in Peru are being destroyed at an unprecedented rate. If we do not act now, most of the archaeological sites in many regions of Peru will be destroyed within the next 10 years. Results of our preservation efforts in the Moche Valley since 1998 indicate that destruction of sites can be averted by forming community partnerships that integrate development, education, and preservation. This community-based approach may be a key to stemming the tide of destruction in Peru and beyond.

[159] *Discussant*; [98] *First Chair*

Billman, Brian [138] *see Boswell, Alicia*

Binning, Jeanne (California Department of Transportation), Alan P. Garfinkel (California Department of Transportation), C. Jill Minar (Fresno City College), Clifford J. Walker (Mojave River Museum) and Robert M. Yohe II (California State University)

[232] *A Biface Cache from Paradise Springs, Central Mojave Desert*
A cache of eight pressure-flaked bifaces, including two Humboldt Basal-Notched knives of Coso obsidian and six chert, dart-point performs, was found at Paradise Springs, south of Fort Irwin in the Central Mojave Desert. Hydration rinds on the two Humboldt bifaces indicate that the cache dates to about 600 AD. The function of the cache within its social context, the special role of the Humboldt Basal-Notched knife, and the persistence of the atlatl and dart into bow and arrow times are discussed.

Birch, Jennifer (McMaster University), Andrea Carnevale (Archaeological Services Inc.), Debbie Steiss (Archaeological Services Inc.), Rob Wojtowicz (Archaeological Services Inc.) and Ronald F. Williamson (Archaeological Services Inc.)

[60] *Aggregation and Integration in Iroquoian Ontario: Recent Insights from the Mantle Site*

Northern Iroquoian societies underwent a macro-regional process of coalescence during the fifteenth and sixteenth centuries A.D. Settlement data indicate that large, well-planned and heavily fortified communities formed out of previously distinct local groups. One such community inhabited the Mantle site, an early sixteenth century ancestral Wendat (Huron) village in southern Ontario. Recent archaeometric analysis of ceramic material combined with analyses of lithic and settlement pattern data indicate that the Mantle community was also involved in interactions that crossed linguistic, social and political boundaries. This paper demonstrates the efficacy of multi-scalar analytical and theoretical frameworks in elucidating patterns of interaction.

Bird, Douglas [118] *see Zeanah, David W.*

Bird, M. Catherine (Midwest Archaeological Research Services, Inc.)

[102] *Ceramic Traditions Identified at the New Lenox Site (11-Wi-213)*

Thousands of sherds and 102 ceramic vessels were recovered from the New Lenox Site including those affiliated with Late Woodland, Upper Mississippian, and protohistoric periods. Radiocarbon assays associated with Late Woodland and Langford Tradition ceramics suggest coeval occupation. Assays associated with Oneota Tradition and protohistoric ceramics postdate the others. Radiocarbon assays, a newly defined protohistoric ware (D'Friant) and European trade goods allow us to separate some features into temporal categories and provide information about the spatial distributions of the site's components. Presence of D'Friant leads us to consider the complicated question of ethnic identification of peoples living here.

Birnbaum, Michelle (University of Wisconsin - Milwaukee)

[102] *More Than Just a Box of Rocks: Mineralogical and Use Analysis of Fire-Cracked Rock from the Late Prehistoric/Proto-Historic New Lenox Site, New Lenox, Illinois*

For those working on prehistoric sites in North America, fire cracked rock (FCR) is a ubiquitous artifact. In some cases FCR is the only cultural indicator of human activity, but in the Midwest rarely is FCR collected and analyzed. Due its ubiquity and significant volume this material class is often discarded with only cursory documentation. Mineralogical and use analysis of FCR from the New Lenox Site provides interesting insights into raw material use, reuse and collection strategies as part of a larger pattern of resource exploitation.

Bishop, Ronald (Smithsonian Institution)

[51] *Facing Anna Shepard*

Anna O. Shepard may be best known by her groundbreaking textbook and her quest for objectivity in ceramic analysis. She is variously referred to as brilliant, scathingly harsh, dedicated, mean, strange, and loving. Undeniably, she fought her way through blatant bias, achieving archaeological fame in her pioneering work as a laboratory specialist. In the end, her unwavering dedication to the role of objective analysis left her despondent, outside of archaeology's thirst for abstraction through an emerging contagion of ceramic taxonomy. This paper examines the life and times of this diminutive fighter who attempted to further archaeology as a scientific pursuit.

[229] *see Forne, Melanie*

Bissett, Thaddeus [15] *see Auerbach, Benjamin M.*

Bisson, Michael (McGill University)

[186] *The Middle Paleolithic of the Wadi Enqiqiyya, Jordan*

The Wadi Enqiqiyya, Azraq Basin, Jordan, first surveyed in the 1980's, yielded the largest sample of MP lithics from Jordan at the time. That collection, a palimpsest from multiple sites along the wadi, included some Acheulian and UP elements. Our 2008 resurvey located an isolated pristine MP site (WE-2) around a spring seep east of the wadi. Systematic collection yielded over 9,000 artifacts. A u/th date associated with MP lithics was also obtained from the wadi itself. This collection is compared to other Levantine MP assemblages, and hominin adaptations to oasis conditions during OIS-5 are discussed.

[186] *First Chair*

Black, David W. [60] *see Betts, Matthew W.*

Black, Kevin (Colorado Historical Society)

[28] *Avocational Contributions to Colorado Archaeology*
Avocational archaeologists have been active participants in Colorado for decades. Organizationally, they have been integral to the formation of support groups such as the Colorado Archaeological Society—one of the oldest such organizations in the country, founded in 1935—and the San Luis Valley Archaeological Network, and were indispensable lobbyists for the creation of Colorado's Office of the State Archaeologist in 1973. Avocationalists continue to contribute to the study and preservation of the state's cultural resources through activities and programs such as site stewardship, volunteer field and laboratory work, publication in local and regional journals, sponsoring college scholarships, and project fund-raising.

Blackhorse, Taft [235] *see Marek-Martinez, Ora V.*

Blackman, M. James [229] *see Forne, Melanie*

Blackmore, Chelsea (UC Berkeley)

[181] *Shaping the Past to Shape the Future? Archaeological Knowledge and the Politics of Modern Maya Identity*
How archaeologists define the past directly affects the relationships and identities created within and between archaeologists and descendant communities. Ancient Maya research, for example, particularly in its public presentation, often exoticizes the past by emphasizing the material culture of the elite. Such "top-down" perspectives not only homogenize archaeological representations but affect the social and political trajectory of indigenous groups such as the Maya. This paper examines the relationship between archaeological research, the production of knowledge, and the creation and recreation of both ancient and modern Maya identities.
[181] *Second Chair [181] Second Organizer*

Blackwell, Bonnie (Williams College), Aislinn E. Deely (RFK Science Research Institute), Anne R. Skinner (Williams College), Christopher Hill (Boise State University) and Thomas M. Truongchau (RFK Science Research Institute)

[259] *ESR Dating Pluvial Events at Paleolithic Sites in the Egyptian High Desert Oases*
During Pleistocene wet phases, hominids left Paleolithic artefacts at Kharga, Dakhleh, and Bir Tarfawi Oases. Today, these hyperarid areas lack naturally occurring surface water. ESR dating ungulate fossil teeth and molluscs found in Pleistocene lacustrine sediment and on deflated surfaces pinpoints times when surface water existed. Although surface water may have been available at other times, small freshwater lakes did occur at ~9 ka (earliest Oxygen Isotope Stage, OIS, 1), ~86 (OIS 5b), 100-130 ka (OIS 5d-5e), and ~2.0 Ma (Early Pleistocene). Herbivores inhabited the oases at ~60 ka (OIS 3), ~159-171 ka (OIS 6c-6d), and ~184 ka (OIS 6d).

Blackwell, Bonnie A. B. [8] *see Skinner, Anne; [161] see Blickstein, Joel IB*

Blahe, Alissa (University of Wisconsin Milwaukee)

[29] *Spatial Analysis of Effigy Mounds and Late Woodland Habitation Sites in the Lake Koshkonong Region, Wisconsin*
Archaeologists have presented numerous models to explain the locations and functions of Late Woodland effigy mound sites. Many of these explanations are environmentally oriented, but are limited by the data available at the time they were developed. In this poster, GIS is used to document the environments surrounding effigy mound sites near Lake Koshkonong, and to compare those locations to other Late Woodland sites in the same region. The analysis will also attempt to take into account change through time in site location. The final goal is to highlight the complexity of Late Woodland period in settlement Southeastern Wisconsin.

Blair, Elliot [154] *see Mahar, Ginessa J.*

Blair, Susan E. [60] *see Betts, Matthew W.*

Blake, Karry L. [33] *see Wegener, Robert M.*

Blake, Michael (University of British Columbia), Bruce Benz (Texas Wesleyan University), Kisha Supernant (University of British Columbia) and Sue Formosa (University of British Columbia)

[163] *A Web-Based Method for Mapping: An Example Showing the Spread of Early Maize in the Americas*
We present a method for producing interpolated distribution maps of archaeological data that can be quickly and easily exported to web-based mapping platforms such as Google Earth API. The method integrates several software programs (FME and ArcGIS) in order to convert point data into contour or surface maps that show age, density, ratio, or other types of distributions on the landscape. We illustrate the process by mapping all available early AMS dates for maize macro-remains in the Americas. Changes and updates can be quickly made with this automated process and the results instantly updated on websites for rapid sharing of research results.

Blake, Michael [138] *see Benz, Bruce*

Blanco, Mónica [221] *see Serra, Mari C.*

Blankenship, Sarah A. [22] *see Sherwood, Sarah C.*

Blankenship, Sarah (University of Tennessee), Alan Cressler (USGS), Jan Simek (University of Tennessee) and Joseph Douglas (Volunteer State Community College)

[62] *A World Below: New Dark Zone Cave Art from 62nd Unnamed Cave, Tennessee*
A complex, rich and diverse cave art assemblage from a small, dry cave in south-central Tennessee is reported. This assemblage has a certain subject matter that suggests a prehistoric, and thus Native American, origin, but its context may indicate an early historic age. The implications of each of these possible ages are important, and how to place the art in proper chronological context is a fundamental puzzle in this site that requires technological resolution. Absolute dating, historical analysis, spatial analysis, and chemical analysis are all brought to bear on this art to try to identify its temporal and ethnic origin.

Blanton, Dennis [259] *see Thieme, Donald M.*

Bleed, Peter (University of Nebraska- Lincoln) and Douglas Scott (University of Nebraska - Lincoln)

[220] *A Contested Terrain: Archeological Reflections of the North Platte Campaign of February 1865*
In the wake of the 1864 Sand Creek massacre, a large Cheyenne and Lakota community moved into the North Platte valley where small units of U. S. volunteers protected the overland trail. Combat that resulted when they met involved establishment of temporary positions, strategic movements, and the pitched battles of Mud Springs and Rush Creek. Viewed in the context of historical sources and local terrain, archeological reflections of these activities offer original insights into the strategic behavior of the two sides. Archeological information also contributes to understanding of conflicts that followed the North Platte campaign and perceptions that guided conflicts of the Indian Wars.

Bleed, Peter [171] *see Scott, Douglas D.*

Blickstein, Joel (RFK Science Research Institute), Anne R. Skinner (Williams College), Bonnie A.B. Blackwell (Williams College), Hirzi Amirkhanov (Institute of Archaeology, Russian Academy of Sciences, Moscow)

[161] *ESR Dating an Oldowan Site in Dagestan, Southern Russia*
In Dagestan, southern Russia, the site of Ainikab I contains 13

recognizable geologic layers grouped into four geological units. The lowermost gravel-rich unit has yielded typical Oldowan tools associated with diagnostic Early Pleistocene (Apscheronian) pollen and fauna. Paleomagnetic analysis for the site suggests that the slightly brecciated lower unit, which contains lens of siltier material, predates the Jaramillo Subchron (0.99-1.07 Ma). One equid tooth from the Layer 11 in the older unit yielded seven subsamples that have been dated by standard and isochron ESR. Sedimentary components from Layer 11 was analyzed geochemically to determine the volumetrically averaged sedimentary dose rate.

Bliege Bird, Rebecca [118] see *Zeanah, David W.*

Blom, Ronald (Jet Propulsion Laboratory), Andrew Yatsko (Naval Facilities Engineering Command, Southwest), Douglas Comer (Cultural Site Research and Management) and Scott Hensley (Jet Propulsion Laboratory)

[160] *Remote Sensing Data and Archaeology: Ingredients for Success*
Applications of remote sensing data in archaeology range from indications of areas favorable for archeological prospection, to direct detection and characterization of potential sites. Remote sensing data are particularly useful in providing spatial context for resources and infrastructure supporting past populations. Accordingly, remote sensing data can be a powerful tool for increasing efficiency of archaeological investigations when systematically integrated into investigation protocols. Projects successfully applying remote sensing data have common characteristics including partnerships between archaeologists, remote sensing specialists, and those with GIS expertise. We discuss successful examples of remote sensing data applied to archaeological efforts in diverse environments.

Blomster, Jeffrey (George Washington University)

[260] *The Naked and the Clothed: Embodiment, Gender and Social Identity in Formative Oaxaca and Olman*

I explore the roles of costume and embodiment in expressing gender and social identity primarily in Formative Oaxaca, Mexico. Examining figurines reveals distinct patterns in how the body is conceived, elaborated and ornamented. Early in the Formative, costumes rarely cover the bodies on these figurines, while headdresses and iconography located on the head occur more frequently; changes in materialization of bodies and their ornamentation during the Formative reflect ongoing negotiations of social identity. Finally, I consider methodological issues in comparing gender and social identity evinced on clay figurines with that expressed in monumental art in Olman.

Blong, John (Texas A&M University)

[90] *Paleoindian Toolstone Provisioning and Settlement Organization at the Higgins site, 18AN489*

The Higgins site is a multi-component prehistoric site in Ann Arundel County, MD, excavated by Carol Ebright in 1987-1988. In 2009 I analyzed the lithic artifacts from the fluted point horizon. Goals of analysis were to determine the technological choices made by the site's earliest occupants and how these related to toolstone provisioning and settlement organization. In this paper I present details on the stratigraphic context, lithic technology and raw material sources of the Higgins artifacts. The earliest occupants of the Higgins site employed a combination of expedient and formal technologies that were tied to variable toolstone quality and availability.

Boatwright, Mark (BLM) and Andreas Charest (BLM)

[211] *Prehistoric Paiute Use of Yucca in Southern Nevada*

Ethnographic data suggest that annual plants such as Indian Rice grass formed a substantial part of the Paiute diet in the Great Basin. Optimal forager theory predicts that resources from more reliable perennial plants such as Yucca species would have been more highly ranked by the prehistoric Southern Paiute bands that lived in the Mojave Desert. Ethnobotanical and ceramic residue analyses associated with rock ring features confirm that the prehistoric Southern Paiute sought out locally occurring perennial Yucca species in favor of patchy and unreliable annual plant resources over an

identifiable period of time.

[211] First Chair [211] Second Organizer

Bocherens, Hervé (Universität Tübingen), Dorothée Drucker (Universität Tübingen), Elisabeth Stephan (Landesdenkmalamt Baden-Württemberg), Nicholas Conard (Universität Tübingen) and Susanne Münzel (Universität Tübingen)

[157] *The Aurignacian of the Swabian Jura, southwestern Germany: Palaeoenvironmental Reconstruction using Bone Stable Isotope Signatures (13C/12C, 15N/14N, 18O/16O)*

Stable isotope signatures of Late Pleistocene large mammal bones yield valuable palaeoenvironmental information. They provide information on vegetation type (13C/12C), trophic web structure (13C/12C, 15N/14N), precipitation and temperature (18O/16O). Bones from various species excavated in caves from the Swabian Jura exhibit excellent preservation. The isotopic data from the Swabian Jura Aurignacian fauna will be compared to those of older and younger periods in the same region, and to those of other regions during the same period. This will help us determining whether the Swabian Jura presented unusual environmental conditions during the Aurignacian period related to exceptional cultural development.

Bocinsky, R. Kyle (Washington State Univ.), BreAnne Nott (Washington State University) and Brian Kemp (Washington State University)

[19] *Plop!: 'Unorthodox' aDNA Studies for Reconstructing Domestication and Migration*

Archaeogenetic research continues to expand as a novel means to deciphering the archaeological record. This paper introduces three lines of genetic research taking place at Washington State University that have the potential to be major contributions to the VEP: turkey coprolite mtDNA analysis at Turkey Pen Ruin, Utah; regional maize strain identification; and mtDNA analysis of archaeological turkey eggshell recovered from Salmon Ruins, New Mexico. We provide an argument for the explicit incorporation of genetic lineages (human and domesticate) into the Village simulation, and outline potential archaeogenetic datasets that could spring from the expansion of studies like these.

Bocinsky, R. Kyle [19] First Organizer, [19] see Glowacki, Donna M.; [235] see Reed, Charles A.

Bodily, Mark [118] see *Yoder, David T.*

Boeda, Eric (Université de Paris X), Christophe Griggo, Heba al Sakhel and Stéphanie Bonilauri

[58] *The Pleistocene Sequence of Umm el Tlel, Syria*

The site of Umm el Tlel, excavated since 1991, includes more than 140 archaeological beds dating from the Acheulean to the Neolithic. The site's many unique features include the interstratification of Aurignacian and Ahmarian assemblages, a series of industries « transitional » between Middle and Upper Paleolithic, and more than 60 distinct Levallois-Mousterian layers. Additionally, there are two Yabrudian sequences, separated by laminar Levallois and Hummalian industries, as well as some distinctive assemblages of Caucasian affinity. The essentially lacustrine depositional environment leads to excellent preservation of lithic, osseous, and vegetal materials, as well as bitumen, permitting diverse behavioral interpretations.

Boehm, Andrew (Southern Methodist University),

Conor Hall (Iowa University) and Erik Otarola-Castillo (Iowa State University)

[123] *Experimental Bison Butchery: Is Marrow Extraction Worth It?*

Experimental studies have quantified the amount of marrow extracted from ungulate long bones per unit time. However, the amount of human energy required to extract the marrow has previously not been quantified. This study measures both the amount energy (calories) expended during 'cold marrow' extraction and the impact forces (Newtons) required to break each bone element. Our results demonstrate that cold marrow extraction is energetically twice as

costly as the calories obtained from the marrow. Given that marrow processing is not energetically cost-effective, our results quantitatively demonstrate that marrow extraction is driven by alternative dietary or non-dietary needs.

[123] *First Chair*

Boehm, Andrew R. [74] *see Willis, Lauren M.*

Boeka Cannon, Molly [234] *see Cannon, Kenneth P.*

Boggess, Douglas (Lone Mountain Archaeological Services, Inc.), Chad Yost (Paleo Research), David Hill (Center for Big Bend Studies Alpine, Texas), Linda Cummings (Paleo Research Institute) and Mary Malainey (Brandon University)

[87] *What's For Supper: The Contents of a Complete Vessel found in Southeast New Mexico*

During the course of data recovery at LA 149260 (the Rascal Rabbit Site), located to the east of Carlsbad, New Mexico, Lone Mountain archaeologists recovered a complete Jornada Brown bowl that had been left in place within a thermal feature. We submitted sherds from the vessel and the fill from within and beneath the vessel for a variety of analyses. These results indicated that the Formative period occupants of LA 149260 consumed not only locally available resources but made use of wetlands plant and faunal materials, including a member of the marantacea family and fish.

Böhner, Utz [205] *see Serangeli, Jordi*

Boisvert, Richard (NH Division of Historical Resources)

[90] *The Potter Site, Randolph, NH: A Multipurpose Paleoindian Encampment in the White Mountains*

A chance find in 2003 provided the discovery of an extensive Paleoindian site in northern NH and annual field investigations have followed. Shovel test pit survey over three acres with attendant small block excavations reveal a mosaic of special purpose loci. Additionally, all diagnostic artifacts recovered indicate that the site was occupied exclusively by makers of the Michaud-Neponset variety of fluted points, associated with the Middle Paleoindian period in New England. A summary of the contents and context of the assemblage and preliminary assessment of the Potter Site's place in the broader settlement pattern is presented.

Bol , Jaques [206] *see Kahn, Jennifer G.*

Bolender, Douglas (University of Massachusetts, Boston)

[246] *Integrated Archaeogeophysics and Excavation as a Method for Regional Household Archaeology*

Icelandic Viking Age household sites are large, complex and expensive to excavate. Effective regionally-based household archaeology programs require a means to target elements of the archaeological record within individual sites and for comparison among sites that does not entail complete excavation. Coring and archaeogeophysics are critical tools in targeting small excavations to ensure better representation of the site and comparability among sites. In addition to assisting the positioning of small excavation units, proper subsurface reconnaissance of a site allows archaeologists to understand the context of small excavations and how they relate to the site and region.

[246] *Second Organizer*

Bolus, Michael (Heidelberg Academy of Sciences)

[157] *Contextualizing Cultural and Technological Trends in the Swabian Aurignacian*

The Swabian Aurignacian dates between 40,000 and 30,000 years ago and is characterized by numerous innovations in nearly all cultural systems. The archaeological record documents radical changes between the adaptations of Neanderthals and modern humans in southwestern Germany. Increasingly, the Swabian record is being viewed as a key case study for examining cultural evolution associated with the beginnings of the Upper Paleolithic and the

spread of modern humans across Europe. This paper examines the patterns of cultural variation in the Swabian Aurignacian in their local and interregional contexts.

Bomalaski, Anne [183] *see Massey, David*

Bon-Harper, Sara (Monticello)

[166] *Yard Space: Comparisons of General Activity Areas between Historic Period Social Groups*

Recent research by the author has established a statistical method for identifying maintained spaces and peripheral refuse areas on archaeological sites. The method was developed as a first step in examining a prior assumption about historic African-American yard spaces. This poster applies the new method to a range of eighteenth and nineteenth century archaeological sites to examine site maintenance between socio-economic groups. The work bridges ethnoarchaeological studies of site maintenance and archaeological observations of artifact distributions.

[166] *First Organizer; [166] First Chair*

Bonilauri, St phanie [58] *see Boeda, Eric*

Bonsall, Clive (Professor)

[61] *Climate, Complexity and the Transition to Farming in the Iron Gates*

The post-glacial hunter-gatherers of the Iron Gates are widely regarded as a classic example of a complex foraging society. But just how "complex" were they, and did this hasten or hinder the transition to farming in the region? This paper will look for trends in the archaeological record of the Iron Gates from c. 14,000 to 5500 BC, and consider whether social or environmental factors were the key driver of culture change in the region.

Boone, James L. [259] *see Worman, F. Scott*

Borck, Lewis (University of Arizona)

[152] *To the Heart of the Matter: Evidence of Trade in the Gallina Heartland*

A phase II survey was conducted on the Cuba and Coyote ranger districts of the Santa Fe National Forest as part of the Rio Chama Prescribed Burn Project. During the course of field work, portions of the Rio Chama Wilderness, which had never before received archaeological survey, were examined. Over 60 unknown/unrecorded sites were located and recorded. This presentation will focus on the evidence of trade from these sites in the form of a foreign ceramic tradition. In addition, the settlement patterns and viewsheds of these new sites, which are predominately located on two inaccessible mesas, will be analyzed in the hopes of attaining a better understanding of how the people living on these mesas interacted with both their neighbors and the landscape.

Boreham, Julie

[161] *Hidden Worlds made Visible*

"Look around you - all you can see is really there. Yet, behind each thing lies a mystery, hidden from view. If you try hard, you may get a glimpse of that world, but never will you be able to see it all." -'Life as a Geological Force - Dynamics of the Earth' by Peter Westbroek In 'Hidden Worlds', I would like to invite the viewer to see the extraordinary - the detailed stories that are not normally seen or told within the confines of standard archaeological field practice. Soil micromorphology, although time-consuming and labour intensive can sharpen, bring forward and separate the threads that make up the tapestry of the past. It is our responsibility as 'Archaeological scientists' to communicate in a easily understandable language what we are privileged we see under the microscope.

Borojevic, Ksenija (Boston University)

[151] *Investigating Modes of Arrival of Charred Seeds at tel Kedesh, Upper Galilee*

Plant macro remains were systemically collected and floated from the multi-layer site Kedesh. The samples retrieved from the various

contexts within the large Hellenistic administrative building are dominated by wild/weedy seeds (e.g., small grasses, melloes, and daisies), regardless of the location within the building or phase. No concentrations of crop remains were found. This is an unexpected discovery since some of the jars and rooms were believed to be used for grain storage. The likely modes of arrival of the plants were examined in order to reveal if they may have been the result of bioturbation.

[151] *see Mountain, Rebecca*

Borrero, Luis (CONICET)

[119] *The Impact of the Work of Lewis Binford in the Archaeology of Argentina*

Geographically speaking, Argentina is -together with Chile- on the most southern marginal position within America. Thus, it is not surprising that in the pre e-mail world of the 20th century Binford's influence on the archaeology of Argentina took a few years. However, when his work was finally known, his faunistic, lithic and hunter-gatherer studies produced a major impact in the reorganization of the archaeology of mid-Argentina, Patagonia and Tierra del Fuego.

Bosch, Marjolein (MAX-Planck-Institute for Evolutionary Anthropology), Florian Fladerer (Universität Wien, Institut für Paläontologie), Philip Nigst (Max-Planck-Institute for Evolutionary Anthropology) and Walpurga Antl-Weiser (Naturhistorisches Museum Wien)

[184] *Bones, fire, and humans: Zooarchaeological, taphonomic, and spatial analysis of a Gravettian mammoth bone accumulation at Grub-Kranawetberg (Austria)*

At Grub-Kranawetberg, a multi-layered Gravettian open-air site located northeast of Vienna (Austria), an area with large animal remains in the vicinity of a campsite was excavated. This area is characterized by numerous and large faunal remains, only a few lithics, and evidence of burning. This bone accumulation is dominated by mammoth. Our research focuses on zooarchaeological, taphonomic, and spatial analysis with the goal to test different models explaining formation of the bone accumulation and the role of humans in it. Here we present first results and argue for intentional burning by humans of the large mammal remains.

Boswell, Alicia (UCSD), Brian Billman, Camila Capriata Estrada and Jesus Briceño Rosario

[138] *Settlement Patterns in the Sinsicap Valley, Peru*

The Sinsicap Valley, a tributary of the Moche River, is located in the Chaupiyunga, a desirable ecological zone located between the north coast of Peru and the highlands. This area is not only capable of producing a large variety of agricultural products but also serves as a natural communication corridor between these two regions. Survey by the Moche Origins Project in 2007, 2008, and 2009 provides new information about the region, providing evidence of highland/coastal relationships in this area.

Boszhardt, Ernie, Danielle Benden (University of Wisconsin-Madison), James Theler (University of Wisconsin-La Crosse), and Timothy Pauketat (University of Illinois)

[70] *Early Mississippian Colonists to an Effigy Mound No-Man's Land in the Upper Mississippi Valley*

Toward the end of the Late Woodland stage in the Upper Mississippi Valley, increased populations likely caused over-exploitation of crucial natural resources and led to social territories that were demarcated by a surge in the construction of effigy mounds. One such boundary involved a no-man's land that separated Eastman and Lewis phase effigy mound peoples. Around A.D. 1050, a colony of early Middle Mississippians travelled over 500 river miles from the American Bottom to establish a short-lived, but apparently peaceful settlement within this no-man's land. Why the Mississippians left their homeland, how they selected the colony site, and what was their effect on the local Late Woodland populations are topics of ongoing NSF sponsored research.

Bouchard-Perron, Julie-Anne

[48] *The World is on the Menu: Discourse and Colonialism at Quebec City Tables*

From the field to the table, from table to meal, food accumulates a biography. Its geographic origins, its link with particular systems of production and exchange, its colour, and its taste, are all characteristics through the recognition of which people create social bonds across time and space. By putting together food at dinner time, some of these characteristics and bonds are integrated to differing extents creating a new social discourse relating to food and culture. This paper addresses questions relating to colonialism as seen through the food chosen at Quebec city tables across a period of over 300 years.

[132] *Third Organizer*

Boulanger, Matthew (University of Missouri) and Peter Thomas
[60] *Seventeenth-Century Native-American Social Dynamics on the Fringe of Colonial Empires: Analysis of the Ceramic Assemblage from Fort Hill, Hinsdale, New Hampshire*

Analysis of the ceramic assemblage from Fort Hill, a fortified Native American village occupied by Sokoki/Squakheag Indians for roughly eight months during the mid-seventeenth century, reveals greater diversity in ceramic technology than predicted. Integration of ethnographic/historical records suggests Native social dynamics were far more complex than archaeologists have previously assumed. Situated on the periphery of the colonial empires of the Northeast, Fort Hill provides an opportunity to examine Indigenous responses to rapid social change instigated by European colonization. We explain these data as representing evidence for amalgamation and unification among Northeastern Algonquins.

Boulanger, Matthew T. [161] *see Woods, Julie A.*

Bovee, Marit [22] *see Bies, Michael*

Bowser, Brenda (CSU-Fullerton), Daniel Grijalva (CSU-Fullerton), Holly Eeg (CSU-Fullerton), Nhi Truong (CSU-Fullerton) and Paul Langenwaller (Biola University)

[81] *Early-to-Middle Holocene Fishing: The Importance of Estuarine Resources from the Perspective of Archaeological Site CA-ORA-64*
CA-ORA-64, also known as the Irvine Site, is one of the oldest and largest coastal shell middens in southern California. Located on a bluff overlooking an estuary, the site was occupied over a period of more than 4,000 years, spanning the Early Holocene and Early-to-Middle Holocene transition. Throughout the coastal regions of southern California, abandonment of coastal estuarine sites like CA-ORA-64 at the end of the Early Holocene has been attributed hypothetically to the silting of estuaries and declining availability of estuarine resources. This paper examines temporal trends in the relative importance of estuarine resources in the diet, based on analysis of faunal remains excavated from CA-ORA-64 in the 1990s, to test the applicability of the Coastal Decline Model.

Boyce, Joseph [29] *see Sonnenburg, Elizabeth P.*

Boyd, Carolyn (SHUMLA/Texas State University) and Marvin Rowe (TAMU)

[104] *Over and Under: A Re-Examination of Red Linear Rock Art*
Red Linear style rock art is one of three recognized styles of prehistoric rock art in the Lower Pecos Canyonlands. During recent rock art recording efforts, multiple examples of Pecos River style rock art superimposing Red Linear style pictographs have been documented. The superimposition of "older" Pecos River style images over "younger" Red Linear images highlights the need for further dating research and a re-examination of the stylistic classifications of prehistoric rock art in the region.

Boyd, Carolyn [22] *see Johnson, Angela K.*

Boyd, Charles (Radford University) and Donna Boyd (Radford University Forensic Science Institute)

[88] *Exploring the Theoretical Basis of Forensic Archaeology*
Forensic Archaeology has recently gained prominence as an important form of applied archaeology. However, development of a theoretical basis for forensic archaeology has been limited largely to the exploration of taphonomic processes. In this paper, we examine the relationship between archaeological theory and forensics. Specifically, we discuss both agency theory (in terms of the actions of individual and collective agents) and behavioral archaeology (the behavioral chain concept) as useful theoretical models for more broadly explaining and interpreting the roles of perpetrators, victims, investigators, and environmental factors in the creation of a forensic scene.

Boyd, Donna [88] see *Boyd, Charles C.*

Boyd, Robert [197] see *Richerson, Peter J.*

Boytner, Ran (UCLA) [188] *Third Organizer*; [188] see *Cardona, Augusto*

Bradbury, Andrew (Cultural Resource Analysts, Inc.), Brian DelCastello (Cultural Resource Analysts, Inc.) and Steven Creasman (Cultural Resource Analysts, Inc.)

[150] *Site Structure Analysis of a late Middle Archaic Upland site in Morgan County, Illinois*

Data recovery investigations at a buried upland site in Morgan County, Illinois documented a late Middle Archaic component. Five hearths were documented and represent three hearth-related activity areas. Three additional activity areas were defined: freehand core reduction area; bipolar core reduction area; and a general dumping/disposal area. The activity areas appear to be tethered to the hearths. A single occupation is indicated by soil micromorphology, refits, and spatial data. Analysis of the recovered materials indicated that the site represents a short-term residential site. This paper summarizes the results of the analysis of site structure.

Bradbury, Andrew [172] see *DelCastello, Brian G.*; [236] see *Carr, Philip J.*; [172] see *Martin, Andrew V.*

Bradley, Bruce (University of Exeter) [256] *Discussant*

Bradley, James [224] see *Lothrop, Jonathan C.*

Brady, James (Cal State L.A.) and Christophe Helmke (University of Copenhagen)

[148] *Evidence for Cave Desecration in Ancient Maya Warfare: Extending the Hypothesis*

Five years ago the idea that caves, as sacred places, were the target of desecration as a provocation for warfare or as a result of military defeat was advanced but the idea was controversial and not well accepted. Since then, both epigraphic and archaeological evidence for the hypothesis has mounted leaving little doubt that war related cave desecration was common. This paper examines the evidence and provides an extended discussion of new evidence for cave desecration that suggests that the practice occurred on a larger scale than has heretofore been appreciated.

Brady, James [107] *First Organizer*

Brady, Kathleen (Hopewell Culture NHP) and Jennifer Pederson Weinberger (National Park Service)

[176] *Investigations of a Hopewell Structure and Associated Features Outside the Mound City Earthworks*

Park staff and volunteers have conducted investigations at a site located just outside of the Mound City Earthworks. AMS dates place the structure and associated features within the period of construction and use of the adjacent earthworks. Structures both within and adjacent to Hopewellian earthworks have been interpreted as places of craft production, sites of domestic habitation, and places of ritual. We cannot fully understand the intent of Hopewell earthworks or their modes of construction without determining what activities did and did

not take place within their immediate vicinities. This research is one contribution to that large and complex question.

Brady, Kathleen [244] see *Pederson Weinberger, Jennifer*

Braje, Todd (Humboldt State University) and Torben Rick (Smithsonian Institution)

[56] *Transition and Evolution During the Middle Holocene on the Northern Channel Islands*

Channel Island archaeologists have demonstrated that the Middle Holocene was a time of cultural transition in southern California. During this interval, Islanders developed new technologies and bead types, participated in long-distance trade networks, and expanded and intensified subsistence activities. This phase in Chumash history has often been interpreted as a period of gradual cultural evolution when islanders steadily adapted to increasing populations and climatic fluctuations. Recent research suggests, however, that Middle Holocene island peoples played an important role in shaping island land and seascapes, possibly including the introduction of the island fox and modification of near-shore and kelp forest ecosystems.

Braje, Todd [16] see *Rick, Torben C.*; [122] see *Erlandson, Jon McVey*

Brake, Jamie [147] see *Curtis, Jenneth E.*

Branch, Nick [18] see *Meddens, Frank*

Brandoff-Kerr, Joan (USFS retired)

[56] *Archaeological Investigations in the Santa Barbara Backcountry*
Two sites in the mountains of the upper Santa Ynez River watershed shed light on subsistence patterns and trade with the coast from two widely separated time periods. Preliminary findings from the ethnohistoric ranchería of Najalayegua indicate a heavy reliance on coastal resources. The second site is a recent and rare discovery of a buried shell midden dating to the mid-Holocene, so far being the only site of this period discovered in the Santa Barbara backcountry. This finding challenges conventional perceptions that early California populations were confined to the coastal zone.

Brandt, Elizabeth (Arizona State University)

[158] *Death and Burial in the Southwest*

Using ethnographic and ethnohistoric data, this paper addresses the behaviors that surround death in the U.S. Southwestern communalities. It focuses on behaviors related to the presence of death and dead themselves in the community. The ethnographic analysis examines the changed status of the dead and their potential interactions, both positive and negative, with the living. These include prohibitions against sleeping with the feet in the same direction as the burial position of the dead and measures to prevent the dead from taking others in the family on this same journey.

Brandt, Steven (University of Florida) and Catharine D'Andrea (Simon Fraser University)

[53] *Pre-Aksumite Lithics from Mezber Ethiopia: Implications for Early State Formation in the Northern Horn of Africa*

The Eastern Tigray Archaeological Project is a long-term program concerned with documenting and explaining early State formation in northern Ethiopia. The 2009 field season focused upon Mezber, a large "Pre-Aksumite" community of the last centuries B.C. Thousands of chert, obsidian and other lithics reduced by direct, indirect and bipolar percussion were recovered in differential frequencies from various rooms and other features. The assemblages suggest little if any connection to Arabia and point to indigenous developments in the northern Horn. We conclude with a discussion of their importance for understanding the origins of complex societies in the Horn of Africa.

Branstner, Mark

[219] *Hog Capital of the Nation: The Rise and Fall of the East St. Louis Stockyards*

Opened in 1873 and incorporated as National City, Illinois in 1907,

the Saint Louis National Stock Yards represented one of the largest livestock processing facilities in the world. At its peak, the facility encompassed 650 acres, employed more than 10,000 workers and processed 30,000 cattle, 50,000 hogs, 20,000 sheep, and 8,000 calves daily. Abandoned in 1997, the last vestiges of the complex will soon be replaced by the new I-70 Mississippi River bridge. Archaeological salvage work associated with this project has prompted this retrospective and a brief discussion of what remains to be discovered under the ruins.

Braswell, Geoffrey (UC San Diego) and Lauren Hahn (UCSD)

[178] *In the Shadow of the Pyramid: Excavations of the Great Platform of Chichen Itza*

The Great Platform of Chichen Itza is often viewed as empty or negative space between the large monuments built upon it. In fact, it has a long history of construction and contains many platforms, buildings, and other features that are now buried. From April through July of 2009, a team from UCSD conducted archaeological excavations of the Great Platform of Chichen Itza as part of the INAH-sponsored Proyecto Chichen Itza, directed by Rafael Cobos. Our work concentrated on two areas: the western portion of the Muralla that encloses the Great Platform and the area between the Pyramid of Kukulcan and the Group of 1000 Columns. Our excavations provide a complex view of how Chichen Itza appeared before about AD 1050.

Braswell, Geoffrey [178] *First Organizer*

Braswell, Jennifer (UC San Diego Stem Cell Program)

[218] *The Creation and Destruction of Structure D-7 at Xunantunich, Belize*

The Maya nobility of Group D, Xunantunich saw the erection of stelae, extension of a sacbe, and the erection and destruction of its principle elite residence. This paper describes fire pits encountered in excavations, their location, architectural context and associated artifacts. Were these burning events public ritual events, or private actions of intentional destruction by the occupants? In honor of E. Wyllis Andrews V, little speculation is offered about symbolic intentions and rather more is made of archaeological evidence for burning at sites such as Seibal and Copan. Symbolic speculation is strictly limited in favor of focus on accurate placement of recovered data in a defensible temporal and geographic framework.

Bravo Torres, Eva Angelica [57] *see Zavala, Bridget M.*

Bray, Tamara (Wayne State University)

[18] *Putting Huacas in Context*

Whatever else huacas may have been, they were clearly regarded as both powerful and efficacious by the Andean communities that revered them. This paper considers the general category of huaca in light of recent theoretical discussions on materiality, animacy, and personhood. Whether huacas were understood as persons, how this may have been expressed, how we approach such questions archaeologically, and what new insights into native Andean ontologies may obtain are outlined in the paper.

[18] *First Organizer*, [225] *Discussant*

Breetzke, David (GAI Consultants, Inc.)

[179] *No Feature, No Midden, No Problem: Ceramic Residue Analysis from a Middle Woodland Component in Southwest Ohio.*

A data recovery excavation on Site 33Wa797, a multi-component site in southwest Ohio, yielded valuable information on Middle Woodland exploited resources. Although no features were encountered, ceramic residue analysis revealed information on exploited EAC resources. One notable result from the analysis was the identification of angular starch typical of starches produced by *Zea mays*. It should not be assumed that due to the recovery of corn on a Middle Woodland site that corn was heavily exploited during this period. However, this discovery may document the early, slow progression of corn's movement from south to north during the Middle Woodland period.

[179] *First Chair*

Bremer, J (Santa Fe National Forest)

[152] *The Big Picture: Thirteenth Century Gallina Archaeology in Northern New Mexico Along the Continental Divide*

Recent archaeological investigations in northern New Mexico in the Llaves Valley and in the southern San Juan Basin suggest differences with regard to Gallina cultural development between the two areas. Llaves Valley populations appear to perpetuate a conservative lifestyle for 200 years with little or no contact with local populations while a short distance away to the west and south, populations with similar material culture, architecture and settlement patterns show evidence of interaction with adjacent populations in the Basin. This paper summarizes the current status of Gallina archaeology and explores potential explanations for the differences between the two areas.

Bremer, J. Michael [19] *see Kulisheck, Jeremy R.*

Brems, Jillian [185] *see Tynan, Collins P.*

Brenner, Mark (University of Florida), Daniel Ariztegui (University of Geneva), David Hodell (Cambridge University), Flavio Anselmetti (EAWAG) and Jason Curtis (University of Florida)

[153] *Paleoclimate and Paleoenvironment of the Maya Lowlands* Archaeologists and earth scientists are collaborating to investigate interactions among climate, environment, and culture in the Maya Lowlands. Insights into past climate and environment in the region are gleaned from lake and marine sediment cores, speleothems, tree rings, and corals. Paleolimnological studies in the Maya region began in the 1950s. New field and laboratory techniques enable collection of very long cores and high-resolution analysis of proxy variables for climate and environment. We summarize results of paleolimnological studies in the Maya Lowlands, covering the last ~85,000 years, and focus on environmental changes during the Maya Period (~3000-1000 BP).

Brezine, Carrie (Harvard University)

[256] *From Spinning to Stitching: Reading Skill through the Colonial Textiles of Magdalena de Cao, Peru*

What effect do existing skills have on the adaptation of new technologies? Under the influence of the Spanish invasion, Andean textile craftsmanship changed drastically in the 16th and 17th centuries. The collection of colonial textiles and garments from the site of Magdalena de Cao Viejo on the North Coast of Peru allows an unprecedented look at the range of qualities found in indigenous cloth, and how existing practices were adapted to new materials (wool, linen) and influenced by new techniques (knitting, lacework).

Briceno Rosario, Jesus [98] *see Billman, Brian R.*; [138] *see Boswell, Alicia*

Bridges, Sarah (USDA Natural Resources Conservation Service)

[249] *Discussant*

Briese, Christian [61] *see Doneus, Michael*

Bringelson, Dawn (NPS - Midwest Archeological Center)

[29] *Exploring the Archaic in the Great Lakes: Investigations at Apostle Islands National Lakeshore*

The record of prehistoric occupation of the Apostle Islands (APIS), in southwestern Lake Superior, mirrors that in other areas bordering the Great Lakes: comprised largely of sparse lithic scatters. Until recently, most precontact sites at APIS were characterized as "general prehistoric," but investigations over the past decade have provided more specific data. Application of relatively intensive traditional techniques and a variety of other tools have led to the discrimination of archaic-age deposits across several Great Lakes NPS units. Current work at APIS illustrates this expansion in our understanding of the Archaic Tradition in this region.

Brite, Elizabeth (University of California, Los Angeles) and

Ghairadin Khozhaniyazov (Institute of History, Archaeology, and Ethnography, Karakalpak Branch, Uzbek Academy of Sciences, Nukus)

[32] *Local and Global Patterns of Socio-Political Integration in Khorezm, Uzbekistan*

Monumental sites appeared in Khorezm by the sixth century BCE, but strong evidence for domestic habitation remains conspicuously absent from the archaeological record for nearly a millennia. When habitation structures appear more prominently in the fourth century CE, the pattern is one of small, heavily fortified homesteads dispersed along irrigation canals with little evidence for concentrations around monumental sites. This pattern raises significant questions about the relationship between local and global spheres of interaction within the Khorezmian polity, in particular questions about the socio-political integration of domestic communities and their relationship to monumental site activities. Recent excavations at the site of Kara-Tepe in Khorezm suggest two different patterns of change in Khorezm: a possible continuity in the local-level social order that occurred alongside dramatic and rapid changes in the monumental complexes. This paper presents new research from Kara-Tepe that reveals how local inhabitants were integrated within this larger system of shared social order.

Brooks, Alison [151] see Henry, Amanda G.

Brooks, James (School for Advanced Research, Santa Fe) [193] *Discussant*

Brooks, Katherine

[200] *Determining Variation in Mogollon Ceramic Vessel Use in Southwestern New Mexico Through Fourier Transform Infrared Spectroscopic (FT-IR) Analysis*

Fourier Transform Infrared Spectroscopy (FT-IR) was used in the identification of organic surface residues found on the interior vessel walls of two contemporary ceramic wares produced by the Mogollon and Jornada Mogollon between A.D. 200 and A.D. 1150. FT-IR analysis was conducted in an attempt to determine if differences in resource utilization existed between the two sub-cultures. Analysis conducted in this study was performed using a Perkin Elmer 1720X FT-IR Spectrometer. Results from laboratory testing support sub-cultural variation in the types of food and non-food substances that the ceramic vessels held.

Brosnan, Patrick G. [86] see Matovich, Jeanette

Broughton, Laurid (Caprock Environmental, LLC) and J. Sanderson Stevens (JMA)

[150] *A Ceramic Unconformity in the Lower Illinois River Valley: The View from Site 11ST544*

Site 11ST544 occupies the interface of the Little Sandy Creek alluvium and the toeslope of a colluvial fan. The site, located east of Sandy Creek and 3.5 miles east of the Illinois River, produced seven C-14 dates with intercept dates ranging from AD 770-1020. Archeobotanical remains produced evidence of domesticated plants including goosefoot, knotweed, maygrass, pigweed, little barley, and squash. Ceramic types from the site do not conform to known types in the region, but rather they share attributes with several types including Egan Zoned, Jersey Bluff, and Bauer Branch. Ceramic diversity at 11ST544 suggests the site occupied a frontier or crossroads setting among several cultural groups during the later stages of the Late Woodland period.

Brown, Claire [185] see Kuijt, Ian

Brown, Clifford (Florida Atlantic University), April Watson (Florida Atlantic University) and Ashley Gravin-Beman (Florida Atlantic University)

[178] *Wealth and Society at Mayapán*

Late Postclassic lowland culture at Mayapán used to be described as "decadent." Decadence is, however, a subjective quality that has been widely rejected as an explanation. Rathje subsequently

suggested that the unattractive qualities of the culture derived from a highly efficient mercantile economic system that created a more egalitarian distribution of goods in society. We argue that widespread poverty caused Mayapán's poor material culture. The distribution of wealth in Maya society indicates that Mayapán society was less egalitarian than Classic Maya society. Mayapán experienced a greater concentration of wealth in a small elite, while the previously robust middle class declined.

Brown, Clifford T. [178] see Witschey, Walter R. T.

Brown, David (Anthony & Brown Consulting)

[45] *Written in Stone... and Adobe and Sod and Earth and Ash: Assessing Inka Flexibility in Construction*

While much has been written about elaborate, high-status styles of Inka stonework, it may be the more mundane styles that truly represent the architectural genius of the Inka – their flexibility in meeting the challenges of building a massive infrastructure across the empire in an amazingly short period of time. Inka constructions used many types of stone as well as adobe, earth, sod, and other materials. The variety of styles and building materials associated with Inka constructions has occasionally frustrated archaeological interpretation and raises the question of how to define stylistic trends under the conquest state.

Brown, James (Northwestern University) [102] *Discussant*; [173] *Discussant* [140] *Second Organizer*; [140] see Chastain, Matthew L.; [140] see Kelly, John E.; [140] see Belknap, Lori

Brown, Kyle [129] see Schoville, Benjamin J.

Brown, Linda (The George Washington University)

[221] *The Meanings and Uses of Obsidian Collected by Contemporary Maya Ritual Practitioners*

Contemporary Tz'utujil Maya ritual practitioners in the highlands of Guatemala routinely collect and curate archaeological materials—including obsidian – for reuse in ceremonies. Collected artifacts, assigned new social lives as *sacra*, are active agents assisting curators in the performance of various ritual activities. In this paper, I discuss recent research combining archaeology and cognitive anthropology to: (1) identify the types of obsidian artifacts collected; (2) elucidate the uses and symbolic complex associated with obsidian; and (3) delineate the social lives of obsidian artifacts once they reenter use-contexts as sacred materials.

Brown, Sean

[6] *Trans-Holocene Mussel Procurement Strategies on Isla Cedros, Baja California*

This study represents the first examination of trans-Holocene California sea mussel (*Mytilus californianus*) procurement strategies. With Isla Cedros, Baja California, as the geographic region of interest, mussel hinge measurements have facilitated the comparison of three time periods: the terminal Pleistocene/Early Holocene, the Middle Holocene, and the Late Holocene. Within the framework of cultural ecology and optimal forging theory, this study of trans-Holocene *Mytilus californianus* procurement strategies addresses various issues such as the applicability of optimization models, hunter-gatherer adaptive strategies, resource intensification, conservation among hunter-gatherers, and the role of shellfish, especially California sea mussels, in prehistoric economies.

Browne Ribeiro, Anna (University of California, Berkeley)

[142] *Spaces, Places, and Deeds: A Geoarchaeological Study of Sítio Antônio Galo, a Terra Preta site in the Central Amazon*

Expanding upon regional, ceramic-based chronological and settlement-pattern work, archaeologists in the Central Amazon have adopted a site-based approach to understanding pre-Columbian occupation in the Negro-Solimões Rivers' confluence region. Well-preserved sites in the micro-region around Lake Limão, located in the interfluvium, make possible the use of organic and contextual evidence in intra-site analyses. This study uses soil signatures, microartifacts,

and geomorphological work to elucidate site formation processes at Sítio Antônio Galo (Lake Limão) from the moment of deposition through to the present. The result is a fine-grained understanding of site chronology, landscape morphology, and use of space at the household level.

[142] *First Organizer*; [142] *First Chair*

Brugam, Richard (Southern Illinois University Edwardsville), Donald Goss (Southern Illinois University Edwardsville), Luci Kohn (Southern Illinois University Edwardsville) and Matthew Wilson (Southern Illinois University Edwardsville)

[215] *Paleolimnology at the Mound House and Koster Sites*

Both the Koster and Mound House sites on the lower Illinois River are located adjacent to formerly extensive drained lake systems. We used prehistoric and historic remains to track changes in aquatic ecosystems in the at the sites. We took sediment cores from the drained lake beds. Radiocarbon dates for the establishment of the lakes was 7860 BP for the Koster site and 5530 for the Mound House site. We contrast carbon and nitrogen isotope ratios from prehistoric, early historic and modern fish bones from midden samples. The results show the impact of human activities at these sites over time.

Bruhns, Karen (Fundacion Nacional de Arqueologia de El Salvador) and Paul Amaroli Bertolucci (Fundacion Nacional de Arqueologia de El Salvador (FUNDAR))

[191] *A Council House of the Acropolis at Cihuatlan, El Salvador*

Excavations in 2008-2009 uncovered a 40 x 8 m. roofed structure on the 5th of the Western Terraces of the Acropolis Cihuatlan, an Early Postclassic urban site in north central El Salvador. This structure, of elaborate construction and nested into a series of ritual and other structures, contains the remains of religious and other activities and shows a careful, patterned "desanctification" when the site was invaded and burned by invaders ca. AD 1100. The rapid destruction of the site has led to unparalleled preservation of archaeological context and permits us to see what activities were carried out in specific structures.

Bruhy, Mark [70] see Egan-Bruhy, Kathryn C.

Brum, Misty (Ripon College), Abigail Levine (UCLA), Charles Stanish (UCLA Cotsen), Misty Brum (Ripon College) and Ryan Williams (Field Museum of Natural History)

[121] *Basalt Sources in the Andean Altiplano*

Recent research in the South American Andes has focused on geochemically characterizing basalt outcrops in the Western Titicaca Basin. Using technologies including Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS) and portable X-ray fluorescence spectroscopy (pXRF) we have characterized approximately twenty distinct basalt formations in a minimally, almost non-intrusive manner. Comparisons with basalt artifacts and monoliths from archaeological sites across the basin will permit us to track exchange patterns of this important lithic resource through prehispanic history. Pairing the two techniques allows us to take advantage of the in situ and non-destructive nature of pXRF, while utilizing the higher resolution and broader spectrum of elements offered by LA-ICP-MS when necessary.

Bruning, Susan (Southern Methodist University)

[237] *Cultural Heritage Stewardship in the 21st Century: Legal and Ethical Frameworks for Museums and Scholars*

Legal and ethical complexities affecting research and curation of indigenous objects and antiquities have forced museums and scholars to reshape their professional expectations. Museums serve as portals and plazas for scholarly research, cultural interaction, and stewardship activities. Scholars seek access to study and interpret materials. This paper will explore some key legal and ethical frameworks within which 21st century museums must work to meet the growing challenges of cultural heritage stewardship: preserving objects and associated archives; providing access to scholars and public; ceding authority to those whose interests take precedence; building relationships with source communities; and actively serving

diverse constituencies.

Bruno, Maria (Smithsonian Institution) and José Capriles (Washington University in St. Louis)

[222] *David L. Browman and the Study of Prehistoric Economies of the Lake Titicaca Basin (Bolivia/Peru)*

In this paper, we introduce this session, which examines the invaluable contributions of David L. Browman to New World archaeology and beyond. We provide a brief overview of his career and address several themes presented in the papers. We then turn to Browman's influence on our own current research of prehistoric economies in the Lake Titicaca Basin of the Andes. He was one of the first researchers to employ flotation in the Andes and to recognize the importance of paleoethnobotany and zooarchaeology in understanding the roles agriculture, camelid pastoralism, and fishing played in the cultural developments in the region.

Bruno, Maria [222] First Organizer; [222] Second Chair

Brunton, Miranda (Trent University)

[98] *Weaving in Context: Exploring the Socio-Political Interactions of Textile Production in Chan Chan, Peru*

Chan Chan, the capital city of the Kingdom of Chimor, offers an excellent opportunity to study the process of weaving in the context of ancient political economy. Textiles, as completed garments sets, played a critical role in the political relations of the Chimú government through reciprocal exchange with subordinate lords. In order to understand and quantify textile production at Chan Chan, a holistic perspective is used that integrates procurement and preparation of raw materials, complexity of weaves, and the impact of other activities, such as domestic duties, on the time devoted to craft production.

Brunton, Thomas (SUNY) and Tina Thurston (SUNY University at Buffalo)

[243] *Peoples, Boundaries, Stones and Soil: Political Identity along a Contested Border in Medieval Småland, Sweden*

During the Medieval era (AD 1000-1560) in what is today Småland, Sweden, various groups vying for regional control defined its borders in different ways. The political border between the warring states of Denmark and Sweden lay at Småland's southern edge, while the local inhabitants, consisting of 12 "small lands", each with a distinct cultural identity, recognized neither authority. Rather, in this heavily wooded plateau region, the identity of "forest farmer" trumped all claims of medieval or early modern kings. In this paper, we discuss historical and archaeological evidence elucidating this complex record of interaction.

Bryan, Karina (Bureau of Land Management) and Colleen Sievers (Bureau of Land Management)

[75] *Wyoming's National Historic Trails: Land Where the Wind Blows* Wyoming has long, pristine segments of the National Historic Trails predominantly on public lands. The area surrounding the NHTs has high wind energy potential, generating a virtual "land-grab" on the part of wind companies. BLM must balance both conservation and multiple use mandates. Making the challenge more difficult is BLM's national wind policy, which excludes NLCS units from development. However, the national policy fails to identify what should be included in this exclusion area for NHTs. Is it trail ruts or the entire viewshed or something in between? Wyoming BLM struggles to answer these questions and develop consistent management strategies.

Bryner, Kyle [76] see Whittington, Stephen L.

Buchanan, Meghan (Indiana University) and Susan M. Alt (Indiana University)

[225] *Making Pottery and People: Materializing Shifting Mississippian Identities*

People have complex and multi-layered relationships with the things that they make. Pottery has long been used to create typologies and understand identities, as well as social and political change. But

typologies pick and choose traits to elevate as important and ignore the interplay of memory, tradition, creativity, place, social and political milieu that informs the construction of every pot. We present data from the Richland Complex and the Common Field site as a means for understanding how shifting identities were materialized in pottery as populations came into contact with new social, political, and physical environments during the Mississippian Period.

Buck, Paul (Desert Research Institute)

[253] *Are PII Site Densities near Mt. Trumbull Higher than Other Areas of the Arizona Strip?*

A remarkably high density of PII sites are now known from Mt. Trumbull-Mt. Logan area. More than 120 sites have been recorded in ~1,000 contiguous acres near Namapweap rock art site, including a dozen of the largest C-shaped pueblos found on the Uinkaret Plateau. Settlement location is closely related to proximity to suitable soils, adequate moisture for maize agriculture and sufficient length of growing season. The variable topography resulting from the volcanic history of the Uinkaret Plateau and proximity to raw materials for pottery manufacture (olivine) resulted in some of the highest site densities yet known from upland areas of the Arizona Strip.

Buckley, Brendan (Lamont-Doherty Earth Observatory), Aroonrut Wichienkeo (Chiang Mai Rajabhat University), Dan Penny (University of Sydney), Kevin Anchukaitis (Columbia University) and Nam Le Canh (Bidoup Nui Ba National Park)

[153] *Southeast Asian Megadroughts and Hydroclimate Extremes of the Past Millennium*

We present the longest and best-replicated tree-ring reconstruction of hydroclimate (PDSI) yet produced from Vietnamese cypress growing in a montane forest at 12° N latitude. Our record reveals that during the time of the demise of the Khmer civilization at Angkor, in the 15th century CE, the worst droughts of the past 7 centuries plagued mainland Southeast Asia. We hypothesize that, while Angkor had been undergoing a slow decline following its peak during the late 13th century, the mid-1300s drought introduced great stress to agricultural productivity in areas away from the main core of an elaborate water management system.

Budden, Sandy (University of Southampton, UK)

[256] *Practicing Skill: People Making Pots Making People*

When people make pots they also make an idea of themselves – of being. We are used, in archaeology, to examining the 'making up' of pots, but we are less used to examining the 'making up' of people through the act of potting. This paper explores the way in which an understanding of skill and making can allow us to develop nuanced ideas about the people who make pots. Case studies from the Bronze and Iron Ages in Central Europe draw on a skills methodology that references a profound understanding of potting technology and the physically embedded nature of procedural knowledge.

Buikstra, Jane (Arizona State University)

[173] *The Center for American Archeology: A Historical Perspective*

This presentation reviews the more than 50 years of archaeological scholarship in west-central Illinois by researchers affiliated with the Center for American Archeology and sets the stage for the other contributions to this symposium. Topics to be treated include both method and theory: especially interdisciplinary archaeology, including paleoethnobotany, zooarchaeology, geoarchaeology, and bioarchaeology. Other significant contributions include training programs for future archaeologists, public outreach, and Koster site research.

[215] see King, Jason L.; [215] see Rudolph, Katie Z.

Bukowski, Julie (University of Illinois - ITRP)

[30] *Analysis of a Middle Woodland Mortuary Population from the Dickison South Mounds (11P787)*

In 1953 the University of Illinois excavated three Middle Woodland mounds near the town of Mossville in the Central Illinois River Valley. These mounds, Caterpillar, Renschville and McDougal-Hartmann, constitute the Dickison South Mound Group (11P787). The mounds

were constructed over sub-floor log tombs that contained extended and bundled burials. Analysis of the human remains according to current standardized methods was recently completed. Twenty-nine individuals, and isolated elements of at least another 16 individuals, were identified. This poster presents the results of the skeletal analysis including data on demography, pathology, taphonomy, post-mortem treatment and the burial program.

Bundy, Paul (Cultural Resource Analysts, Inc.) and Richard Herndon (Cultural Resource Analysts, Inc.)

[150] *Overview of the Late Woodland Occupations at 11PK1718*

Site 11PK1718 was an open habitation site situated on a narrow upland ridge, about 6 miles northeast of the Sny Bottom bluff-line. Following the removal of the plow zone, investigations within the project right-of-way identified 125 features indicative of a variety of activities dating to the latter half of the Late Woodland sub-period. Materials recovered from feature fill included: debitage, Klunk/Koster hafted bifaces, small to medium-sized thin-walled cordmarked jars, a few bowls, clay discoids, clay animal effigies, and clay pipe fragments. This paper presents an overview of the excavations and analysis.

Bundy, Paul [172] see DelCastello, Brian G.; [172] see Martin, Andrew V.

Buonasera, Tammy (University of Arizona)

[216] *Preservation, Detection and Interpretation of Ancient Lipids in Ground Stone Materials*

For several decades, gas chromatography/mass spectrometry (GC/MS) has been used to identify lipids from resources cooked or contained in ancient ceramic vessels. Although the porous surfaces of some ground stone tools may also contain lipids from foods and organic materials processed in prehistory, similar analyses have rarely been applied to this class of artifact. This paper discusses results from an initial study on the presence of ancient lipids in prehistoric milling tools from California. Potential mechanisms of preservation and interpretative limitations are highlighted along with suggestions for future research.

[216] *Second Chair [216] Second Organizer*

Burdukiewicz, Jan (Institute of Archaeology, University of Wrocław)

[177] *Late Glacial Hunter-gatherer's Reaction against Younger Dryas Cooling Event in south and eastern Baltic Region*

Sudden climatic change of Younger Dryas appeared as much cooler and drier. Baltic region was treeless tundra and from north returned big reindeer herds. This environmental impact did visible changes in hunter-gatherer societies tool-kit in Central Europe. Feder-messer groups were limited to Bohemia and Southern Germany. In North European Plain, including Baltic area, appeared follower of Bromme – Ahrensburgian and Swiderian groups with various tanged points. They used blade technology to make straight blades for points. These groups hunted mainly on reindeer herds and possibly wandered after large reindeer herds. Tundra hunting is characterized by seasonal ambushes for huge reindeer herds.

Burger, Oskar [234] see Cannon, Kenneth P.

Burger, Richard (Yale University)

[23] *Three decades of sourcing Andean obsidians: changing collaborations, changing realities*

In this paper I would discuss my experiences working with the sourcing of Peruvian, Ecuadorian, Bolivian and Argentinean obsidian artifacts through my collaborations with scientists at the University of California Archaeological Research Facility, the Lawrence Berkeley Laboratory and the Missouri University Research Reactor. I will illustrate that while technologies have undergone important changes, the nature of my collaborations have likewise changed in character.

Burgess, Robin [75] see Eaton, Marietta

Burke, Adrian (Université de Montréal) and Pierre M. Desrosiers (Avataq Cultural Institute)

[147] *The Naparutalik Siltstone Quarry, Nunavik, Canada*

The Naparutalik siltstone quarry represents the first systematically surveyed prehistoric chipped stone quarry in Nunavik (Quebec Arctic). Exploitation dates to the Paleoeskimo and possibly Neoeskimo periods, and may have begun during the middle Pre-Dorset, around 3000 BP. Quarrying tools, knapped tool blanks or preforms, as well as waste flakes are found mainly in primary contexts and in direct association with the bedrock outcrops exploited. Bedrock outcrops present clear evidence of percussion and extraction along bedded layers. Massive amounts of large size flakes over 200 linear meters demonstrate the extent and intensity of quarrying along this 500 meter bedrock exposure.

Burke, Adrian [60] see *Leclerc, Mathieu*; [60] *Discussant* [147] see *Curtis, Jenneth E.*

Burke, Ariane (Université de Montréal) [126] *Discussant*

Burke, Chrissina (University of Nevada - Reno)

[74] *Applying Ethological Data to Carnivore Modification Research*

This poster presents the results of a pilot study in which the author utilizes extant North American carnivores to understand the specific physical feeding behaviors associated with modification marks present on ungulate appendicular skeletal materials. The carnivores analyzed in this research include, *Canis lupus*, *Canis latrans*, *Ursus americanus*, and *Felis concolor*. Video-recording, photography, and ethological methodologies were used to collect behavioral data. This research reinforces the importance of ethological data in taphonomic analysis, as well as pursues the effectiveness of employing carnivore modification studies as a proxy for identifying paleoenvironmental conditions surrounding faunal deposition events.

[232] see *Fenner, Lindsay*

Burkholder, Jo (University of Wisconsin – Whitewater) and Erika Simborth

[188] *'Late' Discoveries at Pisanay, Sihuas Valley, Department of Arequipa, Peru*

Proyecto Arqueológico Pisanay was a pilot study of a single, large site in the Sihuas Valley. Of many sites, we identified Pisanay as a target of investigation based on observations of petroglyphs and textile fragments potentially dating to the Siguas traditions of the Early Intermediate Period along with other material that suggested subsequent use in the Middle Horizon and Late Intermediate Period. This preliminary report discusses the results of six weeks of mapping and excavation at the site in August and September of 2009 revealing mostly Late Intermediate Period occupation with cultural connections to the Colca Valley. We assess the artifactual, architectural, and funerary evidence for local development within a regional context.

[174] *Second Organizer* [174] *Second Chair*

Burks, Jarrod (Ohio Valley Archaeology, Inc.)

[176] *Exploring the Emergence of Earthwork Complexity in Southern Ohio: the Small and Unique Enclosures of the Scioto Valley*

The Scioto River Valley is home to many large Hopewell earthwork complexes. These monumental works of earth and wood exploded onto the scene after 200 A.D., many built to a common design. But from where did this idea of earthwork construction emerge and can we trace Hopewell design principles back in time? In this presentation I explore early earthwork sites in the Scioto Valley and show, with the help of geophysical surveys and LiDAR data, that (1) early sites are more complex than previously known and (2) the apparent sudden emergence of square enclosures was actually a long time coming.

[244] *Discussant*

Burns, Denver (Volunteer, Santa Fe National Forest)

[152] *The Work of Herbert Dick in the Gallina Area*

The Gallina culture has been the subject of several episodes of field work and reporting. In particular the 1960s and 1970s saw long term field work. Dr. Herbert Dick devoted 10 field seasons to survey and

excavation in the Gallina District. Dr. Dick's artifact collection has recently been cataloged; however much of the field documentation remains missing. His excavations and observations both confirm and expand information previously available for the Gallina.

Burnworth, Barrett [88] see *Peacock, Evan*

Burrow, Ian (President, Register of Professional Archaeologist) [227] *Discussant*

Burt, Chadwick (New Mexico State University) and William H. Walker (New Mexico State University)

[158] *Animacy and the Ritual Killing of Ceramic Vessels: A Late Prehistoric Mortuary Practice in the American Southwest*

How does the animacy of material objects, a cross-cultural pattern common in the prehistoric American Southwest, contribute to patterning in mortuary practices? When pursuing religious perspectives cross-culturally, the more evident it becomes that divisions between those subjects deemed material and those considered ideal are meaningless. In this paper we employ a nonanthropocentric model that extends animacy to objects, as well as people, in order to understand how animated objects shaped interactions between people and things, especially during times of dramatic social change. To illustrate this perspective we explore late prehistoric mortuary practices involved in the ceremonial "killing of ceramic vessels."

Burton, James (University of Wisconsin) and T. Douglas Price (University of Wisconsin)

[214] *Multiple Isotope Systems In Determining Human Mobility*

While strontium isotopes in dental enamel are increasingly used to identify immigrants at archaeological sites, the addition of other isotopic measurements such as carbon and possibly oxygen isotope ratios, together with contextual data, can substantially enhance our ability to determine geographic origins of humans. Case studies from Campeche, Mexico and Anyang, China are presented as illustrative examples.

Burton, Margie (San Diego Archaeological Center)

[216] *Understanding Hunter-Gatherer Grinding Technology through Experimentation*

Despite the acknowledged importance of ground stone tools in ancient economies, the development of middle-range theory that would help researchers link archaeological ground stone assemblages with prehistoric processing practices and technological choices is still at an early stage. This presentation describes a set of 27 grinding experiments using replica milling tool sets recently conducted at the San Diego Archaeological Center. Results are used to suggest relative processing efficiency of three different tool shapes for three different intermediate substances and to help define characteristic use-wear patterns related to specific processing activities.

[216] *First Organizer*; [216] *First Chair*

Bush, Jason (Colorado State University) and Kristen Deily (Colorado State University)

[135] *Postclassic Architectural Types in the Lake Pátzcuaro Basin, Michoacán, Mexico*

The newly discovered site of Sacapu Angamucu, located in the Lake Pátzcuaro Basin, Michoacán, Mexico, presents a unique opportunity to characterize Postclassic architecture within the Lake Basin. Here, using the results from full-coverage survey, GIS modeling, and intra and regional site comparison I develop an architectural typology for the region.

[135] *First Chair* [135] *Second Organizer*

Bush, Jessica

[72] *A Spatial Analysis of 24HL1085: A Prehistoric Site in the Bear's Paw Mountains*

This project was an attempt to discern the use areas of two prehistoric components, located within a site on the Rocky Boy

Reservation in Montana, through the identification of spatial patterns created by the excavated lithics, faunal remains, and fire cracked rock (FCR). In order to complete this analysis the three ring model developed by Stevenson (1985) was adapted and combined with the trend surface analysis created by Hodder and Orton (1976). Results from the study showed that both components were comprised of several discernible use areas, which indicated that both components were short-term residential campsites.

Butler, Amanda (Illinois Transportation Archaeological Research Program, University of Illinois Champaign-Urbana), Brenda Beck (Illinois Transportation Archaeological Research Program, University of Illinois Champaign-Urbana) and Madeleine Evans (Illinois Transportation Archaeological Research Program, University of Illinois Champaign-Urbana)

[83] *Profile of the Lithic Assemblage from a Central Illinois River Valley Mississippian Town Site*
Settlement "D" at the Orendorf site produced an unusually large lithic assemblage. The town's catastrophic burning resulted in the abandonment of much of the residue of daily life. These circumstances afford us the unique opportunity to examine a relatively complete set of household and civic lithic tools and debris. This paper offers a basic description of the artifacts recovered emphasizing a diverse suite of bitted groundstone tools and carved block pipes. We compare the standardized frequency of arrowpoints and endscrapers with that of other central Illinois Late Prehistoric sites, and discuss factors affecting the quantity of material recovered.

Butler, Amanda [83] see Beck, Brenda

Butler, Brian

[217] *Chert Sources and Hierarchy: Mississippian Chert Usage at Kincaid and its Surrounding Settlements*
Mill Creek and Dover chert were extensively employed for large biface production by Mississippian groups in the lower Ohio Valley. Earlier analysis had shown very different distributions of Mill Creek and Dover cherts in the Kincaid area. While Mill Creek appeared to be broadly available in the region the distribution of Dover chert was much more restricted, one that suggested that it was distributed through elite-mediated exchanges. Previously, the only Kincaid samples were from the 1930's excavations and of uncertain reliability. Here, the issue in the Black Bottom is revisited using data from recent excavations at the Kincaid site.

Buvit, Ian and Karisa Terry (Central Washington University)

[177] *The Twilight of Paleolithic Siberia: Human-Environmental Interactions at the End of the Ice Age*
Few sites in Siberia are assigned to the Younger Dryas (locally the Nor'ilk Stade), but occupation persisted despite the re-advance of steppe biota beginning 11,400 BP. Sites are primarily associated with low-energy alluvial landforms where preservation is excellent. Fish bones and other direct evidence of aquatic resource exploitation appeared, while terrestrial animals still were hunted. Technologically there was continuation of microblades, bifaces, and burins, but also harpoons, fishhooks, composite tools, and even pottery in some areas. The Nor'ilk in Siberia was a watershed between Upper Paleolithic lifeways of the late Pleistocene and more settled Mesolithic traditions of the early Holocene.

Buzon, Michele (Purdue University) [122] *First Chair*; [122] see Schrader, Sarah; [122] see Hubbell, Zachariah R

Byerly, Ryan (Colorado Archaeological Society), Charles Egeland (University of North Carolina at Greensboro) and Jason LaBelle (Colorado State University)

[256] *Anatomical Learning among Novice Butchers: Implications for Modeling Early Hominin Carcass Processing Behavior*
Early hominin butchers at times operated in highly competitive environments and maximizing nutrient return from mammal carcasses with minimal temporal expenditure may have been a primary processing goal. As such, greater anatomical knowledge of prey

carcasses probably offered a selective advantage at both intra- and inter-species levels of competition. This study presents experimental data assessing how gained experience affects nutrient acquisition under constraint and how varied butcher experience may be manifest in the zooarchaeological record. These data are discussed in the context of understanding change in hominin carcass processing behaviors through time.

Byers, A. Martin (McGill University)

[176] *The Ohio Hopewell as a System of Cult Sodality Heterarchies*
Treating the major Ohio Hopewell earthworks as peer-polity alliances is becoming widely accepted. I also treat them as manifesting alliances – not polities but mutually autonomous cult sodalities constituting incrementally organized first-order, second-order, and third-order alliances of mutualistic heterarchies that actively pursued the maintenance of cosmic balance through sacred ball games. These games re-enacted the world creation events as represented in historic Native North American myths. The great earthwork locales served as critical monumental symbolic pragmatic devices by which these games were constituted as postmortem sacrificial rituals by which sacred powers immanent in the deceased were recycled back to the world that fed and supported them in life.

Byers, David (Missouri State University) and Joan Coltrain (University of Utah)

[27] *Paleo- and Neo-Aleut Stable Isotope Chemistry*
We explore two questions important to understanding Aleut prehistory. First, if as Hrdlicka's craniometric data suggest, the Paleo- and Neo-Aleut were distinct groups, are differences reflected in their bone chemistry. Second, did subsistence vary between them and how did food preferences change through time. Our dataset includes isotope data from 80 human skeletons and two zooarchaeological assemblages. Our results suggest that Neo-Aleut pursued higher trophic level marine foods than Paleo-Aleut and that through time Paleo-Aleut diets shifted from offshore to nearshore resources. Finally, the trends in isotope chemistry appear closely linked to the spatial distribution of the human remains.

Byram, John (University Press of Florida) [93] *Discussant*

Byrd, Adam (University of New Mexico)

[152] *Intervisibility Among Towers in the Gallina Area of Northern New Mexico*
Numerous masonry structures of various heights throughout the Gallina area of Northern New Mexico have been described as "towers" by many researchers. Suggestions of intervisibility have been made in past studies, but these suggestions have not been systematically and quantitatively tested. In this study, tower sites were identified from a review of the ARMS database in Santa Fe, a subsequent review of the original site records, and selected site visits. Intervisibility between the towers was calculated by conducting a viewshed analysis in ArcGIS. The results of this analysis will be presented along with conclusions derived from this research.

Byrnes, Allison (Mercyhurst College) and David Pedler (Mercyhurst Archaeological Institute)

[247] *Lithic Technology at the Breinigsville Site Complex, Southeastern Pennsylvania*
A surface survey of the Breinigsville site complex, located in the Great Valley section of the Ridge and Valley physiographic province in Lehigh County, southeastern Pennsylvania, has yielded a wealth and diversity of chipped stone artifacts. The site's proximity to several distinctive raw material sources, combined with a material culture inventory that spans from Clovis to the Late Woodland period, makes the Breinigsville complex particularly amenable to time-transgressive cultural and technological studies. This paper characterizes the site's lithic artifact assemblage and employs GIS-based spatial analysis of its raw material distribution to identify spatiotemporal lithic resource-use patterns across the site.

Cadieux, Nicolas (Archéotec Inc. / McGill U.)

[60] *From Lithic Distribution to Distribution Network*

Since the 1950's, archaeologists have been finding pyroclastic stone artifacts on the shores of the Ottawa and Saint Lawrence rivers. With the discovery of site BiFw-20 (4000-4500 BP), many quickly concluded that we were dealing with a modest Late Archaic distribution network. By better understanding the space, time, lithic sources, fall-off curves and the "chaîne opératoire", this study points towards a somewhat more nuanced and complex story of the region. It poses some fundamental questions about archeological methodology involved in bridging the gap between lithic distributions and distribution networks.

Cail, Hannah (University of Montana), Anna M. Prentiss (University of Montana), and Michael P. Richards (University of British Columbia)

[39] *Cultural Implications of Dog Remains at the Bridge River site: Taphonomic and Isotopic Analyses*

Dogs represent a unique facet of the faunal assemblage at the Bridge River site, a prehistoric village in southern British Columbia. The skeletal remains of at least two dogs recovered from cache pits in Housepit 24 exhibit signs of trauma including perimortem fractures, cut marks, and periostitis. This case is different than the canid assemblage of Keatley Creek, where osteological analysis concludes many of the dogs died of natural causes. The pathologic and taphonomic evidence suggests that the Bridge River canid assemblage results from a single event perhaps associated with a symbolic display of status as associated with feasting.

Callaghan, Michael (University of Texas at Arlington)

[17] *Credit Where Credit's Due: Toward Engendering Preclassic Maya Ceramic Production*

Ethnoarchaeological and archaeological studies of pottery production in Mesoamerica have demonstrated a pattern of household production where labor is shared between genders or was gendered female. Despite these findings, production and use of ceramics associated with important Maya archaeological contexts is still commonly gendered male. This paper explores the gap between ethnoarchaeological data and archaeological interpretation, endeavoring to address a tacit androcentrism in the interpretation of archaeological contexts. A study of ceramics from Preclassic period caches from the Holmul Region, Guatemala is used to explore the potential role and significance of women in ancient Maya pottery production, exchange, and consumption.

Calligaro, Thomas [229] see Tenorio, Dolores; [147] see Jaime-Riveron, Olaf

Cameron, Catherine (University of Colorado) [131] Discussant

Cameron, Jan (Cultural Resources Office, City of St. Louis) [3] Discussant

Campana, Douglas and Pam Crabtree (New York University)

[64] *Secondary Animal Products, Wealth, and Trade in Middle Saxon England*

Our research at the Anglo-Saxon sites of West Stow and Brandon suggests that a shift in animal husbandry practices took place during the 7th-8th centuries CE. Here we present a broad survey of zooarchaeological data from over 30 Early and Middle Saxon sites in eastern England. These data suggest a shift from a pattern of relative self-sufficiency to one based on specialized production of commodities such as wool. We examine the relationship of this change in animal economies to the social and political transformations that took place in the Middle Saxon period including state formation, urbanism, and the intensification of trade.

Campbell, David

[241] *Contemporary Yucatec, Kekchi and Mopan Maya Home Gardens: What Do They Reveal about Carrying Capacity of La Selva Maya?*

Maya home gardens have long been recognized as repositories of

native species and the ethnobotanical traditions that pertain to them. We examined the phytosociology, alpha diversity and beta diversity of Yucatec, Kekchi and Mopan Maya domestic forest gardens in western and southern Belize. We examined 37,700 flowering plants in 30 Maya gardens, identifying 515 native species. These gardens are richer in species of flowering plants than the subtropical forests that surrounded them. Indeed, they may be the most species-rich domestic gardens on Earth. What do these statistics reveal about the carrying capacity of the Maya Forest before the "collapse"?

Campbell, Jennifer (University of Toronto)

[230] *Envisioning Space, Investigating Place: The use of Three Dimensional Modeling in Architectural Reconstructions*

As anthropological archaeologists we envision space so that we can investigate the cultural implications of place. This paper presents the use of three dimensional architectural models, created using Archicad, to reconstruct a Mughal Caravanserai from Peshawar, Pakistan. Models can illuminate changes to architecture over time and allow us to begin interpreting the cultural changes that are reflected in and by the alteration of space and the resultant formation of place. The primary field methods involved in data collection for this lab based modeling will be addressed, as well as, methods of spatial analysis and theoretical considerations that guide our interpretations.

[230] First Organizer; [230] First Chair

Campbell, John [59] see Miller, Mason D.

Campbell, Peter (CAIRN), J. Craig Williams (CAIRN) and Susan E. Jansen (CAIRN)

[62] *Possible Ritual Use of Canoes in Keener Cave, Wayne County, Missouri*

Keener Cave's subterranean lake has yielded several canoes since the early 20th century, having the highest concentration of any North American cave. The spatial patterning and number of canoes denotes long-term ritualistic use, as the lake's size and environment disqualify traditional canoe use. Several canoes show a previously undocumented construction method, suggesting specialization and a newly discovered tradition. The canoes' design and ritualistic use designates the site as highly significant. Recreational divers conducted previous research without documentation. The Cave Archaeology Investigation Research Network (CAIRN) performed a survey in the fall of 2009, recording artifacts in situ together with avocational divers.

Campbell, Roderick (Joukowsky Institute), Jing Yuan (Chinese Academy of Social Sciences, Institute of Archaeology), Yuling He (Chinese Academy of Social Sciences, Institute of Archaeology) and Zhipeng Li (Chinese Academy of Social Sciences, Institute of Archaeology)

[155] *Reconstructing Production: A Preliminary Investigation of a Late Shang Bone Workshop at Tiesanlu, Anyang*

In 2006 enormous quantities of bone artifact production debris were excavated along a 270x10 meter stretch of road reconstruction at Tiesanlu, Anyang. Its position in the Late Shang capital of Anyang, adjacent to the Miaopu bronze foundry and predominance of cattle bone raise interesting questions. The nature of the assemblage suggests some sort of relationship to the palace-temple area, yet the scale and nature of production suggests wider distribution. This preliminary study will focus on the wider significance of the site, the spatial and temporal distribution of production debris, and the reconstruction of some of the production sequences.

Campbell, Rose (The University of Montana)

[203] *Corset Stays and Tea Sets: The Archaeology of Women and Children in the American Mining West*

In decades of excavation in mining towns across the western United States, the families of the miners have remained largely ignored or undiscovered. This has led to a decidedly male bias in the archaeology of historical mining communities. Recent research at Coloma Ghost Town in western Montana has provided a unique opportunity to study women and children in mining communities. The

only known history of Coloma was written by a woman, and recent excavations have discovered a relative abundance of children's toys and women's apparel. The results of this on-going study could prove helpful to other archaeologists studying gender issues.

Campos Lara, Omar [254] *see* Limón Boyce, Morrison

Canaday, Tim [86] *see* Swain, Todd

Canaday, Timothy (Salmon-Challis National Forest), Mary Anne Davis (Idaho State Historic Preservation Office) and [43] *The Frank Church River of No Return Wilderness Programmatic Agreement: The Good, the Bad, and the Ugly*
The Frank Church River of No Return Wilderness is the largest contiguous wilderness in the lower 48 states encompassing over two million acres in central Idaho. The wilderness is managed by four National Forests (Bitterroot, Nez Perce, Payette and Salmon-Challis) and contains over 1,000 known archaeological sites. A Programmatic Agreement (PA) between the Idaho SHPO, the Advisory Council, and the four forests was signed in 2003. This aggressive eight year agreement was meant to provide a framework for reducing or eliminating documented adverse effects in the wilderness. This poster provides an overview of the PA and explores the accomplishments and setbacks encountered along the way.

Canaday, Timothy [43] *First Organizer; [43]* *First Chair*

Cannarozzi, Nicole (University of Florida)
[250] *Evaluating the Eastern Oyster (Crassostrea virginica) as a Proxy for Season of Zooarchaeological Collection*
Determination of the season of collection of the eastern oyster in the southeastern US is complicated by the dynamic nature of the estuaries they inhabit. Environmental changes may cause unpredictable biological responses, including the deposition of multiple shell growth breaks. Currently, stable isotope geochemistry is the most effective method for determining seasonality of oysters in the southeast. However morphological indicators have not been consistently correlated with isotopic profiles. This research combines stable oxygen isotope geochemistry with visual analytical techniques that enhance growth structures to establish a simple, low cost method for determining season of capture of oysters in the southeast.

Cannon, Aubrey [29] *see* Sonnenburg, Elizabeth P.

Cannon, Kenneth (USU Archaeological Services), Carol Hearne (Challis Field Office, Bureau of Land Management), Molly Boeka Cannon (Department of Geography, University of Nebraska and Metcalf Archaeological Consultants), Oskar Burger (Stanford University) and William Eckerle (Western GeoArch Research)
[234] *Reinvestigations at the Challis Bison Kill Site, Custer County, Idaho*

In the early 1970s, B. Robert Butler of Idaho State University published a series of articles on bison in Idaho. A key site in these articles was the Challis Bison Kill which was reported as mid-nineteenth century in age and the further west jump site identified. Recent efforts supported by the BLM, the Earthwatch Institute, and the Idaho Heritage Trust have placed doubt on these original interpretations. We report on three years of field and laboratory analysis that focuses on new ages for the deposits and the environmental and social context of the site.

Cannon, Mike (SWCA Environmental Consultants), David Reinhart (SWCA Environmental Consultants), Deborah Jensen (SWCA Environmental Consultants), Heather Stettler (SWCA Environmental Consultants), and Sarah Creer (SWCA Environmental Consultants)
[24] *The Milford Wind Corridor Project: Adventures in Digital Data Recovery Reporting*

For the "new energy economy" Milford Wind Corridor project, SWCA is attempting to use "new digital media" to produce a data recovery

report and public interpretive material that are more user-friendly than the typical CRM document. Issues encountered in developing these materials range from agency acceptance, to selection of appropriate formats for different purposes, to management of a far more complex editorial and production process. Though there are added costs, the benefits of digital CRM reporting should include more appeal to the general public, greater research utility, and better dissemination of the results of technology-intensive analyses like visual impacts assessment.

Canuto, Marcello (MARI/Tulane University), Ellen E. Bell (CSU-Stanislaus) and Marcello A. Canuto (MARI/Tulane University)
[65] *From the Outside Looking In: Boundaries, Borders, and Administrative Strategies in the El Paraíso Valley, Western Honduras*
Recent research in southeast Mesoamerica highlights the inadequacy of models defining cultural borders as spatially fixed entities. Alternatively, we employ an interactionist approach to model integrative strategies in the western Honduras's El Paraíso Valley. During the Classic period (AD 250-900) there developed in this valley a complex web of interactions among El Paraíso residents, Maya elites at Copan, and non-Maya groups. Examining El Paraíso and El Cafetal as nodes of multiple interactive networks, we analyze how distinct groups and their leaders sought to structure and control these networks through distinct practices of materialization aimed at community, place-making, and political integration.

Canuto, Marcello [258] *see* Bell, Ellen E.; [54] *see* Acuna, Mary Jane

Cap, Bernadette (University of Wisconsin-Madison)
[54] *Marketplace identification among the Ancient Maya: A Case Study from the Classic Period site of Buenavista del Cayo, Belize*
Identifying the physical location of a marketplace in the archaeological record is difficult due to the removal of goods after their purchase and vendors carrying away their products and debris when the market closes. Therefore any attempt to identify a marketplace must establish rigorous, empirically testable correlates related to architecture and activities that take place in them. This paper presents such a suite of correlates and tests them against an assemblage from the Maya site of Buenavista del Cayo, Belize. Data from the site's East Plaza meet several criteria for the presence of a marketplace during the Classic period.

Capriata Estrada, Camila [138] *see* Boswell, Alicia

Capriles, José (Washington University), Christine Hastorf (University of California at Berkeley) and Melanie Miller (University of California at Berkeley)
[245] *Stable Isotope Analysis of Fish Remains from Lake Titicaca*
Research on past human diet in the southern Titicaca Basin has directed us to investigate the paleoecology of an important element in the diet, fish. By completing a range of molecular analyses on modern and archaeological fish specimens, we contribute to two related issues regarding the application of stable isotope analysis to archaeological fish remains. The first is the potential carbon and nitrogen isotopic values of prehistoric fish (and how these impact human diet), and the second is the lake-fish ecological relationship. From these data we improve our understanding of the place of fish in the diet of ancient people.
[222] *First Chair [222]* *Second Organizer*

Capriles, José [222] *see* Bruno, Maria C.

Carballo, David (University of Alabama) and Alejandra Gómez Cortés (Universidad de las Americas, Puebla)
[221] *Obsidian Symbolism in a Temple Offering from La Laguna, Tlaxcala*
Recent excavations on top of a temple structure at La Laguna, Tlaxcala, uncovered an offering containing 15 large obsidian bifaces, including knives and eccentrics, along with other imported and symbolically charged materials. The offering is currently without close

precedent for the Terminal Formative, the primary occupation phase of the temple. We comment on the dating of the offering and the technological attributes of the bifaces, and offer an interpretation of the symbolic significance of the complex by drawing on related deposits and iconography from prehispanic central Mexico.

[221] *Second Organizer* [221] *Second Chair*

Carbaugh, Aimee [214] *see* Ambrose, Stanley H.

Cardona, Augusto (Proyecto Arqueológico Misti) and Ran Boytner (Cotsen Institute of Archaeology, UCLA)

[188] *Beyond Moquegua: New Evidence of Wari and Tiwanaku Interaction in the Vitor Valley, Arequipa*

Recent excavations in Vitor reveal a complex interaction between Wari and Tiwanaku in the mid-valley site of Millo-2. Our survey and excavations indicate the presence of a large Wari site with residential, administrative and ceremonial areas. Within this site, both Wari and Tiwanaku ceramics have been uncovered in residential and public compounds. These data suggest that Wari and Tiwanaku traditions overlapped in the region of Arequipa, yet may be distinct from the patterns encountered in the adjacent region of Moquegua. We explore the economic, political and cultural dimensions of this dynamic relationship during the Middle Horizon in the South-Central Andes.

[188] *Second Organizer*

Cardona, Augusto [145] *see* Williams, Patrick R.

Carey, Heather [22] *see* Wagner, Mark

Carignano, Micaela (Washington University in St. Louis) and Lee Arco (Washington University in St. Louis)

[26] *Analysis of Fluvial Deposition during the Late Archaic Poverty Point / Early Woodland Transition at Jaketown*

The Jaketown site has a long history of human habitation, and cultural materials from Late Archaic through Mississippi Periods are present. Throughout the site, an intermediate deposit creates a clear stratigraphic discontinuity between the Late Archaic Poverty Point and Early Woodland cultural strata, which has led to debate concerning the chronologic and stratigraphic relationship between the two prehistoric occupations at the site. This poster presents stratigraphic, chronometric, and sedimentologic datasets that are used to evaluate the chronology of human habitation and to investigate the depositional/geomorphologic events during the Late Archaic / Early Woodland cultural transition at Jaketown.

Carlson, Eric (University of Montana)

[39] *Resource Intensification, Resource Depletion, and Emergent Inequality: An Assessment of Faunal Material spanning 900 yrs of occupation at the Bridge River Site*

An analysis of faunal material from housepit floors excavated at the Bridge River site reveals a process of resource intensification of anadromous salmon correlated with both the emergence and growth of the village through time. Faunal analysis also shows that secondarily-ranked food resources such as deer and other medium to large terrestrial mammals declined in abundance and taxonomic diversity. Element abundance shifts from equal representations of all parts to more selective (i.e. transportable) leg portions. These trends suggest over-exploitation of secondary food resources correlated with the emergence of socioeconomic inequality late in the history of the village.

[39] *see* Smith, Lisa M.; [185] *see* Lash, Ryan P.

Carlson-Drexler, Carl (Army Corps of Engineers, College of William & Mary), Carey Baxter (U.S. Army Corps of Engineers), and Michael Hargrave (U.S. Army Corps of Engineers)

[164] *Deploying Geophysics in Cultural Resources Management on United States Military Installations*

The U.S. Army Corps of Engineers' Construction Engineering Research Laboratory (CERL) in Champaign, Illinois, conducts geophysical investigations on numerous sites on military bases

around the United States every year. These studies are one of our contributions to managing cultural resources on the nation's military installations. Investigations of historic sites at Forts Riley and Leavenworth in Kansas, and Fort Lee in Virginia constitute a portion of our most recent research projects. This poster details the results of fieldwork at these sites and illustrates CERL's ongoing, active program of advanced geophysical research in archaeology.

Carnevale, Andrea [60] *see* Birch, Jennifer

Caromano, Caroline (Museu Nacional, UFRJ, Brasil), Leandro Matthews Cascon (Museu Nacional, Universidade Federal do Rio de Janeiro) and Rita Scheel-Ybert (National Museum, Federal University of Rio de Janeiro, Brasil)

[142] *Be they Big or Small: Integrating Botanical Macro and Microvestige Analyses in Central Amazon*

Innumerable questions in Amazonian archaeology place great emphasis on relationships between past human groups and the environment, traditionally using ethnographic analogies in order to infer these, due to preservation issues but also due to a lack of a systematic focus on the retrieval and analysis of botanical vestiges. A paleoethnobotanical approach through the combined use of anthracological analyses and starch grain and phytolith studies holds great potential by providing direct evidence on a great number of such relationships, and has been initiated in the Central Amazon Project. The present work intends on presenting some first results of this on-going study.

Carpenter, John (Instituto Nacional De Antropología E Historia) and Guadalupe Sanchez (Instituto Nacional de Antropología e Historia)

[199] *Interaction and Integration on the Aztatlán Frontier in Northern Sinaloa*

The Río Mocorito, located in north-central Sinaloa, is generally considered as the northern boundary of the Aztatlán tradition, as well as reflecting the northwestern limits of Mesoamerican culture (Tahue) identified by the 16th C. Spaniards. Here, we consider the evidence regarding Aztatlán interaction and integration within the adjacent region extending between the Río Mocorito and the Sonoran border; an area encompassing both the Huatabampo and Serrana (Rio Sonora) archaeological traditions. Evidence for interaction *vis-a-vis* exchange is ubiquitous. While socio-ideological integration may be reflected by both the diffusion of urn burials and the incorporation of Aztatlán materials as funerary offerings, there is, as yet, no evidence that any communities were politically integrated with their Aztatlán neighbors.

Carpenter, John [21] *see* Sanchez Miranda, Guadalupe

Carpenter, Tina (Northland Research, Inc.) and John Marshall (Northland Research, Inc.)

[33] *Shell and Earth Figures on the Northern Edge of the Sierra Pinacate*

Northland Research, Inc., conducted archaeological investigations at five sites along the U.S.-Mexico border on the Cabeza Prieta National Wildlife Refuge in southwestern Arizona. This paper discusses two data sets from the project—the shell assemblage and earth figures. The composition of the shell assemblage was unexpected as it was not dominated by *Glycymeris* shell as it is in surrounding areas. The documentation of one previously known intaglio, and the discovery of two additional earth figures, provides additional data for this particular landscape. The shell assemblage and the earth figures suggest that this landscape may have been used in unexpected ways.

Carpenter, Tina [100] *see* Simon, Arleyn

Carr, Christopher (Arizona State University) and Anna Novotny (Arizona State University)

[176] *Ritual Dramas in Ohio Hopewell Earthworks*

Survey and study of 89 photographs of skeletons, cremations, associated artifacts, and isolated artifact deposits in Ohio Hopewell

chapel houses indicate that these items were sometimes purposefully arranged into the forms of bird-human composites, birds, human faces, headdresses, and geometric cosmological themes. The arrangements suggest that Ohio Hopewell peoples performed ritual dramas, sometimes with many participants and interpretable in meaning, within their chapel houses. The method of anthropologie du terrain is used to distinguish between unintentional taphonomic processes and intentional arrangement of skeletal remains during these ceremonies. The findings have implications for the study of intercommunity alliance strategies and philosophical-religious concepts.

Carr, Dillon [224] *see Ellis, Christopher J.*

Carr, Kurt (The State Museum of Pennsylvania)

[90] *A Preliminary Analysis of Artifacts from the Shoop site (36Da20): Technological and Functional Implications*

For more than fifty years, research at the Shoop site in Pennsylvania has made significant contributions to Paleoindian studies. In 2008, a proposal was developed to nominate the site as a National Historic Landmark. Towards that goal the first controlled excavations and systematic mapping was conducted. Artifacts from the two major repositories were analyzed. The artifacts are characterized by a high ratio of tools to debitage, tool maintenance activities, scrapers, and a large number of projectile points. This presentation will summarize their morphological and technological characteristics, analyze their horizontal distribution and present the results of a pilot microwear analysis.

[90] *see Stewart, R Michael*

Carr, Philip (University of South Alabama) and Andrew Bradbury (Cultural Resource Analysts Inc.)

[236] *The Organization of Early Archaic Lithic Technology at the St. Albans Site*

Excavation of the St Albans site, West Virginia in the 1960s documented stratified cultural deposits to depths over 36 feet and a sequence of Early Archaic occupations. Despite the importance of St. Albans for our understanding of the Early Archaic, to date no in depth artifact analyses have been conducted. We present the results of a detailed technological analysis of a sample of lithic materials with a focus on raw material use, tool manufacture, and discard. Change in technological organization is inferred from early in the sequence to late. Simulation is used to better understand lithic material use through time.

[236] *First Chair*

Carrillo, Charles [193] *Discussant*

Carrillo, Richard

[193] *The Manufacture and Utilization of a Lithic and Bottle Glass Tool Technology by 19th Century Hispanic New Mexicans and their Colorado Descendants*

Lithic technology, as considered by most Americanist prehistorians, is associated with a technology that is unique to Native Americans. Chipped stone artifacts found on Spanish Colonial period and later sites have previously been attributed to mixing of prehistoric materials from underlying or nearby sites with the historic artifacts, or to historic Indian manufacture and use. A similar situation occurs in Colorado. Using archaeological and ethnohistorical data, the argument is made that the modified tools, both lithics and bottle glass, found on historic sites in the Purgatoire and Arkansas Valley region were manufactured by Hispanic New Mexicans and their Colorado descendants.

Carrión Santafé, Elena [58] *see Baena Preysler, Javier*

Carroll, Alex (Northern Michigan University)

[228] *Social Investment in Regions of Refuge: Survival Strategies among the Southern Paiute of Southern Nevada*

The Southern Paiutes of southern Nevada experienced progressive waves of encroachment by Spanish, Mexican, Mormon, and

American colonizers. In southern Nevada, close proximity to portions of the Paiute Trail, later renamed the Old Spanish Trail, put certain indigenous populations in the direct path of these colonizers and colonizing forces. This paper provides a preliminary analysis of social investment and knowledge transfer strategies about regions of refuges, the use of mountainous regions of refuge in the Mormon Mountains as one mechanism to evade slave raiding activities targeting children and women, and the archaeological imprint of regions of refuge among Southern Paiute communities.

Carroll, G. Denise [250] *see Reitz, Elizabeth J.*

Carter, Alison (University of Wisconsin-Madison)

[121] *LA-ICP-MS of Carnelian and Agate: Analysis of Geological Sources from Central, South, and Southeast Asia and Beads from Iron Age sites in Cambodia*

In Southeast Asia, agate beads are amongst the earliest indicators of contact with South Asia, however the exact provenience of the beads has never been determined. In order to explore this question a group of agate samples from geological sources in South and Southeast Asia were analyzed using LA-ICP-MS. This data was then compared with NAA results in order to ascertain if LA-ICP-MS is a valid method for differentiating the samples. Lastly, these results were compared with LA-ICP-MS data from Iron Age agate beads from Cambodia in order to determine if the beads were being made locally or imported.

Carter, Allyson [93] *Discussant*

Carter, Benjamin (Lehigh University)

[222] *Working the Data: Broad Scale Patterns Derived from 50,000 Data Points on Tiny Shell Beads from Ecuador*

Dr. David L. Browman always stressed the need to understand the data upon which interpretations are built. This is my attempt to demonstrate that I took his advice to heart. I collected nearly 50,000 data points on 7650 shell beads and 996 lithic microdrills from six Manteño (AD 800-1532) archaeological sites. From this database I have been able to demonstrate major technological changes associated with broad social and political changes in Andean South America, as well as site-specific interpretations, such as the caching of in-process shell beads at certain sites.

[67] *First Organizer*; [67] *First Chair*; [67] *see Martin, Alexander J.*

Carter, Tristan (McMaster University)

[175] *Sourcing Without the Social? Obsidian Characterisation in the Eastern Mediterranean 40 years On*

While obsidian sourcing is arguably the success story of archaeometry, social archaeology now often plays a secondary role to methodology and regional introspection. Such work fails to live up to Renfrew's original aims where sourcing was used to reconstruct socio-economic systems, contributing to archaeology's 'big questions' rather than focusing on obsidian per se. This paper details an attempt to use obsidian sourcing in the Eastern Mediterranean to map community interaction and ideational through a large-scale analytical program that involves a more holistic means of characterisation, integrating chemistry and a richer appreciation of the artefacts themselves (chaîne opératoire, visuals, haptics).

Casile, Claudette (Washington State University)

[97] *Statistical Perspectives on the Palynological Investigation of Marie Galante, FWI*

Previous palynological analysis of core VF08-1, collected on Marie Galante, determined the presence of economically important species and allowed for the establishment of three main events within the sedimentological profile. The results document changing environments along with pre-Columbian and colonial human activity. Statistical methods in spatial analysis provide a finer resolution of the palynological results, revealing hidden trends of environmental succession within the stratigraphic zones. When coupled with a series of radiocarbon dates, the statistical analysis corroborates and strengthens the palynological interpretations, and documents a human presence on this island during Archaic times.

Castaneda, Quetzil (OSEA)

[212] *Constructing the Past, Making History: Notes on the Lived Historical Value of Archaeology and the Significance of Autoethnographic Documentation of Archaeological Projects*
This paper discusses how archaeological research projects have an experiential meaning and historical value for the persons and communities involved in archaeology. In other words, archaeology "makes history" in the present in and through the relationships it creates with communities. Recognition of this fact creates the scientific imperative that archaeologists figure out ways to start conducting ongoing ethnographic documentation of the social contexts of their research projects. This paper presents concrete ways that archaeologists might actualize such autoethnography or "self"-ethnographic and historical documentation.

Castanzo, Ronald (University of Baltimore)

[156] *Pottery Production in Formative Period Valley of Puebla: Support for the Intermittent Crafting Model*
Several Formative Period pottery production facilities were excavated in 2007 near the town of San Felipe Tenexitepec in the Valley of Puebla. Facility morphology and attributes of the ceramic assemblage suggest part-time household-level economic activity for the purposes of exchange. Since the local population was well below carrying capacity during this time, these households did not engage in the manufacturing and exchange of ceramics out of any need to augment their subsistence regime. For this reason, Hirth's intermittent crafting model of domestic craft production provides a strong explanatory framework within which to consider early local pottery making.

Castillo, Patricia (INAH)

[242] *The Symbolic Landscape in the Social Structure of Ancient Tajín, Veracruz*
En la distribución al interior de la zona monumental que corresponde a los espacios simbólicos, para su última época en el antiguo Tajín, se observan espacios conceptuales como los juegos de pelota en donde se marcan los rituales y la arquitectura monumental de la Gran Greca o Xicalcolihqui, que está construida y pensada para poder observarse desde lejos como una arquitectura que va a modificar el paisaje y se convierte en un gran símbolo que modifico el interior de la gran ciudad, estos elementos aparecen para los años de 1000 a 1200 con un agente que trasforma la ciudad y que tiene como nombre calendárico Trece Conejo.

Castillo-Butters, Luis (Pontificia Univ Católica del Peru)

[145] *The Wari, The Moche and the Cajamarca*
For a short period of time during the Middle Horizon, and exclusively in the Jequetepeque Valley, a large number of highland and coastal societies coincided leaving behind evidence of different kinds of interactions. While social exchanges and ritual practices seem to be a big part of these interactions, violence and coercion were most likely absent. The time period is critical, because it was during this period that the Moche collapsed, that the Transitional phenomenon took shape, and that the Lambayeque eventually took control. These interactions, and their physical manifestations left behind a trail of information that can illustrate the ways these societies interacted, and the measure by which these interactions conditioned their cultural evolutions.

[145] *First Chair* [145] *Second Organizer*

Castro Martínez, Pedro [143] *see Escoriza, Trinidad*

Catella, Luciana [138] *see Barrientos, Gustavo*

Catlin, Kathryn (University of Massachusetts Boston)

[246] *Getting to the Core of Skagafjörður*
After taking several thousand soil cores across Skagafjörður and noting the presence of tephra layers and the thickness of intervening soil (primarily aeolian sediment), we can begin to construct extensive erosion and deposition histories for individual farms. These sequences correlate with some of the relative measures of socio-economic status. In this paper we will discuss the implications of

observed sediment variations as both a cause and a consequence of the differences in wealth between neighboring Viking-age farmsteads.

Caulk, Grady (Corps of Engineers)

[236] *Archaic in South Florida*
As part of the Comprehensive Everglades Restoration Project (CERP) the Corps of Engineers and the South Florida Water Management District commissioned an update of the Archeological Context and a Cultural Resource Overview and Survey Strategy for the CERP area. Only four Early Archaic and 13 Middle Archaic sites were identified out of the 1,700 pre-Columbian sites recorded in the study area. This paper examines the survey strategies and site evaluation methods used to identify pre-ceramic Archaic sites in South Florida.

Cazares, Lucia (Zona Arqueologica de Monte Alban, INAH)

[103] *El Adoratorio Central de Monte Alban*
Ubicado en el lado oriente de la Plaza Principal, este foso llamado tambien cisterna, es una estructura muy singular explorada por Alfonso Caso en 1945, quien encontro una subestructura conectada con dos tuneles y el famoso pectoral de jade con representacion de murcielago como ofrenda de un entierro multiple. Además, en recientes estudios en la subestructura, localizamos dos ofrendas mas. Todo esto, y su ubicacion tan significativa, contigua al Observatorio Astronomico, al Edificio P y el Edificio H nos indica que esta edificación aun guarda muchos secretos, de los cuales propongo algunas hipotesis.

Cearley, Stacie (Bureau of Land Management)

[75] *Cleaning Out the Freezer: Faunal Analysis and Paleoecology of the Alpha Cave Cold Storage Site*
The bison bone recovered from Alpha Cave, located on the Craters of the Moon National Monument and Preserve, is currently being analyzed to identify the ratio of stable isotopes (18O and 13C). These efforts will provide a great deal of information regarding bison diets and regional paleoecology over the past 5000 years.

Cecil, Leslie (Stephen F. Austin State University), Linda Scott Cummings (Paleo Research Institute) and Melissa Logan (Paleo Research Institute)

[123] *Ancient Maya Food Processing as Evident Through Grater Bowls*
Recent studies of Maya vessel use and residues have concentrated on chocolate and atole residues from vases and pouring vessels that have hieroglyphic texts describing their use and contents. Other vessel forms, such as grater bowls, have received little attention as to their actual use by the Maya. Instead, ethnohistoric and ethnographic analogy of indigenous Mexican populations suggests that they were used to crush chilies. While the Maya may have used grater bowls to crush chilies, they may have been used to process other foods. This poster demonstrates that the Maya grater bowls were used to process animals and plants.

Cerezo-Roman, Jessica (University of Arizona)

[158] *Mortuary Practices and Personhood among the Hohokam of Southern Arizona*
Previous research on mortuary practices in the Southwest largely has focused on the identification of a single aspect of identity. This study employs an intersectional approach looking at the individual as a member of different social networks using the concept of personhood. I contrast the biological profile of individuals with posthumous treatment of the body at two Preclassic Hohokam sites in the Tucson Basin. Preliminary results suggest that social age and gender were emphasized by the mourners. In addition, I look at how transformations in practices and perceptions of the body and individual personhood were accomplished through mortuary rituals.

Cervantes, Gabriela (PUCP)

[226] *Reconstructing Complex Funerary Processes on Peruvian North Coast: A Middle Sican Case Study*
Careful examination of a recently excavated, intact 1000 year-old

Middle Sicán elite tomb has allowed us to reconstruct much of the complex, funerary process. This study shows the careful planning of this tomb from the placement, construction, and decoration of the tomb to cautious placement and organization of diverse grave contents. The funerary process continued long after the primary interment with a sequence of natural and cultural events, including rains, ritualized burning of ground surfaces, and the placement of diverse offerings over centuries. Ritualized funerary process seems to have served as mechanisms of preserving memory of the deceased through materialization.

Chacaltana, Sofia (University of Illinois at Chicago)

[121] *Using LA-ICP-MS Method to Observe Imperial – Local Dynamics in the Upper Moquegua Valley during Inca Occupation*
During the Inca incorporation of the Moquegua Valley in southern Peru, the groups inhabiting this area went through an intense socioeconomic transformation that was reflected in the material culture of the region. I present preliminary analyses conducted at the Elemental Analysis Facility at the Chicago Field Museum to determine chemical readings from ceramic sherds collected from storehouses of an Inca waystation and an adjacent local community. This data shows that the empire was using foreign objects (vessels) in new socio-political contexts but continued utilizing local clay sources to manufacture vessels for their imperial activities.

Chada, Bill [72] see *Lincoln, Thomas R.*

Chadderton, Thomas (The Louis Berger Group, Inc.)

[179] *A Long, Thin Line: Archaeological Survey Along 100 Miles of the Rockies Express Pipeline Project in Eastern Indiana*
The Louis Berger Group, Inc. conducted archaeological investigations for a 100-mile stretch of the Rockies Express Pipeline Project corridor from just southwest of Indianapolis east to the Ohio border. Five hundred eighty-three archaeological sites were identified during Phase I survey. Forty-three of those sites were subject to Phase II testing and nine sites were recommended eligible for listing in the National Register of Historic Places. Four of the eligible sites were avoided by construction design modifications and the five remaining sites were subject to Phase III data recovery excavations. This paper summarizes the results of Berger's archaeological investigations.

Chamberlin, Matthew (James Madison University) and Alison Rautman (Michigan State University)

[110] *Interpreting Burning in the Salinas Pueblo Province, A.D. 1275-1540*

Excavations at multiple villages in the Salinas Pueblo Province reveal divergent patterns of burning during the Pueblo IV period (A.D. 1275-1540). We draw on evidence of architectural history and structural damage, room, plaza, and midden depositional histories, and natural site formation processes from both early and later Pueblo IV villages to compare the occupational conditions, extent, and nature of these different contexts. We characterize variability in the causes and outcomes of both pre-occupational and post-occupational burning episodes during this period, which implicate conflict as well as accidental fires.

Chandler, Susan (Alpine Arch Consultants Inc) [130] *Discussant*

Chang, Claudia (Sweet Briar College)

[32] *Iron Age Demography and Socio-Political Interaction: Farmers, Foragers, and Pastoralists in the Semirech'ye Region of Southeastern Kazakhstan*

We will investigate the economic system used by the Iron Age Saka and Wusun confederacies occupying the northern edge of the Tian Shan Mountains. The survey data and excavation of three Iron Age sites suggest a multiple resource economic base that supported population increase from the 4th century BC to the 1st century AD on the Talgar alluvial fan. How did this local demographic expansion affect larger regional and even global interactions during this dynamic period of steppe development? Models from World-Systems Analysis and landscape archaeology will be tested using our archaeological

data on Iron Age economy.

[32] *Second Organizer*

Chang, Melanie [205] see *Nowell, April*

Chang, Vanessa

[98] *Identifying Elite Structures in the site of Panquilma*

Urban cities provide a wealth of information to the archaeological world. Surviving structures can illustrate social hierarchy. Through architecture, the site of Panquilma illustrates the existence of social stratification. Aerial photos depict the size and complexity of the site. Ground mapping techniques help to establish the variation of structures within. Comparisons amongst each household confirm the dialectics between the "common" and "elite". Common structures generally have: smaller rooms and closed-off quarters. Elite structures generally have: larger rooms, multiple plazas, middens and an open floor plan. Regional comparisons provide guidelines to the identification of Panquilma's elite structures.

Chao, Jiunn-Hsing [206] see *Chiu, Scarlett*

Chapin, Nicholas (ICF Jones & Stokes)

[118] *Late for the Revolution? Archaic Period Subsistence Changes in North-Central New Mexico*

A recent re-analysis of the original Oshara Tradition early archaic sites, from the Arroyo Cuervo region of New Mexico, appears to confirm the near absence of ground stone milling equipment in Archaic Period assemblages dating to before 5000 B.P. In contrast, archaic sites in the San Juan Basin of northwestern New Mexico show the increased use of milling equipment by soon after 8000 B.P. This paper examines the apparent differences in subsistence behavior during the early archaic between occupants of the Rio Puerco and Central Rio Grande Valleys, and those in areas located only a short distance to the west.

Charest, Andreas [211] see *Boatwright, Mark A.*

Charles, Douglas (Wesleyan University)

[173] *The Quick and the Dead: Archaeologists and Mortuary Sites of the CAA*

Burial mounds and cemeteries have been excavated in the lower Illinois River valley region since the mid-19th century. Over the last 50+ years, archaeologists associated with what is now the Center for American Archeology have conducted the excavations. Some of those archaeologists and some of those excavations have figured prominently in theoretical and methodological developments in mortuary archaeology within the discipline as a whole and in the interpretation of the Archaic, Woodland, and Mississippian cultures of the Eastern Woodlands. This paper will highlight the roles of these archaeologists and sites in recent archaeological practice.

Charles, Douglas K. [215] see *Rudolph, Katie Z.*

Charlton, Michael (University College London)

[256] *The Role of Skill in the Evolution of Ironmaking Technology: Examples from Iron Age and late Medieval northwest Wales*

The inference of skill-level from bloomery iron smelting artifacts, especially slag, requires the analysis of both yield efficiency and standardization. A comparison of iron smelting activities from Iron Age and late medieval bloomeries in northwest Wales shows that skillfulness is strongly associated with production intensity. While Iron Age smelting recipes gradually evolve to fit an optimal economic strategy, skillfulness amongst ironmasters does not improve. Late medieval recipes, however, rapidly evolve in concert with increasing control of furnace operating conditions. These results imply that ironmaking ability is developed through repeated performance and that skillfulness hitchhikes with adaptive iron production strategies.

Chase, Arlen (University of Central Florida) [159] *Discussant*

Chase, Zachary (The University of Chicago)

[18] *What is a Huaca? When is a Huaca?*

Material complexities of Andean numina defied Spanish colonial explanation, due to historically deep and persistent semiotic and ontological notions of the referential function of symbols and the ultimately incommensurable natures of the agentive and the material. Data from various highland areas show that understanding "huaca ontology" requires considering the diversity of entities deemed huacas and the temporal conditions of a huaca's being. Huacas were divine entities, intrinsically material, but unrestricted by or to any particular thing; partitive, but without sharp differentiation between signifier and signified. A brief conclusion suggests how this understanding of huacas may be useful in archaeological fieldwork.

Chastain, Matthew (Northwestern University), Alix Deymier (Northwestern University), David Dunand (Northwestern University) and James Brown (Northwestern University)

[140] *Materials Science Analysis of Copper Artifacts from Cahokia's Mound 34*

With the purpose of explaining the techniques used by Mississippian copper workers to reduce nuggets of native copper into thin sheets, copper artifacts deriving from the copper workshop site at Cahokia's Mound 34 were subjected to metallographic analysis. Replication experiments were then conducted to attempt to recreate features seen on the artifacts under controlled conditions. This research confirmed that sheets were thinned through cycles of hammering and annealing, identified a method used to cut the sheets into shape, explored several relevant aspects of copper's material behavior, and, more generally, demonstrated a procedure for using the methods of materials science to address archaeological questions.

Chatfield, Melissa (Stanford)

[137] *Connecting Wari and Inca through Pottery Style and Technology*

The influence that the Wari Empire had on the later Inca Empire in terms of statecraft is a source of scholarly debate in the Cuzco region. The dataset presented here examines lineage iconography present on the tunics of ancestor figurines found at the Cuzco site of Pikillacta (Wari) and traces these design elements using pottery associated with ancestor worship during the Late Intermediate Period and Late Horizon at the multi-component site of Choquepukio, also in the Cuzco Valley. Feasting vessel morphology/technology is compared for the Middle Horizon, Late Intermediate Period, and Late Horizon to demonstrate continuity of Wari practices into Inca times with technological innovation.

Chavez, Eden (CSULA) and Juan Landeros (California State University, Los Angeles)

[148] *Cave Utilization among Highland Zapotec of Oaxaca*

Recent ethnographic research documented Zapotec concepts of ritual and power related to the sacred landscape surrounding the pueblo of Lachirioag. The cosmic center is defined around a Pre-Columbian site believed to be the ancestral settlement of the modern town. Its central importance is validated by reference to elements of the primordial landscape such as mountains and lakes. Caves are constructed within the site as focuses of ritual activity used to access the supernatural power for the petitioning of aid, power, and material benefits.

Chavez, Eden [148] see Landeros, Juan

Chávez Balderas, Ximena [64] see López Luján, Leonardo

Chazan, Michael (University of Toronto) [126] *Discussant* ; [230] see Riddle, Andrew T.

Chen, Honghai [214] see Dong, Yu

Chen, Pochan (National Taiwan University) [95] *Discussant*

Chen, Quanjia [155] see Jia, Peter Weiming

Chen, Stephanie [161] see Blickstein, Joel IB

Chen, Xingcan [155] see Liu, Li

Chen, Yi-lin [206] see Chiu, Scarlett

Chenoweth, Michael (University of Louisiana Monroe) and Diana Greenlee (Louisiana Department of Culture, Recreation and Tourism / ULM)

[160] *Aerial Photography and the Monumental Landscape at Poverty Point*

Archaeologists have used aerial photographs to understand the monumental landscape at Poverty Point for some 55 years. Early efforts focused on using aerial images to identify earthworks or segments of earthworks that were not clearly visible, due to their great size and topographic subtlety, on the ground. More recently, efforts have concentrated on documenting landscape modifications that resulted from 130 years of agricultural practices and on understanding alterations caused by ongoing natural geologic processes. The latter use is important as an aid in managing the archaeological resource. The temporal resolution of the aerial photographs ranges from 1934 to 2004.

Cheruvellil, Jubin (Michigan State University)

[46] *Subsistence Decision-Making in Heterogenous Environments: Foraging Simulation in Saginaw Bay Watershed, MI*

Late Archaic, Early and Middle Woodland hunter-gatherers in Saginaw Basin of Michigan are observed to buffer against environmental variation by resource specialization, mobility and diet strategies. This research tests these past interpretations using a landscape based resource model. Forager behaviors are simulated using historical and idealized landscapes by an agent based approach with the aid of ArcGis and Agent Analyst tool kits. The resulting behavioral patterns are then compared against archaeological site and subsistence data. The statistical evaluation of simulations using archaeological data suggests niche based strategies that vary both spatially and temporally to cope with environmental variability.

Chesley, John T. [255] see Fenn, Thomas; [255] see Thibodeau, Alyson M.

Chew, Sing (HSU/UFZ Helmholtz Centre for Env. Research) [32] *Discussant*

Chiarulli, Beverly (Indiana University of Pennsylvania)

[42] *Geophysical Investigations during the Gila Archaeological Project*

During the past two years, one focus of the Gila Archaeological Project has been to investigate the use of geophysical instrumentation at both historic and pre-European sites. Instruments used in the investigations have included ground penetrating radar, magnetic susceptibility meters and the GSSI profiler. The use of these instruments has guided us in the location of test excavations and aided in our interpretation of landscape and cultural features. Students have benefited as well by gaining experience in the use and interpretation of these data. This poster summarizes our results.

[180] *Discussant* ; [233] *First Organizer*

Chicoine, David (Louisiana State University) and Hugo Ikehara (University of Pittsburgh)

[138] *Formative Period Monumentalism and Visual Arts at Caylán, Coastal Ancash, Peru*

This poster exposes the preliminary results of the 2009 investigations at the monumental center of Caylán, Nepeña Valley, Peru. Initial efforts focused on the mapping and clearing of architectural structures and the excavation of test pits and limited areas. Preliminary mapping results suggest careful planning and a complex urban design, while excavation data point toward a main sequence of occupation during the first millennium BC. Here, we present and discuss Formative period patterns of architecture and visual arts, and propose a comparative analysis of sculpted friezes and other forms of monumental forms documented at Caylán.

Chicoine, David [114] *First Organizer*; [114] *see Mann, Rob*

Childress, Jane (Bureau of Land Management)

[223] *From Clovis to Clantons*

The San Pedro Riparian National Conservation Area (SPRNCA) contains some of the most important and historic properties in North America. Over 12,000 years of human life and culture is preserved, protected, and interpreted. These sites provide the raw materials for research and interpretation. Fostering public support for archaeology is effectively accomplished by providing the public with an experience of the benefits of study and preservation. Effective protection and interpretation of sites which range from Clovis culture to the Old West, accomplished through various partnerships, has enabled the agency to foster dynamic scientific research and public outreach programs.

Childs, S. Terry (Department of the Interior)

[76] *A Federal Perspective on Digital Curation: Issues and Solutions*
The Department of the Interior (DOI) owns almost 160 million museum items of which over 51 million are archeological objects and over 90 million are archives, including archeological associated records. How does DOI account for, document, and make public all these items? How does its collection cataloging system work; what are its benefits and deficiencies? Is the DOI developing standards of information recording that can benefit the wider archaeological and curatorial community? How is DOI handling the curation of its digital records, particularly those curated by non-federal repositories? These and other questions will be explored in this paper.

Chilton, Elizabeth (UMass Amherst) [60] *Discussant*; [161] *see Woods, Julie A.*; [174] *Discussant*

Chiou-Peng, TzeHuey (Univ. Illinois UC) [95] *Discussant*

Chiriboga, Carlos [54] *see Acuna, Mary Jane*

Chisholm, Linda (University of Minnesota-Twin Cities) and Loukas W. Barton (Katmai National Park, Department of the Interior)

[27] *Birds of a Feather, Butchered Together: Patterns of Avian Exploitation in Southwest Coastal Alaska*

This poster will compare avian skeletal data collected from three prehistoric coastal sites in Southwestern Alaska, specifically villages from Kukak and Amalik Bays, and Koniag-era Aniakchak Bay. Avian resources not only hold symbolic and ritual importance in prehistoric and contact contexts, but also reflect crucial subsistence strategies as well. The goal of this research is to determine whether butchery patterns and differential prey preferences exist, and whether such patterns demonstrate continuity between localities and through time.

Chiu, Scarlett (Academia Sinica, Taiwan), Christophe Sand (New Caledonia), Jiunn-Hsing Chao (Nuclear Science and Technology Development Center, National Tsing Hua University, Taiwan), William R. Dickinson (Department of Geosciences, University of Arizona, USA) and Yi-lin Chen (Research Center for Humanities and Social Sciences, Academia Sinica, Taiwan)

[206] *Characterizing Geochemical Compositions of New Caledonian Lapita Pottery via Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)*

The first available high-resolution elemental data on six New Caledonian Lapita pottery assemblages obtained via Inductively Coupled Plasma-Mass Spectrometry (ICP-MS) is presented in this paper. Pairing with petrographic analysis, the chemical compositions of these Lapita pottery assemblages indicate a strong correlation between specific geological zones and geochemical compositions of Lapita pottery within the islands of New Caledonia. This paper discusses not only the possible raw material procurement areas of each site studied, but also outlines a preliminary interpretation for the ceramic transfers occurred.

Chovanec, Zuzana (University At Albany)

[4] *An Experimental Approach to the Analysis of Opium Residues*
The increasing role of residue analysis in archaeological research has shifted the focus of taphonomic studies from sites to artifacts. Geological and chemical processes involved in the creation, preservation and degradation of residues in archaeological contexts are paramount and may be elucidated by experimental archaeological approaches. Such an approach is employed by researchers at the University at Albany in an effort to investigate the prehistoric use of psychoactive substances. Procedures and results are presented here regarding the controlled creation of various opium residues, their artificial aging in an attempt to simulate degradation, and their characterization by two analytical techniques.

Christensen, Kim (University of California Berkeley) [66]
Discussant

Christie, Jessica (East Carolina University)

[99] *Time and the Ancient Maya: Period Ending Ceremonies as Political Control Mechanisms*

The ancient Maya constructed time as a sophisticated political control device. This paper will explore how Period Ending ceremonies communicated to smaller or larger audiences through their spatial settings. Comparisons will be drawn between the Bak'tun ending 9.0.0.0.0. documented at Copan and in Jol'ja Cave and held in secluded spaces and the public architectural complexes of the Twin Pyramid groups at Tikal and some of its subordinates. The argument will be presented that Period Ending ceremonies not only validated the spiritual power of the ruler but further came to legitimize territorial claims of Late and Terminal Classic polities.

[99] *First Chair*

Church, Krista (University of Texas at Austin), Barbara Purdy (University of Florida) and Bruce MacFadden (Florida Museum of Natural History, Vertebrate Paleontology)

[26] *Contemporaneity of Human Remains and Extinct Late Pleistocene Fauna in Florida: A Rare Earth Element Analysis*

The contemporaneity of fossils from the Vero site (8IR9) in eastern Florida has been a subject of debate since the early 20th century, when human remains were recovered in stratigraphic association with extinct late Pleistocene fauna. There are few well-documented sites in the Americas where such sympatry occurs. In 1916, prominent anthropologists, such as Ales Hrdlicka, dismissed the human remains as younger, intrusive burials. However, the rare earth elements (REE) taken up during fossilization by the extinct fauna and the human remains at the Vero site are statistically indistinguishable, thus confirming the coexistence of humans and extinct fauna in Florida.

Church, Michael (HDR|e2M), James Gallison (HDR|e2M) and Michael Jennings (HDR|e2M)

[33] *Refining South Texas Prehistory—Excavation of 41SR392*

The prehistory of far southern Texas is not fully understood due to the small number of excavated sites, making the recent excavations at 41SR392 near Roma, Texas a critical addition to archaeological knowledge of the region. The project exposed stratified occupational horizons dating from the Early, Middle, and Late Archaic and Late Prehistoric periods. The site therefore offers a fine-grained record of changing subsistence patterns and technology, on the banks of the Lower Rio Grande River. We discuss the significance of the project's findings to broad issues in hunter-gatherer behavior.

Church, Minette

[193] *From Carreta to Railroad: Los Vecinos in Turn of the Twentieth Century southern Colorado*

The late nineteenth and turn of the twentieth centuries was a tumultuous time politically and economically in southern Colorado, yet these years have gotten little attention from archaeologists. In less than a generation, Spanish-speaking families living there found their civic identities externally redefined through successive sweeps of cartographers' pens, from Mexican to U.S. citizen, from New Mexican to Coloradan. Damacio and Loretta Lopez and their twelve children

were at the center of these transformative contexts, and through archaeological and unprecedented surviving personal documents we can look at the identities they and their vecinos, Anglo and Hispano, created together and apart.

Cinquino, Michael [22] *see Hayward, Michele H.*

Ciolek-Torrello, Richard [154] *see Van Galder, Sarah J.; [33]* *see Wegener, Robert M.*

Cisneros, Ashley [36] *see Holt, Julie Zimmermann*

Cisse, Mamadou (Rice University), Laure Dussubieux (Field Museum of Natural history), Marilee Woods (University of Witwatersrand) and Susan McIntosh (Rice University)
[121] *Early Glass Trade at Gao Saney (Mali): 700–1000 A.D.*
Excavations since 2000 at the 35-hectare mound of Gao Saney have revealed over six meters of deposits dating to A.D. 700–1000. The earliest deposits in two units contain numerous glass beads, many broken and remelted, in association with considerable amounts of ash and charcoal. LA-ICP-MS analysis of a sample of the beads by Dussubieux indicate that most of the beads were imported Middle Eastern soda glass made with plant ash. Compositional heterogeneity suggests that Gao Saney received glass from different sources, which is consistent with its interpretation as the historical market town of Sarneh, associated with capital of the great early Sudanic polity of Kawkaw.

Clark, Amy (University of Arizona)
[58] *Changes in site/land use between the Acheulo-Yabrudian and Middle Paleolithic at Tabun Cave, Israel*
When comparing artifact density to tool-to-flake ratio at the key site of Tabun Cave in Israel, there is a clear pattern break between the Acheulo-Yabrudian and Middle Paleolithic layers. Throughout the Middle Paleolithic layers these variables correlate negatively, following patterns found in other parts of Eurasia, but when contrasted with the Acheulo-Yabrudian there is an abrupt change, with no correlation evident. This change could reflect differing modes of site provisioning and organization of mobility, a hypothesis that appears to be supported through other lines of evidence from Tabun.
[58] *Second Chair* [58] *Second Organizer*

Clark, Andrew (SD State Historical Socie)
[220] *Landscapes of War: Topography and Conflict in the Middle Missouri*
Although recent scholarship has emphasized and refined the archaeological study warfare, one line of evidence has been under represented in the literature: the physical landscape. Through the use of geospatial techniques such as cluster, multi-dimensional visibility, and cost-surface analyses, archaeologists can infer aspects of war in multiple parts of society. By creating a historical Digital Elevation Model (DEM) of the pre-dam Missouri River and using archaeological data from the Middle Missouri subregion, I show a dynamic relationship between the uses of space and defensive tactics and diachronic changes in settlement choice.
[171] *First Organizer*, [171] *First Chair*

Clark, Bonnie (University of Denver)
[181] *Our Words Betray Us: Rethinking Archaeological Terminology through Collaboration*
Historical archaeologists often explicitly aim to include voices that were repressed during the historical context under study. However, good intentions can be undermined through the most basic of epistemological tools – terminology. The collaborators in the Amache project, the archaeology of a WWII era Japanese American internment camp, include individuals who once lived at the site. Former internees have a direct attachment to this past, one which throws a unique, but valuable light on the sometimes problematic nature of taken-for-granted archaeological terminology. The Amache case highlights how the words archaeologists use can reify the very divisions they are trying to bridge.

Clark, Dylan [103] *see Tuross, Noreen C.*

Clark, Jeffery (Center for Desert Archaeology) [100] *Discussant*

Clark, Jeffery [113] *see Mills, Barbara J.; [192]* *see Huntley, Deborah L.*

Clark, Jeffery J. [200] *see Trowbridge, Meaghan A.*

Clark, Joelle (Northern Arizona University) [209] *Discussant* [209] *Second Organizer* [209] *First Chair*

Clark, John (Brigham Young University) [221] *Discussant*

Clarke, Andrew (University of Otago, New Zealand) and Roger Green (University of New Zealand Auckland)
[68] *Polynesian Contacts: The Botanical Record*
A number of plant species, most famously the sweet potato and bottle gourd, have been involved in arguments about prehistoric contact between Polynesia and the New World. For the sweet potato, there is growing agreement that its prehistoric introduction into Polynesia was human-mediated, and instead the focus has moved to more specific questions around where on the South American coast Polynesians made contact, the number of contacts that were made, the number of sweet potato lineages that were introduced into Polynesia, and the subsequent dispersal patterns in Oceania. Teasing apart the contributions of prehistoric and historic introductions to modern Oceanic sweet potato diversity is also important. For the bottle gourd, fundamental questions still remain about the origin(s) of this species in Polynesia, with modern genetic work suggesting more complex dispersal patterns than previously thought.

Clarke, David (Delaware Department of Transportation) and Kevin Cunningham (Delaware Department of Transportation)
[180] *Public Outreach in CRM the Delaware Department of Transportation Model*
The Delaware Department of Transportation (DelDOT) Cultural Resources Program is continuing to uphold the spirit of section 106 compliance by adhering to guidance from the Federal Highway Administration and the Advisory Council. DelDOT feels it has an exemplarily model to incorporate public outreach and education in every CRM project. Moving into the 21st century we are way beyond brochures and striving towards a more inclusive and reflexive public oriented program. In concert with the tried and true outreach methods, we are using our website www.archaeology.deldot.gov as the flagship tool to promote and enhance our multi-dimensional cultural resources program.

Clauter, Jody (UW-Milwaukee)
[70] *Same Vessel, Different Mound: Ceramic Analysis from the Nitschke Mound Group (47DO27) and Nitschke Garden Beds (47DO518)*
The Nitschke Effigy Mound Group (47DO27) and Nitschke Garden Beds (47DO518) are Late Woodland (AD 400-1150) in eastern Wisconsin. Both were reported upon by W. C. McKern in 1927 and are part of Dodge County's Nitschke Mounds County Park. Ceramic analyses on rimsherds from the sites show that rimsherds from the same vessel were deposited within different mounds, and also indicate close similarities between rimsherds at the garden beds and mound group. Interpretations on the relationship between the habitation and mounds groups, on effigy mound building and site use, and on site formation at Nitschke mounds are presented.

Clay, Berle [251] *see Greenlee, Diana M.; [251]* *see Hargrave, Michael L.*

Clay, Rudolf (Cultural Resource Analysts, Inc.), Michael Hargrave (ERDC-CERL-IL) and Rinita Dalan (Minnesota State University Moorehead)
[251] *Geophysical Survey at Poverty Point: Raising Issues for Future*

Research

Geophysical survey at Poverty Point by the authors has identified a diverse set of geophysical features, some of them unexpected, and has stimulated the process of explaining them. As a group they complement the earthworks and emphasize that mound building, long felt to be the most significant activity at the site, was accompanied by off-mound activities with extensive construction. The realization that these exist, supplemented by excavations essential to understanding them, is expanding and changing our conception of terminal Archaic life.

Cleghorn, Naomi [234] *see Janzen, Anneke*

Cleland, Robin

[136] *Of Godly Deer and Hunters' Fear: The Fauna from La Quemada*
Initial faunal results are presented from La Quemada, a large ceremonial center in Zacatecas, Mexico. Although the size and monumentality of the site suggest an elite presence, rare trade goods are not concentrated in and near the monumental core suggesting that a social stratification approach to faunal analysis may not be the most productive. Instead, this project explores how, and if, ethnographic analogy drawing on current Huichol religious beliefs, animal-use, and bone-disposal practice can inform interpretation of the archaeological faunal assemblage. Particular attention is paid to how size-class and differential disposal affects the faunal record, as well as to taphonomy.

Clites, Elizabeth (Monticello), Brian McCray (Monticello) and Elizabeth Clites (Monticello)

[166] *Monticello Before the Mansion: A Comparative Study of Early Domestic and Industrial Structures on Mulberry Row*
Mulberry Row, an avenue of slave dwellings and workshops adjacent to Monticello Mansion, was a dynamic landscape within the core of Thomas Jefferson's plantation. To date, research has emphasized the structures recorded in a 1796 insurance plat, yet Mulberry Row existed in other forms prior to this time. Analysis of excavations of early enslaved African-American quarters, workshops, and the west kitchen yard provide insights into the earliest phase of Mulberry Row. This poster, using artifactual and contextual data digitized for our ongoing Mulberry Row Reassessment project, explores the early aspects of daily life among Jefferson's enslaved and free workers.

Clottes, Jean (ICOMOS) and Yanik Le Guillou (Ministry of Culture)

[104] *Fontanet: A Painted Cave in the Ariège-Pyrenees*
The Fontanet Cave (Ornolac-Ussat-les-Bains, Ariège, France) was discovered by spelunkers in February 1972. It has been perfectly preserved and its archaeological context is intact on the surface of the ground. In addition to a number of Magdalenian wall paintings and engravings and various engravings on the ground, human footprints and the hand prints of a child have been discovered, as well as the unique print of a shod foot. The preservation of the cave and the variety of Magdalenian traces and remains makes it an exceptional testimony of human actions underground at the end of the Pleistocene.

Coats, Jennifer (Cal State LA)

[148] *The Stone House in the Cave: Analysis of a Speleothem Structure in Actun Yaxteel Ahau*
Surface survey and inventory of the upper level of Actun Yaxteel Ahau conducted during the spring of 2009 documented a number of elaborate speleothem structures. To this point, the analysis of speleothems has tended to consider only portable fragments, while these structures appear to have functioned as ritual features. This analysis considers one example that strongly resembles a house structure. The author considers the function of Lot 11 within the Maya concept of Na and the importance of the idea to the ancient Maya of a cave within a cave.

Coats, Meredith (University of Cincinnati)

[112] *Architectural Development at a Classic Maya Secondary*

Center, Say Kah, Belize

Recent excavations at the Classic Maya secondary site Say Kah, located near the center La Milpa, focused on understanding the architectural development of the site and how the settlement related spatially and chronologically to nearby settlements. Architectural features including large benches and vaulted ceilings suggest a more complex group than hypothesized. Yet, in contrast to surrounding settlements, Group B of Say Kah appears to exhibit only a single phase of occupation. These discoveries allow for clearer understanding of Say Kah's place in a regional community of related sites and the development of settlement in the La Milpa region.

Cobean, Robert (INAH, MEXICO)

[221] *Symbolic Aspects of Epiclassic Obsidian Offerings in the Region of Tula, Hidalgo, Mexico*

During the Epiclassic (circa 600-900 A.D.) several transformations occurred in lithic industries of peoples in the region of Tula, Hidalgo. With the decline of the Teotihuacan state, the use of obsidian tools was largely replaced by the production of instruments from local materials such as rhyolite, chert, and basalt. A major Epiclassic use for obsidian objects was burial offerings. We propose explanations for changes in symbolic meanings of obsidian instruments in the Tula area.

[156] *Discussant*

Cochrane, Ethan (International Archaeological Research Inst. Inc.) and Alexander Morrison (University of Hawaii)

[206] *The Demise of Lapita: An Evaluation from Fiji*

The origin of Lapita ceramics the western Pacific has been the focus of much research, but little work has empirically examined Lapita's rapid disappearance in Remote Oceania. Most researchers suggest that interaction across the vast Lapita world fell rapidly and the ensuing isolation of communities and their adaptation to local environments caused the loss of Lapita. To assess the isolation-adaptation hypothesis for specific Lapita occupations, we should analyze fine-grained data on community interaction, local environmental and subsistence variation, and changes in ceramic use. New data from Tavua, Fiji, and other Lapita sites, are used to evaluate the isolation-adaptation hypothesis.

Cockburn, Denton [19] *see Kobti, Ziad*

Codding, Brian [118] *see Zeanah, David W.*

Coe, Michael (Yale University) [153] *Discussant*

Coffey, Grant (Crow Canyon Archaeological Center) and Devin A. White (ITT Visual Information Solutions)

[160] *The Goodman Point Cultural Landscape Analyzed through Remote Sensing*

The Goodman Point Unit of Hovenweep National Monument was the first archaeological area protected by the federal government when it was withdrawn from homesteading in 1889. This has resulted in remarkable preservation of an ancestral Pueblo community center that was intensively occupied between A.D. 1000 and 1300. Many parts of this archaeological landscape are visible, including ancient roads, footpaths, agricultural fields, and water control features. We explore the utility of quantitatively analyzing various types of satellite imagery and geospatial support data to locate these large-scale archaeological landscape components. The techniques used, and their ground-truthed accuracies, will be discussed.

Coffman, Sam (University of Alaska, Fairbanks) and Ben A. Potter (University of Alaska Fairbanks)

[27] *Early Holocene Archaeology at Teklanika West, Central Alaska*
We report recent research at Teklanika West, one of the original sites used to define the Denali Complex. Multiple components were confirmed at this site, dating throughout the Holocene. Lithic analyses indicate multiple site activities, which include primary reduction and weapon maintenance. Faunal analyses indicate a change in subsistence economies from the earliest to later components at the

site. These analyses have clarified many ambiguities of past research at the site.

**Cohen, Anna (University of Washington)
and Francois Dengah (University of Alabama)**

[135] *The Space of Social Differentiation: Intra-site Organization at Sacapu Angamucu, Michoacán, Mexico*

Recent fieldwork in the Lake Pátzcuaro Basin, Michoacán, Mexico, has revealed a dense Postclassic occupation (Sacapu Angamucu) with intact architecture yielding ancient spatial patterning. Here I examine the spatial distribution of structures documented during the 2009 field season. Utilizing cluster analysis of structure type and size, this research aims to identify social differences within the proto-Purépecha (Tarascan) Empire. In particular, the relationship between architecture and social stratification is considered.

Cohen, Claire [255] see Van Buren, Mary

Cohen, David (University of California-Berkeley)

[181] *Tsimologo ya Ntsha ("They are Still Old-Fashioned"): Pursuing Social Justice in Botswana*

Archaeological practice in Botswana and the way we have engaged with, 'identified', and bounded our subjects provides an example of epistemic and social injustice, and reveals the potential power of our output, positive and negative. In this paper, I argue how we should forgo neutrality to become more critically engaged and politically conscious in our writing of the past where it has the potential to make a positive impact in the present. Using my research in Botswana, I present the case for necessary engagement with the contemporary uses, misconceptions, and abuses of the past and the epistemic output of anthropology.

[181] *First Organizer*; [181] *First Chair*

Colaninno, Carol (University of Georgia)

[250] *Evidence for Year-Round Occupation at Late Archaic Shell Rings of the Georgia Coast: Data from Oxygen Isotopic Profiles and Seasonally Sensitive Vertebrate Fauna*

Determining site seasonality is of archaeological concern, particularly among coastal occupations. Seasonal occupation at five Late Archaic (4,200-3,100 B.P.) shell rings along the Georgia coast is examined using oxygen isotopic profiles from hardhead catfish (*Ariopsis felis*) and Atlantic croaker (*Micropogonias undulatus*) otoliths. Additionally, vertebrate remains are examined for seasonally sensitive taxa. These data indicate that at all five Late Archaic shell rings more than one season is represented and at several sites, all seasons are represented. This suggests that some portion of the population may have occupied the coast throughout the year during this period.

Cole, Clint (University of California at Davis)

[120] *Snake Valley Ceramics at the Fremont Frontier: A Regional Comparison Using Instrumental Neutron Activation Analysis*
Snake Valley Grayware ceramics are widespread throughout southwestern Utah as signifiers of Parowan Fremont (A.D. 900-1200) material culture. Sherds recovered from sites separated by wide distances show remarkable consistency in their manufacture, suggesting that many vessels were either produced from few geological sources or potters attempted to replicate a familiar paste with local materials. Variation in ceramic geochemistry is investigated by comparing results of Instrumental Neutron Activation Analysis on 103 geological specimens against 162 potsherds sampled from regional Fremont sites, including Baker Village (26WP63), Five Finger Ridge (42Sv1686), and Evans Mound/Paragonah (42IN40/43). Evidence for local pottery production versus external acquisition is discussed.

Cole, Sally J. [51] see Hays-Gilpin, Kelley A.

Coleman, Robin [145] see Williams, Patrick R.

Coles, Mellisa [185] see Goodale, Nathan B.

Collar, Anna (University of Liverpool)

[113] *Networks, Epigraphy and Religious Change in the Jewish Diaspora*

I here take a network approach to the epigraphic material for the Jewish Diaspora in the Roman Empire. Inscriptions on stone are ideal for tracing social, cultural or religious change as and where it happened, and analysing their distribution with techniques from network analysis makes it possible to discern patterns in the evidence that reveal processes of religious change over time and space. By looking again at the widely distributed epigraphy of the Jewish Diaspora I show that adoption of rabbinic reforms in the West was widespread, contra the viewpoint that the Western Diaspora was forgotten by the East.

Colledge, Susan [9] see Moore, Andrew M T

**Collins, Michael (Gault School of Archaeological Research)
and D. Clark Wernecke (Gault School of Archaeological Research)**

[38] *Texas Avocationals--We Couldn't do it Without You!*

From its nascency the practice of archaeology in Texas has been one of cooperation between avocationals and professionals. The Texas Archeological Society exemplifies this tradition by prescribing equal status to avocationals and professionals in its governance. Avocationals making substantive contributions to the study of the past in Texas are far too numerous to all be included in this poster, so the stories of a few are presented as representative examples.

Collins, Michael B. [210] see Lohse, Jon C.; [210] see Hemmings, C. Andrew

Coltman, Jeremy (California State University, Los Angeles)

[107] *Breath of the Mountain: Wind and Caves in Classic Maya Iconography and Architecture*

Recent ethnographic data indicate that modern Maya are very aware of air being sucked into and expelled from caves due to atmospheric pressure. This is perceived as the earth breathing and seen as proof that the earth is a living and sentient being. An examination of Classic Maya iconography documents a similar belief depicted in multiple media. The "breath of the mountain" is closely tied to the fundamentally important concept of life giving and life sustaining rain. Caves in ancient Maya thought were important as the nexus of wind, rain, and earth.

[107] see Giron, Mario

Coltrain, Joan [248] see Janetski, Joel C.; [27] see Byers, David A.

Colwell-Chanthaphonh, Chip (Denver Museum of Nature & Science) [159] *Discussant*

Comanche, Jordan [42] see Richbow, Linsey J.

Combier, Jean [58] see Moncel, Marie-Hélène

Comer, Douglas (Cultural Site Research and Management (CSRM)) and Glenn Markoe

[160] *Monumental Tether: The Nabataean Transition from Trade to Agriculture*

Profound cultural changes were occurring in the Arabian Desert at the dawn of the Common Era. Three centuries before, Alexander the Great found no houses, fields, temples, or anthropomorphic images there. Agriculture and permanent settlements were eschewed. Trade by camel caravan over trackless desert was the engine of wealth. In contrast, Petra by AD 100 was filled with temples, houses, theaters, a nymphaeum, a paradeisos, and monumental tombs, all adorned with humans, animals, and the fruits of nature. Agricultural fields surrounded the city. We examine here the appearance of monumental structures and this transition from trade to agriculture.

Comer, Douglas [160] *First Organizer*; [160] *First Chair*; [160] see

Tilton, James C.; [160] see Blom, Ronald G.; [160] see Yatsko, Andrew

Compton, Anne (University of Michigan)

[182] *Insights on the West African Gold Trade: Ceramics from Bono Manso*

Little is known about the history and material culture of Bono Manso, the seat of the first centralized Akan state in the Brong-Ahafo region of modern-day Ghana. Documentary records suggest the site dates to approximately the 14th through early 18th centuries CE, but we lack a fine-grained chronology based on archaeological material. Using the ceramic assemblage first excavated by Emmanuel Effah-Gyamfi from 1973 to 1976, my research refines the existing ceramic typology and draws on ceramic analysis to offer new inferences on Akan trade relations and interaction with neighboring ethnic groups and political entities.

Compton-Gore, Katharine A. [122] see Kellner, Corina M.

Conard, Nicholas

[157] *From the Danube Corridor to Sex and Music in the Swabian Aurignacian*

Since 1996 the current team from the University of Tübingen has conducted a major body of fieldwork at sites in the Swabian Jura including: Hohle Fels, Geißenklösterle and Vogelherd. This research has produced important new data on the Aurignacian and has provided breakthroughs in the areas of cultural and chronostratigraphy, economic and technological systems, settlement dynamics, as well as on the origins of figurative art and music. This paper provides an overview of recent work on the Swabian Aurignacian and touches upon some of the highlights and open questions currently under study.

[157] *First Chair* [157] *Second Organizer*; [157] see Riehl, Simone; [157] see Bocherens, Hervé; [157] see Wehrberger, Kurt; [205] see Serangeli, Jordi

Concannon, Kieran [185] see Tynan, Collins P.

Concannon, Mary [38] see Crowley, Suanna Selby

Condie, Carol [3] *Discussant*

Condon, Peter (TRC Environmental), Javier Vasquez (TRC Environmental) and Luis Sierra (TRC Environmental)

[87] *Evaluating Formative Period Subsistence Economies in the Jornada Mogollon Region: Current Trends and Perspectives* Previous research by Hard (1986) suggested that the ratio between net-annual above ground productivity and the primary biomass of a biotic community acts as a predictor towards understanding the persistence of a hunter-gatherer subsistence strategy well into the late Formative period in the Jornada Mogollon region. Recent analyses into the subsistence economies of Mesilla and El Paso phase populations provide new insight into the exploitation of domesticated and nondomesticated resources as they relate to Hard's (1986) model. Using a comparative approach, data from 15 prehistoric sites in the Hueco Bolson, Hard's (1986) model is assessed and current interpretations highlighted.

Condori, Nilda [188] see Muñoz, Lizette A.

Conkey, Margaret (UC-Berkeley) [104] *Discussant*

Connaway, John [217] see Mehta, Jayur M.

Conner, Dr. Michael [150] see Erickson, Luke W.

Connolly, Brian [19] see DeFrank, Laura

Connolly, Cara (University of Nevada, Las Vegas) and Nathan Martinez

[190] *Fertility Groove Marks and Cupules in the American Southwest*

and Northern Chihuahua Desert

The groove and cupule rock art style is widely dispersed throughout the American Southwest and Northern Chihuahua desert. This rock art style is defined as boulder or rock slab covered with small rounded depressions (cupules), usually one or two inches in diameter and half-inch to an inch in depth, and/or linear grooves that are rarely more than a quarter-inch in depth. Archaeologists have speculated on the function of these groove marks, however, little research has focused on their purpose. This study will couple ethnographic and experimental data to test whether the groove and cupule style is associated with fertility rituals.

Connolly, Robert (University of Memphis)

[251] *Using the Material Record to Interpret the Poverty Point Site*

The Poverty Point site is featured in current discussions of a wide range of archaeological speculation on social, political, and economic organization. This paper uses data from surface collections and excavated cultural materials from the site to explore numerous aspects of the cultures fluorescence in the Southeast United States. Particular attention is paid to the provenience and context of the recovered cultural materials. The analysis provides insights for the noted discussions on the temporal development, functional use of space, and regional interconnectedness of the earthwork complex, along with its position in the site clusters of the Poverty Point culture.

Connor, Melissa (Nebraska Wesleyan University) [69] *Discussant*

Conolley, Ivor [201] see Galle, Jillian E.

Conrad, Lawrence (Ancient Society Books)

[83] *Introduction to the Orendorf Project*

Between 1971 and 1978 emergency salvage excavations were conducted in three sequentially occupied Middle Mississippian town sites on the Orendorf site in response to impending strip mining. With a grant from the NPS to WIU collections and records were organized and several aspects of the collections from Settlement C were examined. Currently we are finishing the faunal analysis from all of the excavations and examining flora and artifacts from Settlement D. Between 1986 and 1989 field school excavations were conducted in a large burial mound in response to ongoing vandalism. Bioanthropological analysis has been ongoing since 1996 and remains productive.

[83] *First Organizer*; [83] *First Chair*

Constan, Connie (University of New Mexico)

[152] *Pointed Bottom Pots and other Gallina Ceramic Quandaries*

This paper will focus on the pottery of the Gallina area of the American Southwest. Previous research on Gallina ceramics is limited and there is little consistency in typology. A synthesis of previous work and the different decorated and utility ware types will be presented. This will be facilitated through a comparison of frequencies from excavated assemblages, available whole vessel measurements, and current microscopic, mineralogical, and chemical investigations. In addition, the historic theories and recent ideas on the unusual pointed bottom pot form will be evaluated. Relationships between Gallina ceramics and types in adjoining culture areas also will be discussed.

Contreras, Daniel (Stanford University) and Kristin Nado (Arizona State University)

[175] *Interpreting Geochemically Characterized Obsidian from Chavín de Huántar, Peru*

The ceremonial center of Chavín de Huántar witnessed one of the early successful applications of archaeometry in the Andes, substantiating prior ideas about the site's integration in a broad regional network through the geochemical sourcing of obsidian. Our follow-up sourcing project moves beyond issues of long-distance trade to address the role of multiple social actors in prehistoric social organization. Embedding archaeometric data in economic and social theory and emphasizing the archaeological fundamentals of sampling and context, we critically reflect on the potentials and shortcomings of

obsidian geochemistry for elucidating aspects of flexibility and tension in multi-scalar sociopolitical dynamics.

Conway, Meagan (University of Massachusetts Boston)

[185] *Living on the Ridge: Understanding Streamstown Village, near Clifden, Co. Galway, Ireland*

This poster focuses on the vernacular architecture at Streamstown village, an 18th and 19th century ridge-top settlement, to understand shifting patterns of household and community spatial organization. In examining these remains and archival documentation, I trace the decrease in informal systems of community land use and building strategies, and the later emergence of a more formalized process of decision-making by both tenants and owners. The formalization was accompanied by the rapid depopulation of the upland hilly interior townland due to disease and immigration, followed by a shift to coastal areas and new road systems closer to the sea.

Conyers, Lawrence (University of Denver)

[85] *Ground-penetrating Radar Visualization Techniques for Anthropological Analysis*

Geophysical archaeologists have recently relied solely on amplitude slice-maps of GPR reflection data as a prime image from which to interpret information about buried archaeological sites. While this is a powerful tool, which can define buried features in three-dimensions, two-dimensional analysis of reflection profiles can often produce images that are much more informative. Examples are given from the American Southwest, Central America, Australia and Italy, which when combined with standard map-view images can tell much more about the human past and can be used to test ideas about human behavior in ways not possible using any other method.

[85] *Discussant*

Cook, Anita (Catholic University of America)

[18] *The Pageantry of Empire: Huari Shrines and Devotional Practices (AD 550-1000)*

In the Andes, every political act had ritual overtones. Huari sanctuaries present huaca-like qualities with later Inca ushnu complexes. I argue that the shape and size of Huari shrines are similar throughout the empire and as such represent the intersection between ritual and sovereignty. Portable objects and an iconography depicting the pageantry of empire provide a back drop to the activities identified in the archaeological remains of the shrines that include human and animal sacrifices combined with libations and burning events. Hence, regional Huari sanctuaries and their contents are metaphorically linked to the principal shrine and seat of power.

[18] *First Chair*

Cook, Della [30] *see Ausel, Erika*; **[239]** *see Kaestle, Frederika A.*

Coons, Barbara [62] *see Coons, Don*

Coons, Don (Hawaiian Speleological Survey) and Barbara Coons (Hawaiian Speleological Survey)

[62] *Archaeology in Hawaiian Caves*

The Hawaiian Island Chain is a series of mountains formed by actively growing volcanoes. Polynesian settlement on these islands was closely intertwined with geologic processes, and the settlers very quickly developed an understanding of and dependence upon the lava flows that make up the land forms. Exploring and utilizing the underground lava tubes was a natural extension of this newly adapted life style. Artifacts left behind by these earliest of colonizers are perfectly preserved today in an environment of constant temperature, constant humidity and absence of light. This valuable resource is little understood and only recently begun to be documented.

Cooper, D. Randall [172] *see DelCastello, Brian G.*

Cooper, H (Purdue University) and Nicholas Waber (University of Victoria)

[207] *Prehistoric Copper on the Northwest Coast*

Discussions of social complexity on the Northwest Coast have made reference to the use of copper as a prestige good, but little is currently known about the prehistoric use of copper from a regional perspective. This paper provides a preliminary regional overview of the archaeological occurrence of native copper in southeastern Alaska and British Columbia based on a review of published and unpublished data. Additionally, the social context of native copper metallurgy and its diffusion among hunter-gatherers will be briefly considered.

Cooper, Judith (SWCA), John Kennedy (SWCA Environmental Consultants) and Norma Crumbley (SWCA Environmental Consultants)

[228] *High Elevation Landscape Use in the Upper Green River Basin of Western Wyoming: Exploring Ecological and Cultural Mosaics*

As an archaeological landscape, the Wyoming Upper Green River Basin exhibits an intersection of varied topographic, ecological, and cultural zones. Despite intensive occupation of this high desert basin throughout much of prehistory, this area demonstrates strong influences from surrounding regions, like the Great Plains or Northern Colorado Plateau. To explore these influences, we focus on the archaeology of the Jonah Subregion of the Upper Green River Basin to evaluate long-term patterns in occupation, including temporal changes in raw material use and projectile point technologies. Using site distribution data, we attempt to link apparent population trends to climatic change over time.

Cooper, Leslie [201] *see Galle, Jillian E.*

Cooper, Randall (Cultural Resource Analysts), Brian G. DelCastello (Cultural Resource Analysts), Jennifer M. Haney (Cultural Resource Analysts) and Richard L. Herndon (Cultural Resource Analysts)

[172] *Synopsis of Woodland Occupations*

A total of 21 sites had Woodland components ranging in time from Early Woodland through the latter portion of the Late Woodland. Pottery, diagnostic hafted bifaces, and radiocarbon dates indicate Black Sand, Havana-Hopewell, Weaver, and South Branch groups occupied the area. Black Sand material was recovered from five sites, Havana-Hopewell from five sites, and Late Woodland from ten sites (South Branch and Weaver). Several sites had ephemeral Woodland deposits that could not be classified culturally or temporally. This paper provides an overview of these Woodland occupations, including several sites that are presently unique for this portion of Missouri.

Corbett, Debra [79] *see Funk, Caroline*

Corbett, Jack [103] *see Robles Garcia, Nelly M.*

Corbett, Ray (Santa Barbara Museum of Natural History)

[56] *Mortuary Practice on the Northern Channel Islands*

This paper examines and analyzes the nature of mortuary practice during the Early and Middle Period on California's northern Channel Islands. It compares the predominant mode of burial and mortuary treatment evidenced on each of the islands, Santa Cruz, Santa Rosa, and San Miguel, and contrasts these with patterns on the south central California mainland. Statistically significant differences are evident between the each of the islands and between the islands and the mainland.

Cordell, Ann (Florida Museum of Natural History) and Thomas Pluckhahn (University of South Florida)

[217] *Paste Characterization of Weeden Island Pottery from Kolomoki, Georgia*

Petrographic analysis of pottery from the Kolomoki site, Georgia is underway. Thin sections of 65 sherds were obtained representing several prestige and utilitarian Weeden Island pottery types, from midden and ceremonial contexts. Initial goals of the analysis are to characterize the range of variability in paste/resource groupings present in the Kolomoki assemblage. Ultimate goals of analysis are to

begin resolving patterns of manufacture and exchange of Weeden Island pottery through comparisons to thin sections of comparable types from the McKeithen site and other sites in north and northwest Florida.

[217] *First Chair*

Cordell, John [59] *see Doershuk, John F.*

Cordell, Linda (School for Advanced Research)

[51] *Inspiring Women in Archaeology*

In order to continue to advance our field, archaeology must pursue the innovative capacity of all its practitioners, women as well as men. There are significant barriers to continued advancement of women's careers in archaeology. Overcoming these barriers requires changing the rules, acknowledging women whose contributions have inspired the field, and inspiring women to inspire women and men.

[208] *Discussant* [14] *Discussant*

Cordero, Maria-Auxiliadora [68] *see Scaglion, Richard*

Cordova, Guillermo (arqueólogo)

[195] *Aproximaciones al Fenómeno Urbano de Tamtoc, SLP, México*

Por su importancia regional, la antigua ciudad de Tamtoc suele considerarse como la capital prehispánica de la región Huasteca. Su estudio significa la posibilidad de aproximarnos al fenómeno urbano ocurrido en épocas tempranas en México. En esta exposición presentaremos algunos aspectos arqueológicos que guían nuestra investigación que tiene como objeto aproximarnos al proceso histórico de una sociedad compleja caracterizada por una vida urbana. espacio material de la organización política: El templo y el palacio. Órganos rectores con capacidad para agregar densos de población organizados en unidades políticas para ser gobernados.

Cordova, Isabel (California State University Northridge)

[169] *La Blanca and Chalcatzingo: A Comparative Approach to Symbolism and Identification to the Ritual Use of Figurines.*

There have been many detailed analyses of anthropomorphic figurines from the Mesoamerican region, which have yielded various results. This analysis will explore the function and purpose of figurines recovered from two Formative Period Mesoamerican sites to broaden the perspectives under which they are studied and draw comparison across geographic space and time. Ritual usage seems to be a strong component of many of the pervading theories. In this paper, I propose an analysis of two different data sets, from La Blanca, Guatemala and Chalcatzingo, Mexico, which produced comparable figurines. Moreover, I will address theoretical orientations surrounding both sets of figurines.

Corella, Elijah (UM-St. Louis), Michael Ohnersorgen (UM-St. Louis) and Patti Wright (UM-St. Louis)

[162] *Undergraduate Archaeology at the University of Missouri-St. Louis*

In this poster, 2009 graduate Elijah Corella and University of Missouri-St. Louis faculty share their insights about the undergraduate program. Building on a well-rounded three-field foundation, students may emphasize any of the subfields through their choice of electives and the topic of the original research for their senior theses. Elijah Corella, completing a field school, a number of archaeology courses, and his senior thesis, *Microwear Studies: An Analysis of Flake Tools from Truman Road and A Critical Review of Current Methods*, is now employed by the Illinois Transportation Archaeological Research Program.

Corsci, Alexander [115] *see King, Adam*

Cortegoso, Valeria [123] *see Giesso, Martin*

Cortes Pérez, Enrique (INAH)

[57] *The Río Verde Grande Region and its Diagnostic Ceramics: First Approach to the Interaction Dynamics in Southeast Zacatecas during the Epiclassic Period*

The archaeological site at Buenavista is located in a semiarid environment of the Mesa Central province. The presence of ceramic types previously defined from other regions allowed us to interpret this ancient settlement as part of the cultural dynamics of northwestern Mesoamerica, principally during the Epiclassic period. In this context Buenavista's association to one of the principle affluent systems along the Río Grande de Santiago becomes significant. The Río Verde Grande, an ancient communication artery, that connects southeast Zacatecas, Aguascalientes, highlands of Jalisco and Atemajac valley, may have exchanged material objects and certainly with it, a series of ideological concepts.

Costello, Julia (Foothill Resources, Ltd.)

[56] *Mike Glassow in Context*

For over forty years Michael Glassow has had an enormous impact on California archaeology and the lives of countless students and colleagues. An accomplished academic and professional, he earned the deserved respect of students and peers. Additionally, Mike instilled in all of his students a sense of integrity and obligation to our profession, and stewardship to the resources we study. He expected us to serve in offices and on committees of state and national organizations, to participate in governmental programs, to act as advocates for our sites, and to publish our findings in accessible sources. He taught us to be generous and to volunteer.

[56] *First Chair* [56] [81] *First Chair*

Costin, Cathy (California State University)

[17] *Gendered Divisions of Labor in the Chimú and Inka Political Economies*

My research on textile manufacture on the North Coast of Peru suggests that the organization of cloth production within the political economy was transformed after the Chimú empire was conquered by the Inka empire. Here, I reflect on these changes in the context of gendered divisions of labor among the Chimú and the Inka, considering (1) historic developments in the organization of craft production on the North Coast; (2) the reorganization of production in other sectors of the North Coast economy after the Inka conquest; and (3) the ways in which North Coast structures and practices influenced the development of the Inka political economy.

[149] *Discussant*

Costion, Kirk [145] *see Williams, Patrick R.*

Coughlan, Michael (University of Georgia)

[184] *What the Trees Can Tell Us: An Archaeological Approach to Agro-pastoral Forest Modification in the French Western Pyrenees.*

Pastoralists in the French Western Pyrenees intentionally set landscape fires to create and maintain woodland pastures and to manage the type and quality of forage for their livestock. These landscape modifications likely represent ancient practices. Modified pastoral habitats grade along altitudinal vegetation zones from alpine meadows, to openings in closed-canopy subalpine forest, to semi-open woodland and "infield" pastures of the village. This research attempts a diachronic analysis of forest/pasture management regimes using the evidence presented by extant vegetation. This poster presents preliminary findings and an analysis of the feasibility of combining methods in paleoecology, ethnoarchaeology, and landscape ecology.

Covarrubias, Miguel [109] *see Hutson, Scott R.*

Cowan, Frank (Hartgen Archeological Associates, Inc.)

[176] *Tooling Up for Special Events at Special Places*

Hopewell artifact assemblages within Ohio Hopewell enclosures are dominated by small, fragile bladelets and, to a lesser degree, by highly stylized, thin bifaces and bifacial points, all often made of exotic raw materials. These are not tools designed for utilitarian purposes, and they appear to be ritual paraphernalia for use in ritual places. Specialized crafting areas for bladelet and very thin biface production are known adjacent to several Ohio Hopewell earthworks, but few workshops have been substantially investigated. Three

southwestern Ohio workshops provide a basis for evaluating the roles of bladelets within Ohio Hopewell earthworks.

Coward, Fiona (Royal Holloway University of London)

[113] *Grounding the Net: Networks, Environments and Material Culture in the Epipalaeolithic and early Neolithic of the Near East (~21-6,000 cal BP)*

The use of social network analysis (SNA) methodologies in archaeology has huge potential, but the 'networks' analyzed are derived from archaeological proxies for social relations and often highly abstracted from their real-world contexts. This paper will discuss the use of different proxies and levels of analysis in the analysis of the prehistoric social networks of the Epipalaeolithic and early Neolithic of the Near East (~21,000-6,000 cal BP). It will also consider how Geographical Information Systems and SNA might be used in tandem to investigate the relationship between social networks and the real-world physical environments in which they occur.

Cox, Matt (Illinois State University)

[125] *Living Beyond Their Means: An Archaeological Investigation of Consumption Patterns at the Janis-Ziegler Site (23SG272)*

Previous archaeological research at the Janis-Ziegler site in Ste. Genevieve, MO has suggested that the Ziegler family may have presented the public with a picture of wealth that they did not possess. In order to further investigate this notion the archaeological data from the 2006, 2007, and 2008 excavations was compared to four contemporaneous sites in Ste. Genevieve: the Delassus-Kern site, the Delassus de Luzieres-Hecker site, the Benjamin Shaw House, and the Felix Vallé State Historic Site. Additionally, historical records concerning the Ziegler family finances were examined to gain insight into the family's financial history and produced surprising results.

Cox, Richard [121] see Dussubieux, Laure

Crabtree, Pam (New York University)

[243] *The Role of Zooarchaeology in Modern Medieval Archaeology*
Modern medieval archaeology developed in Europe in the aftermath of World War II at a time when environmental data were playing an increasingly important role in archaeological research.

Zooarchaeological techniques, many of which were initially pioneered to study animal domestication, have played a major role in the development of contemporary medieval archaeology. Using data from NW Europe, this presentation will examine the role that faunal analysis has played in the study of the transition from the Roman to the early medieval world and in the analysis of the rebirth of towns and trade in 7th-10th-century medieval northwest Europe.

[64] see Campana, Douglas V.

Crabtree, Stefani (Washington State University), Ben Ford (Washington State University) and Tim Kohler (Washington State University)

[19] *Modeling or Simulation? Assessing Settlement Patterns—Real and Modeled—in the VEP World*

Calculating spatial goodness-of-fit measures between VEP simulations and the archaeological record assesses the general fidelity of the simulation to the archaeological record, and aids in understanding sub-regional settlement differences and changes in settlement patterns over time. We explore various methods of assessing spatial goodness-of-fit using over 4,000 archaeological sites in the VEP study area, determining the most useful approaches for settlement distribution data. This yields suggestions for improving methods of assessing goodness-of-fit; insights into the modeling process; and, most importantly, expectations for how these societies actually worked.

Craig, Douglas (Northland Research) and Johna Hutira (Northland Research)

[86] *Applying Federal Damage Standards to Non-Federal Land: A Case Study from Southern Arizona*

A federal damage assessment was recently conducted on non-federal land in a highly publicized case in southern Arizona. Although the case was eventually settled out of court, a number of general issues were raised that bear careful consideration in the future. This paper presents some of the good points and the not-so-good points of the damage assessment efforts.

Craig, Douglas [33] see Hopkins, Maren.

Craig, Jessica (University of Kansas)

[112] *Changing Perceptions of the Built Landscape: Evidence for the Ritualization of Reused Structures and Monuments at the Ancient Maya Site of San Bartolo, Guatemala*

This work illustrates how the ancient Maya of San Bartolo constructed and reconstructed their cultural landscape over the course of the sites' decidedly turbulent occupational history. The varying ceremonial treatment of buildings and monuments across the site expresses the community's shifting notions about the past, the present, and the future. More specifically, the residents of San Bartolo utilized both veneration and termination rites as a means for rectifying these changing perspectives. Furthermore, paleoethnobotanical evidence from excavations across San Bartolo indicates that they employed a kind of "ritual tool kit" in the execution of otherwise distinct religious rites.

Crass, Barbara [27] see Potter, Ben A.

Crawford, Gary (University of Toronto) [151] Discussant

Creamer, Winifred (Northern Illinois University) [114] see Haas, Jonathan; [138] see Rutherford, Allen; [218] First Organizer; [218] First Chair

Creasman, Steven [150] see Bradbury, Andrew; [172] First Organizer; [172] First Chair

Creel, Darrell (University of Texas at Austin) and Roger Anyon (Pima County, Arizona)

[128] *Mimbres Kivas Great and Small: Ritual in Construction and Retirement*

More recent investigations of Mimbres kivas have revealed considerable regularity in construction and retirement. We explore the dedicatory deposits of kivas and their intentional retirement (possibly with termination deposits), usually by burning, followed by toppling the walls. The dedicatory objects are relatively consistent in Mimbres great kivas, especially during the Three Circle phase, AD 800-1000, with most objects such as shell bracelets and quartz crystals being broken prior to placement in floor, wall, or roof adobe. Termination deposits other than pottery vessels and objects left on floors are more difficult to identify but may include pottery vessels and dismembered dogs.

[128] Second Chair [128] Second Organizer

Creer, Sarah [24] see Cannon, Mike

Cressler, Alan [22] see Sherwood, Sarah C.; [62] see Blankenship, Sarah A.

Cresswell, Lisa (Bureau of Land Management)

[223] *Stone Boys and Scotsmen: Historical Land Use Practices on the Craters of the Moon National Monument and Preserve*

This paper presents the results of oral history investigations of land use practices associated with historic sheep herding activities on the Craters of the Moon National Monument and Reserve in southern Idaho. Interviews with key informants have generated a wealth of information on regional history involving individuals and families that made their living in the sheep business. These efforts have provided the BLM with a detailed account of significant localities within the steppe and lava flows included in the Preserve and how specific portions of the area were utilized over the past 130 years. The interviews also document the challenges associated with challenging

weather conditions and how land use within the region has evolved through the years. The results of this study stress the urgent need for additional interviews, before critical information is lost forever.

Crews, Christopher (Texas A&M University)

[161] *Obsidian Procurement in the Piedra Lumbre Valley: 130 Obsidian bifaces from GR-2*

GR-2, Ghost Ranch, New Mexico, has revealed at least 3 meters of deposition. 130 obsidian bifaces, including complete and fragmented points, have undergone X-Ray Fluorescence. The results show a reliance on Jemez and Polvadura sources throughout the occupation of the rockshelter. Outliers further our understanding of the mobility and trade practices of the inhabitants of the Piedra Lumbre Valley over the last 4000 years.

Crider, Andrea (Environment & Archaeology, LLC)

[55] *The Use of Residue Analysis in Determining Resource Procurement Strategies: A View from Appalachia*

Recent excavations at a mountaintop site (46Bo419) in Boone County, West Virginia revealed components dating from the Early Archaic to Late Woodland cultural periods. Various forms of pedoturbation, logging, and looting have disturbed stratigraphy across much of the site. Residue analysis performed on lithic tools, pottery sherds, and pitted stones provided key data concerning resource procurement at the site, including data that did not support commonly held theories of nut mast utilization in Appalachian upland settings. These results could have interesting implications to broader mobility and resource procurement patterns of the understudied interior uplands of southwest West Virginia.

Crider, Destiny (Arizona State University)

[161] *Pottery Paints and Technological Traditions: PIXE Characterization of Central Mexican Epiclassic and Early Postclassic Pottery*

Surface paints of red and cream painted Epiclassic (ca. A.D. 650-850) and Early Postclassic (ca. A.D. 850-1150) pottery from the Basin of Mexico are examined using particle-induced X-ray emission (PIXE), a non-destructive method of identifying chemical composition of archaeological materials. The samples are representative of diachronic and regional variants from Coyotlatelco, Mazapan/Tollan, and Early Postclassic Chalco-Cholula complexes. Chemical signatures are used to examine spatially and temporally discernable micro-variation among of paint and slip recipes among diagnostic pottery types. Spatial patterns in pigment recipes may reflect the degree of shared technological traditions evident across the region within each complex.

Crist, Walter (Arizona State University)

[183] *Beyond the Rules: An Archaeology of Board Games in the Eastern Mediterranean*

Despite being an artifact class that is quickly becoming ubiquitous at Bronze Age sites in the Eastern Mediterranean, game boards have received remarkably little treatment in the archaeological literature. This poster examines the spread of the Egyptian games senet and mehen, which spread throughout the Levant and Cyprus during the Early Bronze Age. Through comparison of the morphology and social contexts of these games in Egypt, Cyprus, and southern Canaan, conclusions can be made about the nature of interaction between the cultures. Game boards provide a unique avenue for studying trade relations, since they show the flow of ideas without an explicit commercial component.

Crompton, Amanda (Memorial University of Newfoundland)

[219] *The Finest Beach: The Changing Landscape at a French Fisheries Colony in Plaisance, Newfoundland, Canada (1662-1713)*

In 1662, a French colony was officially established in Plaisance, Newfoundland, Canada, to encourage and protect the vitality of France's overseas cod-fishing industry. The development of the French settlement at Plaisance will be reconstructed with archaeological and historical evidence. The colony was shaped both by its physical topography and by the competing demands of the

people who lived and worked there. Co-operation and conflict between Plaisance's permanent residents, seasonal fishing crews, military detachments, and administrative personnel shaped the colony's developmental trajectory. As a result, Plaisance was an atypical settlement that stands in marked contrast to other fishing settlements in Newfoundland.

Cross, Sarah [121] see Vaughn, Kevin J.

Crossland, Nicole (University of Montana)

[39] *The Evolution of Domestic Economies at the Bridge River site: A Lithic Perspective*

The rise of social inequality has been a topic of interest for Fraser Plateau archaeologists for some time and can also be demonstrated at the Bridge River site. The extensive dating at the Bridge River site enables researchers to examine the village intensively through several occupation periods. This research aims to understand the ways in which domestic economies have evolved in relation to the rise of social inequality. More specifically, the paper examines change in lithic tool production and use systems associated with domestic activity areas in large and small houses spanning the transition to inter-household ranking within the village.

Crothers, George M. [51] see Wright, Patti J

Crowley, Suanna Selby (Geoarch. Research Assoc./Mass. Archaeological Soc.), Curtiss Hoffman (Bridgewater State College/Massachusetts Archaeological Society), Eugene C. Winter, Jr. (Massachusetts Archaeological Society), Frederica Dimmick (NPS Cape Code National Seashore/Massachusetts Archaeological Society) and Mary Concannon (Massachusetts Archaeological Society)

[38] *A Community of Avocationals and Professionals: Profiles in Outreach, Education, and Collaboration Among Archaeologists in Massachusetts*

Since 1939, the Massachusetts Archaeological Society has been a diligent advocate for Native American archaeological research in New England. Based at the Robbins Museum of Archaeology in Middleborough, MA, generations of Society members have organized and participated in research projects, family-friendly educational events, annual meetings, and published in traditional and digital formats. We are an active group of professionals, teachers, collectors, and enthusiasts who share common goals of education and preservation. This poster highlights accomplishments of our avocational and professional community, as well as partnerships with local Chapters, institutional grantors, Native tribal groups, and an expanding regional audience.

Crowley, Suanna Selby [252] see Aiuvalasit, Michael J.

Crown, Patricia (University of New Mexico)

[131] *Acquisition, Use and Discard of Red and Brown Wares at Pueblo Bonito, Chaco Canyon*

Red and brown wares represent only 5% of all ceramics from the Pueblo Bonito mounds, yet the specific types found indicate much about exchange relationships with groups in other parts of the Southwest. Examination of forms and use alteration of this assemblage indicates that these intrusive ceramics were valued and used for specific purposes. Comparisons are made of red and brown ware percentages relative to Pueblo Alto and Chacoan small sites.

[131] First Chair

Crumbley, Norma [228] see Cooper, Judith R.

Cruz Alvarado, Wilberth [5] see Rosenswig, Robert M.

Cruz Berrocal, Maria (University of California - Berkeley)

[143] *Some Comments on Spanish Feminism and Archaeology*

Some potential aspects for debate are: 1) the practical problems of using gendered languages, such as Spanish. A commitment to not using the masculine gender as the generic one has been particularly

important in Spanish archaeology, although there are some limitations; 2) while feminism and marxism in some American and Spanish archaeological traditions originally shared common elements -e.g. standpoint epistemology or focus on human labor as a fundamental in the understanding of society-, feminism has long had ambivalences about marxist views; 3) archaeology can make a particular contribution to the issue of object-subject distance. Is 'distance' a shortcoming?

[143] *First Organizer*, [143] *First Chair*

Cuartero Monteaugudo, Felipe [58] *see Baena Preysler, Javier*

Cuevas, Kimberly (Bureau of Land Management)

[223] *Piedras Blancas Light Station: Historic Property Restoration and Preservation*

Located on the coast of California, Piedras Blancas Light Station is one of only two such properties managed by the Bureau of Land Management in the nation. The light station became operational in 1875, and through the years experienced periods of construction, modification, and destruction. Today, the BLM has embarked on an ambitious restoration effort at PBLS. Through consultation with the California Office of Historic Preservation, the BLM has resolved adverse effects to the historic and prehistoric sites on the property. This paper will demonstrate how restoration at PBLS has embodied the conservation and preservation goals of the NLCS system.

Cui, Jianfeng [175] *see Hung, Ling-yu*

Cui, Yaping [214] *see Dong, Yu*

Cullen Cobb, Kim

[26] *Riveting Technology!*

This poster covers research and documentation of a group of Mississippian sheet copper ornaments from the collection of the Smithsonian Institution's National Museum of the American Indian. The application of rivets to finely crafted copper sheet ornaments is widespread during the Mississippian. The ornaments in this study are hammered into sheets and subsequently embellished with symbolic motifs. Rivets are used to join layers of copper during sheet production sequences or repair fractures or losses in the ornament. Careful examination of rivet application reveals fabrication sequences, starting with the original production of copper sheet, through extensive and ongoing repairs.

Culleton, Brendan (University of Oregon), Bruce Winterhalder (University of California, Davis), Cedric Puleston (University of California, Davis) and Douglas Kennett (University of Oregon)

[197] *The Ideal Free/Despotic Distributions, Social Network Theory and Intensification in the Ancient Maya Dual Economy*

The development of "dual economies", where intensive production serves goals of both domestic subsistence and surplus production for the prestige economy, is a significant but theoretically under-examined aspect of the emergence, integration and transformation of ancient Maya socioeconomic systems. We invoke the Ideal Free and Despotic Distribution models from Human Behavioral Ecology (HBE) and elements of Social Network Theory to examine the tempo and mode of Maya socioeconomic intensification. The theoretical aim is to outline a framework that maintains HBE's methodological individualism and ecological foundation while accounting for multiple currencies (e.g., calories, status, reproductive success) operating at diverse scales of socioeconomic organization (e.g., individual, household, polity, region).

Culleton, Brendan [250] *see Kennett, Douglas J.*

Culley, Elisabeth

[22] *Models of Pleistocene Image Production and Its Social Consequences: A Defense of Semiotics in Rock Art Research*
Archaeologists have long flirted with semiotics as a promising heuristic for interpreting prehistoric art and largely with disappointing results. Many semiotic tenets have proven theoretically unsound,

while others are difficult to operationalize in archaeological contexts. This paper returns to semiotics as a way of delineating the cognitive entailments of image-making practices and their social consequences and as a source of rigorous and testable hypotheses. Semiotic models for the initial emergence of non-utilitarian object production and use (artistic expression) and the cognitive relationships among these and other Pleistocene behaviors are presented. Broader applications of a semiotic research program are also discussed.

Culotta, Elizabeth (Science Magazine) [141] *Discussant*

Cummings, Linda Scott (PaleoResearch Institute, Inc.) and Chad Yost (PaleoResearch Institute)

[172] *Agriculture, Nuts, Wild Plants, and Fish: A Record of Subsistence along the Avenue of the Saints Corridor, NE Missouri*
Zea mays pollen, recovered from stratigraphic contexts, as well as organic residue matches with maize, beans, and squash point to agriculture practices by at least Woodland occupants of these sites. A glimpse at economic activity in one structure, represented by pollen analysis, indicates processing native resources such as nettle, marshelder, and basswood. Phytoliths recovered from stratigraphic samples hint at the availability of wild rice or a close relative. Organic residues examined from ceramics broaden our understanding of diet with evidence of meat, cultigens, and wild plants. Residue on a scraper, identified as fish scales, indicates scaling perch and suckers.

Cummings, Linda Scott [10] *Discussant* [10] *First Chair* [123] *see Cecil, Leslie G.*; [172] *see Varney, R. A.*; [4] *see Puseman, Kathryn*; [55] *see Logan, Melissa K.*; [87] *see Boggess, Douglas H M*

Cunningham, Kevin [180] *see Clarke, David S.*

Curet, L. Antonio (The Field Museum)

[116] *Archaeological Correlates in the Study of Social Stratification: The Cases of Central Place Theory and Ceremonial Centers*

Since early on American Archaeology has used a series of correlates to identify and understand social stratification in ancient societies. In this paper, I review two of these correlates: (1) centralized settlement patterns and the use of Central Place Theory and (2) the presence of ceremonial centers. The main argument of the paper is that these two correlates are being used very mechanically and without any discrimination to identify the presence of social stratification, even when other evidence against it exists. After discussing these correlates conceptually, I present ethnographic cases that contradict them. The paper ends with a case study from the Caribbean, the ceremonial center of Tibes.

Curewitz, Diane (Washington State Univ.) and R.G. Matson (University of British Columbia)

[84] *The 13th Century Depopulation of Cedar Mesa: The View from Ceramic Design*

Previous Cedar Mesa tree-ring dates and ceramic seriations did not explicate the relationship between terminal mesa-top and canyon occupations and the process of depopulation. Using seven design elements (including "rim ticks") developed by M. Hegmon to date assemblages from southwestern Colorado, these ambiguities are resolved; the mesa was essentially abandoned as a unit circa 1250, although Moon House appears to be a later exception. Simultaneous seriation of Central Mesa Verde and Cedar Mesa Pueblo III sites shows close parallels in timing of design element changes, although element abundances vary between the two areas.

Curran, Sabrina [205] *see Belmaker, Miriam*

Curta, Florin (University of Florida)

[243] *Ethnicity in Medieval Archaeology*

A resurgence of interest in ethnicity in medieval archaeology has recently re-opened the debate surrounding the ability of archaeologists to "get into the minds" of medieval people. The debate was ignited by the idea that archaeologists have no access to the

meaning of cultural traditions. The theoretical malaise at the root of this scepticism verging on nihilism shows that medieval archaeology still has to come to terms with such key concepts as symbols, style, and power. The paper offers a brief survey of the most recent developments in the field.

Curtis, Jason [153] *see Brenner, Mark*

Curtis, Jenneth (Parks Canada), Adrian Burke (Université de Montréal), Jamie Brake (Torngâsok Cultural Centre) and Pierre Desrosiers (Avataq Cultural Institute)
[147] *Documenting the Ramah Chert Quarries in Torngat Mountains National Park of Canada*

Ramah chert is a distinctive material for chipped stone technology that is well-known for its wide distribution across archaeological sites in eastern North America. Recent fieldwork is increasing our knowledge of several aspects of the quarry sites. This paper provides a review and update on the quarries as a contribution to the international inventory. We explore the geology of the chert outcrops and evidence of cultural activity. This information is further placed within the context of the period of use, products created, and geographical range over which they were distributed.

Cushman, David (SRI Foundation) [3] *First Chair [3]* *First Moderator; [3]* *first organizer*

Cuthrell, Rob (UC Berkeley)

[154] *Foodways, Practices, Colonial Experiences, and Elusive Identities: A Comparative Approach*

Many archaeologists have acknowledged the foodways/practice/identity nexus as an important space for political and social negotiation in colonial settings. However, because identities are multifaceted, multiscalar, and dynamic, exploring them using archaeological remains involves much uncertainty and ambivalence. This is particularly evident in colonial settings, where identities and identity-signaling practices were often central discursive problems. Using examples from colonial and post-colonial contexts from the east and west coasts of North America, this essay will explore how these issues affect archaeological interpretation.

Cutright, Robyn (Centre College)

[137] *Domestic Ritual in a Provincial Chimú Community, Jequetepeque Valley, Peru*

This poster explores small-scale domestic ritual in the LIP village of Pedregal, in the Jequetepeque Valley on the north coast of Peru. A wide range of rituals at multiple scales, from small offerings of burnt maize within houses to community-wide feasts, were integral to community life at Pedregal. The use of exotic materials in intimate household-based ritual acts drew Pedregal residents into contact with wider spheres of interaction, while feasting in the public sector of the site served to reinforce integrative community ties.

Cutright-Smith, Elisabeth (University of Arizona), Kacy Hollenback and Wendi Field Murray

[7] *Twenty Years Later: A Quantitative Assessment of NAGPRA's Impacts on American Archaeology*

The passage of NAGPRA in 1990 forever changed the discipline of archaeology. This legislation mandated repatriation of human remains and certain objects found on federal or tribal lands to culturally affiliated descendant communities, as well as those items in the possession of agencies and museums receiving federal funding. Yet twenty years later, we still do not have a clear picture of how this legislation has collectively changed the discipline in terms of method, theory, or practice. This paper seeks to understand the magnitude and direction of these changes through a quantitative content analysis of major anthropological and archaeological journals.

Cyphers, Ann (IIA-UNAM)

[156] *Subsistence Strategies at San Lorenzo*

Food production strategies in the lower Coatzacoalcas River drainage are risky due to unexpected fluctuations in environmental conditions.

In the early phases, the San Lorenzo Olmec diversified in a wide spectrum of resources in a mixed economy that incorporates fishing, hunting, and collecting with arboriculture and upland root crop cultivation. As subsistence demands increased through the Early Preclassic period, wetland resource withdrawal and production intensified, and maize agriculture in the wetlands became increasingly attractive despite its higher degree of risk from unpredictable flooding.

Cyr, Howard (The Department of Archaeology)

[111] *Geoarchaeological Research along the Oldman River, Southern Alberta*

Few early-middle Holocene age archaeological sites have been identified across the Northern Plains, leading archaeologists to speculate as to the effects postglacial environmental change had on the habitability of the area and on differential site preservation. Little is known about the development of Northern Plains river systems following the draining of the glacial lakes or about the impacts that river evolution may have had on both site selection by prehistoric groups and site preservation. This paper investigates the evolution of the Oldman River drainage in southern Alberta and addresses the possible impacts of alluvial activity on archaeological site preservation.

Czaplicki, Jon (Bureau of Reclamation)

[50] *The Fabulous '50s*

The 1950s is the decade that brought, among other things: the Korean War, polio vaccine, Ike for president, the original Disneyland, the Suez Canal crisis, the Barbie doll, the microchip, the death of the last Union and Confederate Civil War veterans, Sputnik, the space race, NASA, the US's Explorer satellite, rock 'n' roll, Elvis, the hula hoop, the 4 cent postage stamp [first penny increase in 26 years ('58)], the color TV ('53), B-52 bombers on full-time flying alert, and 509 TV stations by the end of decade. Well, what the heck was happening in archaeology?

[50] *First Chair [141]* *Second Organizer*

da Gloria, Pedro [47] *see Strauss, André*

Daehnke, Jon (Stanford University)

[225] *Places of Protocol: Lived Heritage, Memory and Materiality on the Columbia River*

There is increased demand by Indigenous populations for control of heritage, especially in accordance with their own practices and protocols. While non-indigenous views on heritage often remain attached to the primacy of archaeological objects, it is often these forms of intangible heritage – protocol and practice – that are most relevant to Indigenous communities. This paper explores the Chinook Nation's efforts at cultural reclamation, especially their emphasis on "lived heritage". This is demonstrated most clearly by the resurgence of canoe culture, the rebirth of communal longhouses, and most importantly the teaching of the protocols associated with being Chinook.

Daggett, Adrienne (Michigan State University)

[53] *The Chronology of Exchange: An Example from Early Iron Age Southern Africa*

Research on exchange between forager and agropastoralist communities in the southern African Iron Age focuses on how exchange affects social organization and subsistence for both communities. Spatial and cultural associations between forager and agropastoralist sites are well-documented, but sufficiently tight chronology to demonstrate temporal correlation is often missing. The material record represents relatively short-term events, from which long-term processes are extrapolated. The disparity between the activities represented and their interpretation makes addressing cultural and economic exchange problematic. This paper will consider chronology, inter-site correlation, and interpretation for a better understanding of the dynamics of interaction in Iron Age southern Africa.

[124] see Milligan, Colleen

Dahdul, Mariam (University of California, Santa Barbara)

[56] *Possible Ecological Factors Affecting Variability within the Cahuilla Mortuary System*

Much of the variability observed in mortuary remains has been attributed to social complexity or status differentiation. What some studies have not taken into account are ecological factors that may have influenced mortuary practices, specifically among prehistoric hunter-gatherer groups. Within the Cahuilla mortuary system, there may have been a relationship between variability and ecological conditions. This paper will explore whether or not ecological conditions at the time of a Cahuilla individual's death was a factor in determining how much energy and material wealth the social group was willing or able to expend on the funerary process.

Dahlin, Bruce (Ancient Maya Environmental Studies Center)

[5] *A Tale of Three Cities: Revisiting the AD 536 Event in the Maya Lowlands*

Climate scientists and historians have long known that starting in AD 536 a dust veil blanketed the earth, causing extremely debilitating climate changes, crop failures and famines throughout much of the northern hemisphere. Empirical data of various sorts now show that its effects drastically altered climates for a short, but significant, time in the Maya lowlands, and there are reasons to believe that Maya societies were forced to adapt to these changes in ways that fundamentally changed the course of Maya prehistory. This paper will review the data from Tikal, Caracol and Calakmul, the largest reigning polities at that time.

[178] see Magnoni, Aline; [20] see Terry, Richard E.

Dahlstedt, Allisen (Arizona State University)

[137] *Beer, Meat and Potatoes: Dental Evidence for the Movement of Chicha, Llamas and Tubers between the Moquegua Valley of Peru and Highland Tiwanaku*

The movement of food goods between the Omo and Chen Chen populations of Peru's Middle Horizon Moquegua Valley has not been adequately investigated. By analyzing and comparing the rates of the complete Rio Muerto M70B Omo skeletal assemblage for the presence and severity of caries, calculus, abscesses, enamel hypoplasia, and attrition with the rates of local and foreign populations of known subsistence strategies, results are suggestive of an agro-pastoralist economy. With the integration of botanical evidence, as well as previous dietary studies conducted on Chen Chen and Tiwanaku populations, an inter-dependent relationship between all three communities is suggested.

Dalan, Rinita [251] see Hargrave, Michael L.; [251] see Clay, Rudolf B; [251] see Greenlee, Diana M.

D'Alpoim Guedes, Jade (Harvard University) and Ming Jiang (Chengdu City Archaeology Institute)

[151] *Going back to Baodun: Challenges for Archaeobotanical sampling in the Chengdu Plain*

Sites of the Baodun culture (2700 BC) form a lynchpin in our understanding of the spread of agriculture to the Sichuan Basin, China; however none of these sites were sampled for archaeobotanical remains. This paper presents the results of feasibility study carried out to assess the potential for re-sampling previously excavated sites in the alluvial environment of the Chengdu Plain. A combination of geophysical prospection and small scale excavations were used to extract data. The efficacy, representativeness and efficiency of these sampling methods are examined.

D'Alpoim Guedes, Jade [151] First Organizer; [151] Second Chair [162] see Meadow, Richard H.

Dalzell, William (College of Wooster)

[184] *Lead Tesserae and the Roman Economy or How I Stopped Worrying and Learned to Love Lead Tokens*

The purpose of this paper is to reevaluate the Roman tesserae, primarily lead or bronze tokens of approximately the first and second centuries AD, in light of modern theories and apply knowledge of them to the study of the Roman economy. To this end, the study analyzes a sample of 2400 pieces from the British Museum and other collections. The majority of tesserae considered are from the city of Rome, along with specimens from the provinces. The remaining data is taken from in the few published catalogs, scholarly articles, and site reports.

Damiata, Brian (Cotsen Institute of Archaeology at UCLA)

[246] *Shallow Geophysics on Viking Age sites in Skagafjörður*

Critical to the success of the Skagafjörður Archaeological Settlement Survey is a robust subsurface exploration program. We use electromagnetic and electrical methods to locate sites and to identify concentrations of architecture. Once identified and confirmed, we use Ground Penetrating Radar (GPR) to define specific structures. Developing GPR as an excavation tool in Iceland has its challenges. The most important methodological refinements have been the mechanical removal of the surface grass; close transects spacing; and appropriate processing of the data using GPR-Slice software. These refinements make GPR an indispensable tool for the excavation of Viking Age turf farmsteads in Iceland.

Damp, Jonathan

[213] *Daily Practice and Early Southwest Domestic Space*

This study reviews attempts to analyze domestic space during the Late Archaic and Basketmaker periods in the Southwest. I focus on the use of space within pitstructures and ephemeral structures on the Colorado Plateau from the Zuni/Cibola area, Black Mesa, and Grand Canyon. Various methods of analysis are provided to show how social organization through gender or economy (farming versus foraging) may have contributed to the use of domestic space. A GIS-based approach best offers insight into daily practice in the early Southwest.

Damp, Nicholas (University of New Mexico)

[37] *Rethinking Tijeras Pueblo*

Fourteenth century aggregation of Ancestral Pueblo communities along the Rio Grande has long been a hotly debated topic among archaeologists. New research being conducted on Tijeras Pueblo (Cordell and Damp 2009; Cordell et al. 2009) may provide further clues into the aggregation process. By employing an approach that combines 461 tree-ring dates with a geographic information system-based (GIS) map we have re-defined previous interpretations of the site. As a result, new information on population growth at Tijeras Pueblo, important to exploring aggregation as a process, is slowly unfolding.

Dancey, William (Ohio State University) [244] Discussant

D'Andrea, Catharine [53] see Brandt, Steven A.

Daniels, James (ASM Affiliates, Inc.) and Mark Becker (ASM Affiliates, Inc.)

[161] *Geophysical Investigation and Archaeological Excavation of a Late Prehistoric Site*

Large scale excavations are often employed to understand the function and cultural activities associated with late prehistoric archaeological sites. However, these endeavors can be expensive and destructive. This study employs an efficient and integrative approach to assess cultural activities associated with subsurface artifacts. The integration of geophysical data, controlled surface collection data, geomorphology and topographic data using global information systems (GIS) was used to conduct a dynamic spatial and associative analysis of the archaeological record at a late Prehistoric site on near the Coast of Southern California in order to address site structure and function.

Daniels, Stephanie [217] see Kozuch, Laura

Danien, Elin (Univ. Pennsylvania Museum)

[229] *Self-Sacrifice, Tombs, and Trade: The Construction of a Ceramic Narrative*

From the time of its discovery in 1961 at the site of Altar de Sacrificios, the 'Altar Vase' has been the focus of questions. Five of the six individuals depicted and their home cities have been identified. But who is the sixth figure? And why is a young woman engaged in auto-sacrifice? This paper examines the vase together with relevant data accumulated over the past half century, to answer those questions as well as how a nice Chama Polychrome from the country made it down river to a tomb in the big city of Altar de Sacrificios, and why it's important.

Danis, Ann (Barnard College)

[235] *Pictured Tipi Site: Biographical Tradition Rock-art in Northern New Mexico*

This poster reports on a previously undocumented tradition of Western Plains rock art in northern New Mexico. Two seasons of rock art survey in the Rio Grande Gorge have brought to light dozens of detailed images of battles, tipis, horses, parfleches, and other material culture scratched onto basalt boulders. Following the "Biographical Tradition" known in the Western Plains, the images recount specific events, represent tallies, and express individual identities and tribal affiliations through stylistic detail. As such, they raise important questions regarding changing attitudes towards identity, landscape, and the construction of personal archives during the turbulent early colonial period.

Darley, Zaida (University of South Florida) and E. Christian Wells (University of South Florida)

[258] *Archaeopedological and Geomorphological Perspectives on Prehispanic Water Management at Palmarejo, Honduras*

The research discussed in this paper uses archaeopedological and geomorphological data to reconstruct aspects of water management at the prehispanic settlement of Palmarejo in northwestern Honduras. Mid-level settlements (not quite urban, not quite rural) have often been neglected in water management studies in Mesoamerica that attempt to investigate a representative sample of hydrological features and configurations by focusing on the extreme ends of the urban/rural continuum. Recent archaeological research at Palmarejo, a mid-level settlement, has revealed an unexpected degree of water management complexity involving the use of limestone sinks.

Darling, J Andrew (Gila River Indian Community) and Robert Valencia (Pascua Yaqui Tribe)

[225] *Return to Bacatete: Yaqui Resistance, Reconciliation, and International Repatriation*

In 1902, the physical anthropologist, Ales Hrdlicka, armed with a letter from Porfirio Díaz and under the aegis of the Hyde Expedition for the American Museum of Anthropology, removed the physical remains and possessions of Yaqui genocide victims from the site of Cerro Mazatán, Sonora. Today, negotiation for their repatriation resides in multiple overlapping political arenas. Some scholars may accuse Hrdlicka of anthropological racism, but such statements are political obfuscations, which downplay tragic historical realities and Yaqui memory. Yaqui Tribal action, instead, is the only focal point of social engagement that can lead to their reconciliation with an unbursed past.

[158] *Discussant* [193] *Second Organizer*

Daron, Steve (Lake Mead National Recreation Area)

[253] *Ranching on the Shivwits Plateau*

Ranching has been an integral part of life on the Arizona Strip for over 100 years. J. D. "Slim" Waring arrived on the Strip in the early 1900s. Over the next 50 years he built a large cattle ranching operation that covered over 100,000 acres. The ranch included several cabins, corrals, dirt reservoirs or "tanks", and roads. This paper examines the physical remain associated with the Waring Ranch landscape on the southern end of the Shivwits Plateau on the west site of the Arizona Strip.

Darras, Véronique

[221] *Ritual and Trivial Uses of Obsidian: The Symbolic Dimensions of Blades among the Tarascans*

By the 13th century, prismatic blades become a common artifact among the Tarascans from Zacapu, Michoacan. The study of their spatial distribution at the site of Las Milpillas shows an undifferentiated distribution in both domestic and ritual contexts. Through these archaeological examples and ethnohistorical data, the symbolic dimension of the blade is considered. Two hypotheses are conceived: 1) the "banalization" of the prismatic blade is compatible with uses other than trivial (especially for bloodletting and ritual cutting of hair); 2) the consumption of green blades from a regional source is probably linked to the symbolism associated with that color.

Dasovich, Steve (SCI Engineering, Inc.)

[187] *230 Years of Living: Front Yard and Back Yard Archaeology in St. Charles, Missouri*

Old Main Street in St. Charles, Missouri has stayed residential for over 200 years. This has resulted in historic and prehistoric deposits remaining relatively undisturbed in people's yards. Late Prehistoric, French Colonial, and Early American Period materials have been found in several locations along Old Main Street. A volunteer archaeological program has provided much of the excavation labor.

Davenport, Bryce (Brandeis University)

[169] *Substance and Style: Evaluating Mixteca-Puebla Influence in the Aztatlán Complex*

The spread of the Mixteca-Puebla ceramic style linked Postclassic Mesoamerica and beyond, from the American Southwest to Pacific Nicaragua, into what many scholars consider a nascent international system of trade and political influence. On the West Mexican coast, this spread was accompanied by intense political, economic, and social change. In this paper I argue that the Aztatlán phenomenon of the Pacific littoral can best be understood as a series of local developments taking advantage of the Postclassic International style in order to generate idiosyncratic claims to legitimacy, rather than as an overriding 'wave of influence' from Central Mexico.

Davenport, James (Tulane University) and Kit Nelson (Tulane University)

[137] *Cuchimilcos and their Role in Interment Ritual for the Chancay*
Cuchimilcos have long been recognized as a marker of the Chancay Culture of the north central coast of Peru. Although they are part of the burial ritual, little has been ascertained about the role or significance of cuchimilcos. Specific attributes are examined in light of recent finds including excavations of a tomb near the town of Rontoy in the Huaura Valley and an x-ray fluorescence study of red paint found on both excavated and museum samples of human remains and cuchimilcos. From these data, aspects of interment ritual for the Chancay culture are examined.

Davies, Diane (Tulane University)

[175] *The Value of Chemical Analysis in Understanding the Function and thus Activities carried out in Ancient Structures: Results from the Maya site of San Bartolo, Petén, Guatemala*

Artifacts collected in excavations are often used by archaeologists to determine a structure's function. The results can be misleading as artifacts are most often found in secondary depositional contexts. Fortunately chemical signatures are mostly left in primary contexts even when all evidence of past activities has disappeared. Over 300 floor samples from an architectural group in the ancient Maya site of San Bartolo were analyzed for phosphate and potassium. The results, combined with architectural morphology, associated features, and artifacts, proved successful in determining activities carried out in the individual rooms and thus the function of the structures as a whole.

Davila Cabrera, Patricio (INAH)

[195] *Algunas Características Arquitectónicas de la Region Huasteca en los Siglos XV y XVI*

Cuando los europeos llegaron al continente americano, Mesoamérica se encontraba en un proceso de unificación en el que participaron

varias áreas culturales, sin embargo, cada una de ellas continuó conservando los atributos básicos de sus tradiciones originales. Las investigaciones arqueológicas más recientes, en la región Huasteca, han llevado a refutar varios de los axiomas que fueron establecidos para especificar las características de su arquitectura. En esta sesión expondré algunas de las particularidades que hemos encontrado, tanto en sus elementos constructivos, como en sus patrones, los cuales distinguen a los constructores huastecos de los siglos XV y XVI.

[195] *Second Organizer*

Davis, Allison (University of Michigan)

[225] *Ancestors, Living Landscape, and Community Identity in an Early Village in Cusco, Peru (400 – 100 BC)*

The Andes Mountains are a rugged landscape comprised of river valleys, icy lakes, high grassy plains, and imposing glacial peaks. Historic and ethnographic accounts describe farming and herding communities who understood their shared identity and territorial rights as (1) established by ancestors, and (2) conceptualized through relationships with living landscape features. My excavations at Yuthu, a Formative period village in Cusco, Peru (400-100 BC) uncovered a sunken court, ritual canals, and 21 human burials that are material remnants of ceremonial practices shaped by similar ideology early villagers used to establish, renegotiate, and remember their place and privilege in the world.

Davis, Hester (Arkansas Archeological Survey), and Glen Akridge (Arkansas Archeological Society)

[38] *85 Years of Contributions by Amateur Archeologists in Arkansas* Contributions by amateur archeologists to preserving Arkansas's past began in 1925, when Sam Dellinger, Professor of Zoology and head of the University of Arkansas Museum, found that museums in the east were accumulating large collections of Arkansas's prehistoric artifacts. He began an effort to save archeological sites and artifacts for Arkansans. With the creation of the Arkansas Archeological Society in 1960 and the Arkansas Archeological Survey in 1967, these efforts intensified. Amateur contributions continue to this day largely because of the successful Society/Survey Training Program now in its 45th year.

Davis, Judy (HDR | e²M) and Ben Fischer (HDR | e²M)

[165] *Settlement Patterns of the Mormons and Chinese in the American West*

Mormon settlers and Chinese immigrants played key roles in the settling of the western frontier. Although both groups pursued differing goals, their settlements reflected their traditions and culture. Archaeological evidence illustrates how these two distinct groups interacted with the environment, with other settlers, and why they chose to live where they did. This poster focuses on reconstruction of the two groups' settlement patterns from their respective archaeological records.

Davis, Judy [165] First Organizer; [165] First Chair

Davis, Katharine (Harvard University)

[245] *Heterarchy and Whole Camelid Butchering among Urban Residential Populations in the Classic Tiwanaku Period, Muru Ut Pata, Bolivia*

As the Middle Horizon site of Tiwanaku (AD 800-1000) experienced an influx of population at the ceremonial center, spaces around monuments were settled for residential occupation. Though cross-culturally such urbanization often signals a disconnect from pastoral activities, such is not the case in Muru Ut Pata. Traditional models of social complexity hold that meat-provisioning leads to the emergence of hierarchical systems of distribution. Data from Muru Ut Pata, however, suggests that members of non-elite households had direct access to whole animal carcasses. This paper explores the nature of heterarchical power achieved by residential groups through close connections with camelid herds.

[245] *Second Chair [245] Second Organizer*

Davis, Loren (Oregon State University)

[62] *Stratigraphic Context and Site Formation Processes at Paisley Five Mile Caves, Oregon*

Gearchaeological investigations at Paisley Five Mile Point Caves establish a contextual perspective on its late Pleistocene to Holocene cultural occupations. Deposits within Caves 1, 2 and 5 are polygenetic in origin, comprised of aeolian, colluvial, alluvial, and biogenic deposits. Late Pleistocene-aged deposits are contained in all three caves, but are best exhibited in Cave 5. Cave 5 late Pleistocene-aged deposits are primarily comprised of aeolian dust influx and coarse clastic roof fall materials, reflected in lithostratigraphic unit 1a, and a deposit of reworked packrat midden materials combined with aeolian, colluvial, and alluvial deposits, which are designated as lithostratigraphic unit 1b.

[62] *see Stafford, Thomas W.*

Davis, Mary Anne [43] see Canaday, Timothy W.

Davis, Michael [226] see Wake, Thomas A.

Davis, Miriam (Delta State University)

[51] *Kathleen Kenyon and Women Archaeologists of the British Empire*

Women were prominent in the archaeology of the British Empire. In the early twentieth century archaeology was still primarily an amateur pursuit; paid positions were rare. Women with independent means could pursue archaeology almost as easily as men. Dame Kathleen Kenyon (1906-78) both made an important methodological contribution to the new discipline and excavated a site that changed scholarly understanding of prehistory. In the 1950s her excavations at Jericho pushed back the accepted date of town life by at least 2000 years and were instrumental in spreading the Wheeler-Kenyon method to the Middle East, where it has continued to influence archaeological field work to the present day.

Davis, Sara (Archaeological Investigations Northwest)

[108] *Stacked rock features along the Columbia River of Oregon and Washington*

Stacked rock features are typically difficult to evaluate in terms of function and age. Ethnographic and historical information indicate a wide diversity in both functions and ages for these types of archaeological features. Hundreds of stacked rock features have been recently identified in the Southern Columbia Plateau of Oregon and Washington, located in the Columbia Hills and on the broad terrace along the Columbia River. This large data set provides a unique opportunity to assess the function and age of rock features in this area. Analysis of these stacked rock features compares their geographic locations, morphology, size, and associated artifacts to provide general characterizations of stacked rock features in this region.

Davis-King, Shelly (Davis-King & Associates)

[81] *Glassowisms and Their Subsistence Support for One Person's Career Path*

This paper provides a glimpse into communications between Mike Glassow and the author during his first years at Santa Barbara, and connects these expressions to her exploration of Native American cultural geography. In 1972, Al Spaulding and he received "a pile of bread for two years work on Santa Cruz...." that led to his groovy observation that one needs "to spend time in a place so that you can understand why other people were there." This simple concept provided structure to understanding California Indian settlement, subsistence, and spiritual geography, explicated by using California's Winnemem Wintu cultural landscape as an example.

Davis-Salazar, Karla (University of South Florida), Edgar Amador (University of South Florida), Jason Miller (University of South Florida)

[162] *Undergraduate Archaeology at the University of South Florida-Tampa*

This poster presents an overview of undergraduate archaeology at

USF, a large, metropolitan research university in the Southeast US. As the first anthropology department in the country to offer a graduate degree in Applied Anthropology, USF traditionally has placed great emphasis on public archaeology. This poster considers how the applied emphasis at the graduate level has shaped the undergraduate major, including program goals, course offerings and content, student learning outcomes, and career paths.

Day, Grant (AMEC Earth & Environmental) [150] First Chair

Dayton, Chris (Cox|McLain Environmental Consulting, Inc.)

[231] *Excavations at Site 41DL203: New Data on the Late Archaic and Late Prehistoric in North-Central Texas*

The prehistoric archaeology of North-Central Texas remains marked by serious gaps in basic knowledge about subsistence regimes, chronology, settlement patterns, exchange, and paleoenvironment, even in relatively recent periods such as the Late Archaic and Late Prehistoric. The region's archaeology has lagged behind that of neighboring areas, due in part to a lack of multidisciplinary investigations of stratified sites. Recent data recovery excavations at Site 41DL203, a stratified 2,500-year series of near-channel occupations on Rowlett Creek in Dallas County, provide important new data that allow us to more confidently address some of these gaps.

De Anda Alaniz, Guillermo (Universidad Autonoma De Yucatan)

[148] *Watery Spaces of Life and Death: Ritual Practices in Cenotes of the Center of Yucatan*

The present work is based on the reports of an important number of artifacts, cave modifications and human remains found in cenotes of the Center of Yucatan State. This work analyzes the presence of these materials in specific cenotes, and makes first interpretations on the data obtained. We also examine their possible relationship with an extended cult activity in all the area of the Center of Yucatan and its possible origins.

De La Fuente, Guillermo

[23] *The Abaucán Sur Research Project: initial stages in the collaboration between archaeologists and archaeometrists (Dpto. Tinogasta, Provincia de Catamarca, Argentina).*

The Abaucán Sur research project began two years ago in the context of exploration and research of a new geographical area. This geographical area was almost entirely unexplored until the 70's with some few archaeological sites being known and investigated. Most of the archaeological evidence known from this area belongs to the Late (ca. AD 900 – AD 1200) and Inka (ca. AD 1480 – AD 1532) Periods of Northwestern Argentine region. One of the goals of the project focused in the development of an archaeometry program involving the studding of different types of artefacts, mainly ceramic, to understand certain aspects of ceramic production organization for these two periods (raw materials use, manufacture, function, and trade). The integration of the classical archaeological evidence and the archeometrical data is an ongoing work we are developing at this stage of the project. This paper is concerned with the exploration of the several ways archaeologists do this integration, paying especial attention to the links with local communities they are working in. This work involves the dissemination and diffusion of the main results obtained through research and how this information helps and lead people and archaeologist to a better understanding the past in the region under study

De Leon, Jason (University of Washington)

[194] *The Migrant Material Culture Project: Studying Modern Undocumented Migration through Ethnoarchaeology and Ethnography*

Undocumented migration into the United States has increasingly become a secretive, multi-faceted, and highly politicized cultural phenomenon. These combined factors have made studying undocumented migration a difficult task for social scientists to undertake. The Migrant Material Culture Project (MMCP) uses ethnoarchaeology along the southern U.S. Border combined with

ethnography in Northern Mexico to better understand this complex issue. Here I present data from the first field season of the MMCP and discuss the benefits and problems of combining archaeology and ethnography to study, interpret and explain a cultural phenomenon that is always clandestine and often contentious.

[156] Discussant [156] Second Organizer

De Leon, Jason [156] see Wendt, Carl J.

De Loecker, Dimitri [184] see Kindler, Lutz

Deal, Nan [56] see Johnson, John R.

Dean, Rebecca (University of Minnesota-Morris)

[16] *The Mesolithic/Neolithic Transition in Coastal Portugal*

In Portugal, Mesolithic shellfisher/gatherers persisted in marine environments after domestic economies were established in the interior. It is difficult to generalize about Mesolithic and Neolithic resource use, since faunal remains reflect the variation in terrestrial and marine species available to inhabitants of rocky shores, sandy estuary environments, and inland sites. Where regional trends are masked by variability in available resources, measures of energetic return prove easier to compare than more traditional zooarchaeological data. Assemblages from Mesolithic and Neolithic sites show a general trend toward lower energetic returns from wild resources, whether in shifting species compositions, or in diminution of shellfish.

Deats, Stewart [158] see Spurr, Kimberly

Decker, Jeremy (Valles Caldera National Preserve)

[41] *On a Foundation of Stone: Using Projectile Points in Building Culture History at the VCNP*

While adjacent regions in the Jemez Mountains have been the target of archaeological investigation for decades and have well-developed culture histories, the Valles Caldera National Preserve has been inaccessible and little is known about the chronology of human use in this landscape. Since 2000, archaeologists have collected 178 projectile points within the VCNP, mostly from surface assemblages. These points provide an opportunity to build a culture history for the caldera through evaluation of typology, raw materials, and obsidian hydration. This poster summarizes the available projectile point data, and provides new knowledge regarding chronology and land use within the Preserve.

[41] First Chair

Deckers, Katleen [157] see Riehl, Simone

Deel, Judith [187] see Meyer, Regina M.

Deely, Aislinn E. [259] see Blackwell, Bonnie A. B.

deFrance, Susan (University of Florida)

[64] *Animals and Social Distinction at the Wari site of Cerro Baul, Southern Peru*

The Andean Wari Empire used animals and animal products as a means to create social distinction. At the administrative capital of Cerro Baul in far southern Peru the distribution of animal remains in elite-occupied architecture indicates that the Wari acquired diverse animals for both food and non-food symbolic functions. The Wari relied on local pastoral production and engaged in long-distance trade including contact with coastal regions. I discuss intra-site variability in social function using the distribution of animal remains in different buildings and rooms across the site.

[245] Discussant

DeFrank, Laura, Brian Connolly (University of Pennsylvania), Fumi Arakawa (Crow Canyon Archaeological Center), Nathan Goodale (Hamilton College) and Timothy A. Kohler (Washington State University)

[19] *A Breadcrumb Trail: Using Projectile Point Variation to Address*

Migration

Production of material goods across space and time should have correlates in the out-migration of people from the Northern Southwest during the thirteenth-century. We aim to link the out-migration of the Mesa Verde region to variation in projectile point morphology by mathematically characterizing the shape of the bases of side- and corner-notched points from the central Mesa Verde and the Northern Rio Grande regions. Along with data regarding projectile point variation as well as temporal and spatial controls, we utilize Bayesian statistics and network graph analysis to examine cultural transmission and migration in the VEP II study areas.

Deily, Kristen [135] see *Bush, Jason*

Delaney-Rivera, Colleen (Cal State Channel Islands)

[127] *West Meets the Middle Ground: A Comparison of Coastal and Riverine Complex Sociopolitical Landscapes*

Humans often use and view space and landscape differently, although the societies may appear similar at first glance. This paper compares the sociopolitical landscape of two "simple chiefdoms" of pre-European contact North America: the Chumash of coastal southern California, and Mississippian-era groups from the Illinois River floodplain of west-central Illinois. While the subsistence systems were different (hunter-gatherer-fishers vs. maize agriculturalists), the sociopolitical power base of the chiefly groups were similar, being reliant on the land itself, as well as familial ties to the land.

[127] *First Chair* [127] *Second Organizer*

DelCastello, Brian (Cultural Resource Analysts), Andrew Bradbury (Cultural Resource Analysts), Andrew Martin (Cultural Resource Analysts), D. Randall Cooper (Cultural Resource Analysts) and Paul Bundy (Cultural Resource Analysts)

[172] *Lithic Analysis and the Avenue of the Saints Project*

Lithic artifacts recovered from sites excavated as part of the AOS project were subject to a series of analyses. Traditional methods such as technological and use-wear analysis of modified implements, individual flake analysis, and aggregate flake analysis were employed in conjunction with refitting and minimum analytical nodule (MANA) analyses. In addition to providing information concerning the prehistoric technologies in use, refitting and MANA provided data relevant to site structure and formation processes. This paper presents an overview of the methods used, how they were applied at the various sites, and the general results of the analyses.

DelCastello, Brian [172] see *Cooper, Randall*; [172] see *Herndon, Richard I*; [150] see *Bradbury, Andrew*

Delgad Kú, Pedro [20] see *Escamilla Ojeda, Barbara*

Delgado Ku, Pedro (Centro INAH Yucatán/AYERCPE A.C.), Bárbara Escamilla Ojeda (Centro INAH Yucatán/AYERCPE A.C.), Carlos Peraza Lope (Centro INAH Yucatán), and Marilyn Masson (University at Albany – UNY)

[20] *El Templo H-17 y la Sala Columnada H-15 del Grupo Itzmal Ch'en y su Contexto Comparativo*

En los últimos años se han llevado a cabo exploraciones arquitectónicas públicas en un barrio importante en el interior de la muralla de Mayapán, el Grupo Itzmal Ch'en, ubicado a 2 km al noreste del núcleo central del sitio. En este grupo fueron explorados el Templo H-17 y la Sala columnada H-15. El presente estudio consiste en un análisis comparativo entre las diferentes clases de edificios como son los templos y las salas hipóstilas de los individuos que coexistieron en los barrios y el núcleo principal de este sitio arqueológico del período Posclásico.

Demarest, Arthur (Vanderbilt University)

[218] *Morphing into Merchants?: The Aborted Early Transition to the Terminal Classic in the Southwestern Peten*

During the eight to tenth centuries some northern and coastal lowland Maya states changed through transition from Classic period k'uhul

ajaw political, ideological, and economic systems to PostClassic multipeal patterns of power including merchant elites and an economy more involved in over-production and long distance exchange. Yet, most southern lowland states simply collapsed. The Cancuen city-state hegemony, however, began a very early transition in political economy and exchange systems in the eighth century. Recent findings regarding the nature and the failure of this precocious transition allow speculation on the general southern lowland collapse and why the western Peten never recovered.

[229] see *O'Mansky, Matt*; [212] see *Luin, Luis F.*

Demel, Scott (Northern Michigan University)

[102] *Using Features and Contents to Recognize Cultural Change*

Cultural features at the New Lenox site include hearths, processing, storage and trash pits, two types of houses, a unique burial feature containing three individuals and grave goods, and a 24 m by 16 m double walled enclosure of unknown function. These features will be described and to the extent possible be assigned to specific occupations at the site. I will also explore the possibility that the protohistoric component of the site is a refugee center where previously separate groups either border each other, or are mingled into one community, becoming symbolic kinspeople in the "Iroquois shatter zone."

Demoule, Jean-Paul (Université de Paris I)

[61] *European Neolithic Enclosures and Mississippian Monumentalities: Emergences and Collapses*

There is striking similarities between the first monumental enclosures of temperate Europe and the various earth monuments of American Woodland. This concerns the shape of certain complexes of ditches, but also the general process of emergence, from simple farmers communities to much more complex societies. But interestingly enough, in both cases this complexity collapsed after a while and does not produce urban societies like in other places in the world. The problem would be to understand the circumstances and the reasons of such collapses and to look for other examples in other places in the world.

Dempsey, Erin (University of Kansas)

[176] *The Utility of Dirt: Soil Studies at the Hopeton Earthworks*

Soil studies at the Hopeton Earthworks in Chillicothe, Ohio provide valuable information on Hopewell earthwork construction regarding soil placement, construction sequence and chronology, and site use. Geomorphological studies and magnetic susceptibility testing have been conducted on soils across the site. Most recently these techniques were used to study three sections of the earthworks via soil cores excavated during the summer of 2007. This paper presents the results of the 2007 research and briefly summarizes past soil studies at the site to develop an understanding of the earthworks' construction.

[176] *First Organizer*

Dengah, Francois [135] see *Cohen, Anna S.*

Dennett, Carrie (University of Calgary) and Steve Simpson

[202] *Tools of the Trade: Microbotanical Trace Analyses of Ground Stone Tools from El Rayo, Pacific Nicaragua*

In Central America, ground stone tools come in a relatively limited number of forms, most of which are easily identifiable by archaeologists working anywhere in the area. However, what they were used for in pre-Columbian times is often assumed based solely on tool type. For example, manos and metates are generally understood to have served for grinding maize among Mesoamerican groups. With the goal of gaining insight into dietary practices and tool use, this poster presents preliminary results of microbotanical trace analyses of ground stone tools from the site of El Rayo (N-GR-39), located near Granada, Pacific Nicaragua.

Dennett, Carrie [191] see *McCafferty, Geoffrey*

Deppen, Jacob (University of Washington)

[194] *Environment as an Explanation*

This paper will explore the issue of environmental and climatic explanation in archaeology. It will address (1) the history of these types of explanations, (2) the kinds of evidence that are in use, both archaeologically and environmentally, and (3) the problem of establishing causal relations between cultural and environmental phenomena. In an effort to be more than simply critical, the paper will draw on the philosophy of science and explanation to make some recommendations for improving archaeological explanations based on environmental and climatic phenomena.

[194] *First Chair*

Depratter, Chester [250] see Jones, Douglas S.

Derr, Kelly (Washington State University)

[203] *Human? Nature? or Both?: The Role of Local Fire on Valdes Island, British Columbia.*

Natural fire plays an important role in Pacific Northwest ecosystems. Regional ethnographic data also depict the importance of human-induced fire to increase plant productivity and shape surrounding landscapes. One of the most difficult tasks that researchers face when reconstructing fire history is determining if fires were natural or anthropogenic in origin. Fine-grained localized macrocharcoal data can provide us with a better view of anthropogenic fire. Macrocharcoal analyses coupled with climatic and archaeological data from Shingle Point, Valdes Island, suggest that pre-contact peoples may have used fire as a tool to shape the localized landscape surrounding the site.

Desrosiers, Pierre [147] see Curtis, Jenneth E.; **[147]** see Burke, Adrian L.

Devlin, Sean (Washington and Lee University), Fraser D. Neiman (Thomas Jefferson Foundation), and Susan Payton (Washington and Lee University)

[166] *Middle Through Spatial Patterning*

While archaeologists have made great strides in understanding the interactions of elite and enslaved individuals within the plantation system, more middling groups such as overseers/farm managers have received less attention. Our research begins to address this lacuna through an examination of household economies of such individuals/family units. Our research draws on interpreting spatial variation in artifact patterning to denote specialized activity areas within the household landscape. In turn, this provides a basis for evaluating the complexity and autonomy of the household economies. Comparative analysis of contemporaneous enslaved households will highlight possible diversity among groups at Monticello in the early-nineteenth century.

Devos, Yannick [259] see Arroyo-Kalin, Manuel

DeWitt, Thomas [21] see Smith, Heather L.

Dexter, Jaime (University of Oregon)

[120] *Paleoethnobotanical Studies at the Erin's Cave Site, Southeastern Oregon*

Recent evidence from the Northern Great Basin documents human occupation there as early as 12,300 cal. B.P. Compared to the wetlands in the Basin, the arid uplands have been perceived as deprived landscapes unsuitable for human habitation and thus marginalized in research. I suggest the xeric uplands should be properly acknowledged as a critical landscape of the early human occupation and foraging activities. The Catlow Valley of southeastern Oregon is such an example. The paper investigates resource procurement strategies of the Late Archaic Period in the Catlow Valley, based on paleoethnobotanical data from the Erin's Cave site, a rockshelter.

Deymier, Alix [140] see Chastain, Matthew L.

Di Giuseppeantonio Di Franco, Paola [189] see Galeazzi, Fabrizio

Diaz-Granados, Carol (Washington University-St. Louis) and James Duncan

[62] *Rock Art in Caves and Rock Shelters: Searching for Evidence of Prehistoric Ritual Activity*

Prehistoric American Indian rock-art, mainly pictographs, have been found in over 40 rock shelters and caves in Missouri. These sites contain paintings in both red and black pigments and naturalistic imagery as well as enigmatic abstract designs. In this paper we review the rock-art recorded at several Missouri sites and discuss the iconography. We also take a look at the possible uses of these rock-art sites during the prehistoric and early historic period.

Diaz-Granados, Carol [22] see Jansen, Susan; **[115]** see Duncan, James R.

Dibble, Harold (University of Penn Museum), Alain Turq (Musée National de Préhistoire), Dennis Sandgathe (Simon Fraser University), Paul Goldberg (Boston University) and Shannon McPherron (Max Plank Institute for Evolutionary Anthropology)

[8] *An Overview of Roc de Marsal*

This paper discusses the site of Roc de Marsal in terms of the history of the excavations there and the site's basic stratigraphic sequence. It also presents background and context for the results of the new excavations concerning the lithic and faunal assemblages, site formation, and the major new discoveries concerning the abundant hearths and the deposition of the Neandertal child.

[8] *First Organizer***[58] *Discussant***

Dibble, Harold [8] see Aldeias, Vera I.d.; **[129]** see Schurmans, Utsav A.; **[8]** see Turq, Alain; **[8]** see Sandgathe, Dennis M.; **[8]** see McPherron, Shannon P.

Dibble, Loretta (Rutgers University)

[129] *Understanding Holocene East and North African Bone Harpoon Variation: Subsistence, Technology, Function and Style*

Bone harpoon points are ubiquitous throughout Northern and Eastern African regions during the Holocene. These worked bone artifacts characterize change in human subsistence strategies from hunter-gatherer foraging lifeways. These worked bone artifacts hold many clues to understanding local and regional human dietary and resource utilization shifts towards food production, and natural resource management. Considerable variation exists in harpoon shape and size, and in barb shape, spacing and size. Is the variation related to function or style? This paper presents a typology for barbed bone harpoons and the inter site and intra site variation for the Lake Turkana basin in an initial attempt to address the questions of stylistic or functional variability in barbed bone harpoons.

Dickinson, William R. [206] see Chiu, Scarlett

Dickson, D (Texas A&M University) and Jason W. Barrett (Texas Department of Transportation)

[139] *Cosmography at Nojol Nah, Belize*

Preliminary excavations at Nojol Nah, a newly discovered site in northwestern Belize, reveal an occupation sequence from the Early to the Terminal Classic periods. Present also, in various symbolic forms, are the key elements of Maya cosmology identified by Ashmore and Brady (1999: 144): "mountains of earth and stone, water lying within the earth and caves linking them altogether." Although the entire site appears to be abandoned in the Terminal Classic, limited ceremonial activity resumed during the Postclassic period. This suggests that, despite its abandonment and modest scale, Nojol Nah retained a cosmographic significance for the local Maya.

[91] *Discussant*

Diederichs, Shanna [19] see Glowacki, Donna M.

Dillian, Carolyn (Princeton University), Charles Bello (FEMA) and M. Steven Shackley (University of California, Berkeley)

[60] *Informal Mechanisms of Long-Distance Exchange*

Though formal long-distance exchange networks have been documented in prehistoric Eastern North America, not all exchange necessarily occurred in this manner. In fact, informal, casual, person-to-person exchange through mechanisms such as gifting, may have been equally important in transporting objects over long distances. Specifically, the small number of obsidian artifacts recovered from sites in the Middle Atlantic region documents long-distance exchange. Obsidian, as a chemically traceable and exotic material, provides evidence for informal and more casual exchange in Eastern North America. Such informal exchange may have cemented relationships between individuals and offered a social link to far away lands.

Dillon, Jennifer (Kenyon College) and Patricia Urban (Kenyon College)

[258] *Keeping the Fires Burning: Ceramic Firing Facilities at Las Canoas, Northwestern Honduras*

Recent excavation at the site of Las Canoas has revealed a sequence of three firing facilities dating from the Late and Terminal Classic. These resemble neither the earliest firing area from Las Canoas, nor the recorded firing facilities from the Late and Terminal Classic at sites to the north in the Naco Valley. These newly-discovered pyrotechnological areas will be compared to other known facilities in Southeastern Mesoamerica.

Dimmick, Frederica [38] see *Crowley, Suanna Selby*

Dixon, Christine (University of Colorado, Boulder)

[5] *Agricultural Organization and Field Boundaries: A Brief Look at Cerén, El Salvador*

The extraordinary level of archaeological preservation at Cerén has afforded valuable insights into ancient Maya food production. The discovery of multiple agricultural plots in the region south of the Cerén site center has changed our understanding of subsistence practices for this Classic Period village. This paper presents a compilation of data from recent field seasons to highlight our current knowledge of overall agricultural organization, particularly the relationship of maize and manioc planting areas to the site center. Additionally this paper discusses a zone of manioc production where possible separate but adjacent manioc fields were discovered in 2009.

Dixon, E. (Maxwell Museum)

[21] *The First Colonization of the Americas: New Insights from Large-scale Paleogeographic Reconstructions*

Advances in large-scale paleogeographic reconstruction define physical and environmental constraints relevant to understanding the timing and character of the first colonization of the Americas. Diachronic mapping shows continental glaciers coalesced in central Canada during the Last Glacial Maximum (LGM) 20,000 – 14,000 years ago while unglaciated refugia existed along the NW Coast. This visual analysis enables large-scale synthesis of recent geological and environmental research. These data establish timelines for a biotically viable colonization corridors connecting eastern Beringia to southern North America and provide insights into probable Paleoindian origins and subsistence strategies.

[21] *First Chair*

Dixon, Mary Lenn [93] *Discussant*

Dixon, Nicholas [34] see *Peres, Tanya M.*

Dodge, Robyn (The University of Texas at Austin)

[54] *Establishing Hun Tun, Insight from the 2008 and 2009 Field Seasons*

This paper examines the data collected during the 2008 and 2009 seasons at the Maya settlement, Hun Tun, initially identified in 2008 in northwestern Belize. Preliminary investigations focused on survey, mapping and testing courtyard spaces. Architectural evidence and material culture will be discussed generally in terms of chronology and possible function. Ceramic analysis suggests a single occupation with a Late Classic hiatus. Analysis of field research will be limited to studies of settlement patterns, chronological sequencing and

proposed function of limestone features. Research has yielded information pertaining to socioeconomic status, sociopolitical interaction and potential hypotheses related to these topics.

Doelle, William (Desert Archaeology, Inc.) and John Kantner (School for Advanced Research)

[14] *The Nonprofit "Pentagon" of the Southwest*

Five private nonprofit institutions arrayed around the perimeter of the American Southwest have very different missions and histories. The strategic plans of these institutions are considered within the context of their histories. Projections and suggestions for the future are developed. The institutions: Museum of Northern Arizona, Crow Canyon, School for Advanced Research, Amerind Foundation, Center for Desert Archaeology.

Doelman, Trudy [155] see *Jia, Peter Weiming*

Doershuk, John (University of Iowa) and John Cordell (University of Iowa)

[59] *Project 1047: New Deal Archaeology in Iowa*

The Iowa State Planning Board issued in September 1934 a comprehensive "Preliminary Report of Progress" to the National Resources Board. Included was description by supervisor Charles R. Keyes of "Project 1047." This project incorporated "the duty" of "supervising certain unskilled work in excavating Indian village sites and Indian mounds" and describes progress made the previous summer and a request for continued funding. The infusion of New Deal funding into on-going Iowa survey efforts led to new types of projects building on accomplishments of earlier work. Today, New Deal-funded Iowa archaeology collections continue to provide critical data and influence current practice.

Dolan, Patrick [203] see *Grier, Colin*

Domenici, Davide (Bologna University (Italy))

[107] *The Mosaic Tablet from Cueva Cheve (Oaxaca, Mexico) and the War of Heaven*

In this paper I suggest that the turquoise mosaic tablet found in 1989 in Cueva Cheve (Oaxaca, Mexico) can be interpreted as a Cuicatec representation of the Mixtec myth known as War of Heaven. The new iconographical reading of the tablet allows a new appreciation of the associated archaeological context of Cueva Cheve Chamber 1, whose elements strongly suggest that it could be interpreted as an activity area devoted to ritual communication and exchange with the ñuhus, the supernatural beings whose reciprocal relationship with humans was properly established by means of the mythical War of Heaven.

Dominguez, Nancy (ENAH) and Cristina García Moreno (Centro INAH-Sonora)

[57] *Recent Investigation in Southern Sonora, Mexico*

The Southwest-Northwest and Mesoamérica Interactions Archaeological Project located, in southern Sonora, Mexico, recorded 17 archaeological sites (including historical contexts) during the first field survey in 2008. One of the most important sites, Batacosa (SON:S:7:2) is currently the focus of our research including surveys and extensive excavations at the site. Batacosa is located in the municipality of Quiriego in the ancient limits between Yaquis and Mayos indigenous groups in southern Sonora. Preliminary results show that the site was of regional importance because its dimensions, the density of archaeological features, and the presence of local and foreign artifacts.

Doneus, Michael (University of Vienna), Christian Briesche (Institute for Photogrammetry and Remote Sensing, Vienna University of Technology, Austria) and Nikolaus Studnicka (RIEGL Measurement Systems GmbH, Austria)

[61] *Airborne and terrestrial waveform laser scanning for documentation of archaeological sites in woodland environments*

The presentation will explain the basic process of airborne laser scanning and terrestrial laser scanning, and demonstrate its potential

for archaeological reconnaissance in densely forested areas. It will focus on the latest generation of both airborne and terrestrial laser scanners, which use the entire waveform of the received laser echoes to distinguish between vegetation and solid structures. These systems have the potential to provide a more accurate DTM as well as better and more detailed information on e.g. buildings within densely vegetated areas. Using several case studies, the paper will present the implications of this new generation of laser scanners for the documentation of cultural heritage.

Dong, Guanghui [177] see *Elston, Robert G.*

Dong, Yu (University of Illinois At Urbana- Champaign), Honghai Chen (Northwest University, Xi'an, of Illinois at Urbana-Champaign), Yaowu Hu (Graduate University of Chinese Academy of Sciences) and Yaping Cui (Museum of the Western Han Dynasty Mausoleum of the Nanyue King)

[214] *Paleodietary Reconstruction at Late Neolithic Zongri Site, Western China*

From late Neolithic to Bronze Age, western China generally went through a transition from agricultural system to pastoralism. However, how, when and to what extent agriculture declined is not well understood in this region. Zongri is a newly defined culture distributed to the south of Qinghai Lake, contemporary with the Majiayao culture to the east. Stable isotope analysis of human remains from Zongri site shows slightly increasing millet and less animal protein consumption through time, suggesting a growing emphasis on agriculture. These data are compared to other contemporary sites with isotopic and/or paleoethnobotanical evidence for agricultural diets during this era.

Donner, Natalia (UNAM) and Jonathan Hernández Arana

[254] *Lithic Technologies at El Carrizal, Veracruz: An Operational Sequence Study*

El Carrizal, Veracruz is an archaeological site from the Proto-Classic period (100 B.C. – 100 A.D.) located in South-Central Veracruz. Recent intensive survey of 13 square kilometers in the immediate vicinity of this area by the Proyecto Arquelógico El Carrizal identified numerous lithic artifacts produced from various raw materials (basalt, flint, obsidian, travertine, etc). The study of these lithic artifacts, based on the Operational Sequence Methodology, covers different stages in their use-life, from procurement to abandonment. This approach will provide new perspectives on the role, use and technologies of lithic artifacts from Terminal Formative through Early Classic Period in South-Central Veracruz.

Dooley, Alek [55] see *Barnard, Hans*

Doolittle, Christopher [144] see *Keller, Angela H.*

Doolittle, William (University of Texas)

[44] *A View from the Other Side of the Fence*

In 1990 and again in 1993 I hypothesized that irrigation originated in the southern Southwest and spread into Mexico. I also outlined a sequence of technological developments in Mesoamerican irrigation. My first hypothesis was proven correct by work at the Las Capas site. Subsequent work in Mexico proved my other ideas to be less accurate. This presentation brings irrigation research in the Southwest and Mexico up-to-date in a pan-regional context.

Doran, Glen H. [90] see *Dunbar, James S.*

Dorr, Roger (National Park Service)

[190] *Where is the kiln? Investigating Northern Sinagua Pottery Production through Experimental Replication.*

This presentation investigates Northern Sinagua pottery production around Flagstaff, Arizona through experimental replication. It addresses a deficiency in knowledge regarding clay and temper sources, firing techniques, and the lack of recognized pottery-firing features found in the archaeological record.

Dorshow, Wetherbee (University of New Mexico)

[131] *GIS-based Landscape Reconstruction of the Chaco Core During the Bonito Phase*

This paper presents a GIS-based reconstruction of the 11th century landscape in the Chaco Core. The geospatial reconstruction is based on the Archaeoflow GIS framework and draws on stratigraphic interpretations of archaeological trenches in the Pueblo Bonito mounds as well as previous geomorphic and archaeological research in the region. The Archaeoflow framework is a geospatial data model and analytical structure for reconstructing past landforms and environments and simulating hydrological processes.

Dortch, Joe (University of Western Australia)

[16] *Late Pleistocene Environmental Change and the Evidence for an Economic Response in south-western Australia*

Southwestern Australia, a Mediterranean-type region, features flat topography, nutrient-depleted soils, and a diverse and resilient biota relatively unaffected by climatic oscillations. Zoo-archaeological evidence and hunter-gatherer occupational remains dating from c.45,000 BP at limestone caves in the far south-west indicate changes in prey abundances c.10,000 BP, contemporaneous with small shifts in plant associations as documented by pollen and charcoal sequences. Such localized change need have required no major regional-scale innovations. While much work remains to be done in the little-investigated, drier interior, and in assessing social changes, the picture so far suggests shifts in emphasis rather than fundamental economic change.

Douglas, Joseph [62] see *Blankenship, Sarah A.*

Douglass, John (Statistical Research, Inc.) and Seetha Reddy (Statistical Research, Inc.)

[154] *Perceiving Food and Identity during Culture Contact*

Culture change and continuity are two fundamental aspects of archaeological research. In this talk we discuss culture change and continuity as perceived through food during the contact period in North America - a time of upheaval and change for Native Americans. Contact with European and Hispanic cultures, either through the Mission system and/or through colonization, introduced new ideologies, technologies, and social structures. However, Native American exposure to and incorporation of these new traditions was varied. Our talk focuses on markers of cultural identities among hunter gatherers, and the most prevalent media for expression of cultural identity among hunter-gatherers.

Douglass, John [154] *First Organizer*; [154] *First Chair*

Douglass, Matthew (University of Auckland), Simon Holdaway (University of Auckland) and Thomas Barker (University of Auckland)

[73] *Assemblage Color Variability as a Proxy for Prehistoric Mobility in Western New South Wales, Australia*

Recent study using cortex proportion indicates widespread curation of stone artifacts from assemblages produced from local stone. Here we report on the use of digital imaging analysis as an alternate measure of artifact movement. Artifacts were photographed under controlled lighting and analyzed using imaging software. The extracted data create a distribution of assemblage color variation. Isolated data points represent unpaired artifacts within assemblages thus indicating transport from elsewhere. Conversely, point clusters provide a basis for linking artifacts to the same nodule. Results demonstrate the usefulness of color variation for investigating artifact movement within high volume assemblages produced from local materials.

Dowd, Elsbeth (University of Oklahoma)

[26] *The Woods Mound Group: Revisiting a Multi-mound Site in the Caddo Area*

The Woods Mound Group (34MC104) is a late prehistoric site along the Mountain Fork River in southeastern Oklahoma, in the Caddo archaeological area. A portion was excavated in 1964-65 prior to inundation by the Broken Bow Reservoir. The site, which is situated

within the Ouachita Mountains, includes eight low mounds (0.2-0.8 m tall) clustered into two distinct groups. By obtaining four new radiocarbon dates and stylistically reanalyzing the pottery from these two groups, this project attempts to test whether the mounds were built concurrently and whether socially different groups of people were responsible for their construction.

Doyon, Leon (HRAF, Inc.)

[67] *Once in a Lifetime?: Spondylus Supply and Demand in the Regional Developmental Period Ecuadorian Highlands*

A sequence of shaft tombs at La Florida, Quito attributable to a generation or three of a middle Regional Developmental period (ca. AD 150-500) elite lineage provides a unique look at the short-term microeconomics of a system of long-distance exchange emphasizing Spondylus. Although social reproduction was highly dependent upon prodigious amounts of Spondylus ultimately consumed in mortuary ritual, supply was spotty and processing probably was local and small-scale. In order to maintain exclusivity, the ruling class was forced to practice strategies of rationing and substitution and, quite likely, personally undertake perilous journeys to the ends of the earth.

Drake, Douglas (Washington State University) and John G. Jones (Washington State University)

[136] *Spatial Analysis of Phytoliths from an Archaic Shell Midden in Coastal Chiapas*

A detailed analysis of phytoliths from a shell midden in southern Chiapas is revealing information on prehistoric plant use and human activity. Samples collected in 1m increments across a gridded pattern on a prepared clay floor reveal distribution patterns reflecting past plant use. Possible presence of economic types including palms and Heliconia, presumably thatch, should prove to be particularly significant. These patterns have the potential to document the presence of houses or other ephemeral structures. Other phytolith types document nearby forests and potentially significant plant foods. The role of cultigens at this 5500 year old site is also explored.

Drake, Eric (Binghamton University/Hiawatha National Forest) and John Franzen (Hiawatha National Forest)

[114] *Commodity Fetishism and the Looter's Looter: Casting a Reflexive Gaze Upon the Practice of Archaeology In Capitalism*

For professional archaeologists, relic hunting, or looting, represents the quintessential antithesis of the discipline; and yet, this wide spread activity has received little analytical attention. In this paper we draw upon examples of recent looting activity in the Upper Peninsula of Michigan to explore relic hunting as a social practice structured by the commodity form of historical narrative production. This exercise serves as an entry point for asking the difficult question: "In what way(s) does the practice of archaeology in the context of late capitalism resemble that of looting, and how might this affect our collaborative relationships with descendant communities?"

Drass, Richard, Stephen Perkins (Oklahoma State University) and Susan Vehik (University of Oklahoma)

[171] *Digging Ditches; Fortifications at Bryson-Paddock and Other Southern Plains Villages*

In 1759, Spanish forces attacked a Wichita village on the Red River. The expedition provided the first description of a Wichita fortification; a roughly circular rampart and stockade surrounded by a ditch. Wichita groups erected similar structures as early as 1500. Magnetometer surveys and excavations at an 18th century Wichita village revealed three concentric ditches representing portions of fortifications. The efforts expended to excavate ditches and build extensive fortifications at large villages reflect intensification of intertribal conflict in the southern Plains by 1700, probably arising from increased mobility with arrival of horses and competition over access to the European market economy.

Drennan, Robert D. [155] see Peterson, Christian E.

Dretske, Lisa (Illinois State University)

[125] *German Ethnicity in Missouri*

This paper will examine the ways in which German immigrants expressed their ethnic identity in a town dominated by French colonial descendants. The analysis is based on material culture recovered from excavations at the Janis-Ziegler/Green Tree Tavern site (23G272) in Ste. Genevieve, Missouri, and historical documentation, including census records, probate records, and newspapers from several archives.

Drew, Brooke (University of Wisconsin-Milwaukee)

[124] *"Register of Burials at Milwaukee County Poor Farm": Utilizing Historical Documentation in the Analysis of an Excavated Historic Cemetery*

The analysis of the Milwaukee County Poor Farm Cemetery is an example of the utility of the use of multiple lines of evidence including that of anthropologically-oriented archaeology and historical documentation. Documentation includes a ledger-format book, though incomplete, which includes name, residence, place, cause, and date of death, burial date and grave number. This information, as well as the county death certificates, is currently being inputted into a database to facilitate management and statistical manipulation. This poster demonstrates how this will inform the osteological analysis of the remains and make possible the identification of individuals interned at the cemetery.

Drew, Natalie (US Army Corps of Engineers)

[76] *Meeting the Curation Challenges of the Digital Dark Age*

Curating archaeological associated documentation has always been challenging but the increasing usage of digital and electronic media in these collections has made it especially so. These challenges can be so daunting that the threat of a Digital Dark Age, where electronically recorded information is inaccessible and the information is irrevocably lost, seems a very real possibility. This paper will discuss some of these challenges (particularly those associated with digital images), identify different types of electronic records, and provide practical strategies for curating electronic and digital records.

[76] First Chair [76] Second Organizer

Driver, W. (Houston Community College)

[112] *Building Boundaries: Ancient Maya Architectural Design and the Construction of Social Identity*

Excavations at the site of Blue Creek in Northwestern Belize documented a wide range of formal variation in the architectural designs of both ritual and residential structures. Further study determined that a consistent set of proportions were present in the design elements that comprise the substructural façades of temples and shrines located within the site core area. Comparisons with formal shrine groups located in the surrounding settlement zone indicate a correlation between shrine façade design and settlement distribution, and provide potential insight into the sociopolitical organization of the polity.

Druckenmiller, Pat [79] see Shirar, Scott

Drucker, Dorothée [157] see Bocherens, Hervé

Drucker, J.D. [72] see Vlcek, David T.

Dubreuil, Laure (Trent University) and Hughes Plisson (CNRS, Aix-en-Provence)

[216] *Use-wear Approaches to Ground Stone Tools: Developing the High Magnification Analysis of Objects with a Metallographic Microscope*

Use-wear formation on ground stone tools has generally been investigated at low magnifications with a stereomicroscope (from x6 to 50, sometimes to 100). This method is particularly relevant for the study of use-wear features on ground stone tools made of coarse, non-homogeneous, raw material. In this paper, we explore another promising approach: the high magnification (from x50 to 500) analysis of ground stone tools using a metallographic microscope. We discuss the methods used to observe and photograph the surfaces and comment on some of the use-wear features observed in an

experimental sample consisting mostly of basalt implements.

DuChemin, Geoffrey (University of Florida)

[116] *Food and Community: Zooarchaeology in South Central Puerto Rico*

Recent research from sites in south-central Puerto Rico provides an opportunity to shed new light on the nature of pre-Columbian social organization in the region. Animal remains recovered from three sites, PO-29 (Jacanas), PO-42, and PO-43, are currently being analyzed. Preliminary results are presented here, emphasizing how faunal data can be used to elucidate aspects of social development and organization. Food procurement, allocation, and consumption are communal activities that hold important cultural significance. Careful zooarchaeological analysis offers interpretation of social organization that focuses on the level of the community, as opposed to central-power models that are often applied when chiefly societies are presupposed.

Dudgeon, John (Idaho State University - CAMAS), David Peterson (Idaho State University) and Monica Tromp (Idaho State University)

[175] *Traces of the Trade: Bronze Age Metal Producers in the Eurasian Steppes Determined Through Skeletal Trace Metals*
Human skeletal and wild and domesticated faunal remains from the Middle Bronze Age II Kamennyi-Ambar V cemetery (western Siberia, circa 2025-1745 BC) were analyzed for trace metals to determine the probability of identifying copper and bronze producers in ancient populations. Current social models favor sedentary agriculturalists over Eurasian steppe pastoralists, while metallurgy was another significant productive activity during this period. Identifying metal producers is crucial to improving present understandings of ancient Eurasian societies. Signatures of metal production in human bone acquired by LA-ICP-MS and SEM-EDS are compared with results for local fauna to distinguish and quantify non-occupational uptake and diagenesis.

[175] *Second Chair* [175] *Second Organizer*

Dudgeon, John [175] see *Peterson, David*

Dueppen, Stephen (University of Michigan)

[110] *Burning the Past, Present and Future: The Ancestor House at Iron Age Kirikongo, Burkina Faso*
Excavations at Kirikongo (AD100–1700) have revealed only two structures destroyed through burning. These structures, one of which was likely built to replace the other after it burned, were ritual buildings located in the center of the site: analyses identified a variety of features that distinguish them from domestic contexts, including evidence for ritual animal sacrifice, special architectural construction methods, and communal storage activities. Building from the characteristics of the burned structures, this paper will explore why and by whom these were targeted for burning, as well as the implications for social and political developments in the community and region.

Duff, Andrew (Washington State University)

[240] *Producing Structure: The Role of Ceramic Production in Understanding Chaco-period Communities in the American Southwest*

Pottery production within a community comprised of kin, neighbors, and more distant others is a conscious act that reproduces societal relationships in material culture. Information encoded into vessels during manufacture is used to reveal differences in learning frameworks among the residents of two Chaco-period communities (ca. A.D. 1050-1130) located at the intersection of two classic Southwestern Culture Areas—Mogollon and Pueblo. Aspects of undecorated vessel manufacture both document and served to reproduce difference, while larger scales of social action signal greater communal unity; both processes are argued to be accurate reflections and embodiments of social relations.

[14] *First Chair*; [223] see *Wilkinson, Brenda J.*

Duffy, Paul (University of Michigan)

[149] *Trends and locations for Bronze Age crafting in the Lower Körös Basin*

The fortified tell sites of the Great Hungarian Plain are believed by most specialists to be the area's centers of craft production and consumption. This paper evaluates the evidence for this claim in the Lower Körös Basin. First, I estimate metal consumption by site for the regional scale. Second, using surface collection material from open and tell settlements for a focus area within the Basin, I consider the evidence for stone tool production and metallurgy over the Early and Middle Bronze Age. The observed patterns at both scales suggest that fortified tells have less authority over craft production than previously believed.

Dunand, David [140] see *Chastain, Matthew L.*

Dunbar, James (FI Bureau of Archaeology), Glen H. Doran (Florida State University) and W. Jack Rink (Geology and McMaster Institute of Applied Radiation Sciences (McIARS))

[90] *Paleoindian Sites Revisited – Known Sites and New Perspectives*

Wakulla Springs Lodge (WA329), Helen Blazes (BR27) and Norden (GI40) are Florida Paleoindian sites first investigated more than a decade ago. In 2008, the Wakulla Springs Lodge site was revisited and, in 2009, Helen Blazes and Norden, among others, to collect OSL samples. While the Wakulla Springs Lodge site might be pre-Clovis, the Helen Blazes and Norden sites remain without temporal context, represented only by waisted Suwannee points, until OSL results are completed. Here we will not focus on the age or internal integrity of these sites; rather on past versus current understanding of artifact-bearing levels and the artifacts recovered.

Duncan, James (Lindenwood University) and Carol Diaz-Granados (Washington University)

[115] *The Ascent of First Man's Eldest Son*

Using one of Brown's (Phillips and Brown 1978) iconic Braden markers, the copper repousse hawk plaques, we will trace this cosmic imagery through time from its earliest expression to the latest protohistoric examples. This set of images is not only the work of a particular linguistic group -- it is the material and iconographic expressions of each related group's oral traditions. These oral traditions are found to have many similarities as do their material expressions.

Duncan, James [62] see *Diaz-Granados, Carol*

Duncan, Neil (University of Missouri-Columbia)

[55] *Gourd Artifact Residues and Macroremains Reveal Feasting in Late Preceramic Peru*

In a recent study, starch grains from residues on ~4000 year old gourd and squash artifacts were recovered; identifying several cultivated and managed plant taxa used as food at the Buena Vista site in central Peru. In this paper, I will present the phytolith results from the same squash and gourd artifacts. As part of a larger dataset, starch and phytolith residues provided evidence of taxa not identified in the macroremains, despite excellent preservation. The results of this study have implications for interpreting agriculture in Late Preceramic Peru, as well as feasting and ritual behaviors associated with food.

Duncan, Richard (GAI Consultants, Inc.) and Alyssa Trimmer (GAI Consultants, Inc.)

[179] *Life with Lithics in the Upper Mercer: Sites 33Pe174 and 33Pe362 in Perry County, Ohio*

Data recovery investigations at Sites 33Pe174 and 33Pe362, performed as part of the REX-East Pipeline Project in Perry County, Ohio, document lithic procurement and tool production in the heart of the Upper Mercer chert resource area of eastern Ohio. The results of these investigations will be explored in relationship to the broader findings of other REX-East and regional sites within the uplands of the Hocking and Muskingham river drainages.

Dunford, Ashley (University of Wisconsin-Milwaukee)

[124] *Examples of Juvenile Scurvy from the Milwaukee County Poor Farm*

Ortner (2001) and Brickley and Ives (2006) have thoroughly researched and recorded methods of diagnosing scurvy in juvenile skeletal remains in the recent years. This poster details examples of scurvy in juvenile remains from the Milwaukee Poor Farm Cemetery. This research is focused on two temporally distinct areas of the cemetery both used for the exclusive burial of children. These distinct areas of sampled in order to determine the presence of scurvy. The results provide a characterization of changing juvenile health among the poorest segment of early 20th century Milwaukee residents.

Dungan, Katherine (University of Arizona)

[235] *Distance and Perception in GIS Visibility Analysis: A Chacoan Example*

Models of changes in the visibility of objects with increasing distance are crucial to GIS viewshed analysis if our visibility models are to accurately represent human experience. This study uses an approach to visibility derived from the fields of proxemics, architecture, and landscape design to examine intervisibility within the community surrounding the Chacoan great house of Kin Bineola, New Mexico. The distance classification model, in combination with "ground truthing" of lines of sight, provides a robust model of intracommunity visibility that can then be used to question the apparently straightforward relationship between visibility and monumental, ritual, or community architecture.

[192] see Huntley, Deborah L.

Dunn, Stacy (Tulane University) and Kit Nelson (Tulane University)

[137] *Reevaluating Ceramic Chronologies for the Huaura Valley, North-Central Coast of Peru*

This study examines both inter- and intra-site variability of Chancay ceramic assemblages during the Late Intermediate Period (A.D. 1100-1435) and Late Horizon (A.D. 1435-1532) in the Huaura Valley, north-central coast of Peru. Unfortunately, Chancay pottery typologies established in the 1920s have not advanced since then beyond basic descriptions of stylistic traits. To address this issue, detailed attribute analysis of pottery excavated from structures at three sites--Rontoy, Chambara, and Quipico--combined with AMS dates allow for the formation of a more refined ceramic chronology. Pottery distributions across time and space are then compared to characterize the Chancay in this region.

Dunn, Stacy [98] see Heaton, Ashley K.

Dunning, Nicholas [97] see Jones, John G; [139] see Storozum, Michael

Duran, Victor [161] see Glascock, Michael D.

Durán, Victor [123] see Giesso, Martin

Durant, Adam [183] see Eren, Metin I.

Dussubieux, Laure (Field Museum of Natural History), Mark Golitko (University of Illinois at Chicago), Patrick R. Williams (Field Museum of Natural History) and Richard Cox (University of Quebec at Chicoutimi)

[121] *ICP-MS with Adaptable Chamber Laser: Quantitative Analysis of Glass, Metal and Ceramic Artifacts in the Museum Environment*
Commercially available lasers used with Inductively Coupled Plasma – Mass Spectrometer allow the sampling of small objects with a high throughput. An experimental adaptable cell laser ablation system was recently developed for the characterization of archaeological specimens without the necessity to destructively subsample whole artifacts that will not fit in a standard laser chamber. The acquisition of such a laser system reduces the risk of biased samples that a selection of only small or already broken objects could introduce. A

rigorous testing program was implemented in order to test the new laser system on several different matrices (ceramic, glass, metal).

Dussubieux, Laure [121] *First Chair*; [121] *First Organizer*; [121] see Sharratt, Nicola O.; [121] see Cisse, Mamadou; [121] see Vaughn, Kevin J.

Duwe, Sam (University of Arizona)

[19] *Coalescence, Continuity, and Change in the Tewa Basin, New Mexico*

The large Classic Period (AD 1325-1600) sites in the Tewa Basin of northern New Mexico have confused archaeologists interested in population movement over the past century with their sprawling architecture and long ceramic chronological sequences (in some cases over three centuries). This paper will address the results of a ceramic analysis from surface contexts of 10 sites in the region. By comparing ceramic seriations to detailed site maps it is possible to create a high resolution culture history of population coalescence. This research is imperative to conduct studies of cosmological and ecological adaptation during this period of social and residential upheaval.

Dwyer, Benjamin [22] see Johnson, Angela K.

Dwyer, Rachel (SUNY-University At Buffalo)

[247] *A Madder of Grave Importance*

Bedstraw (*Galium* sp.), a member of the Madder family, is one of few sources for a stable red dye in North America. The vast quantities of bedstraw seeds recovered from the Curtwright site in Western New York are indicative of the utilization of the plant for this purpose. The production of red dye was possibly important to the political economy of Pre-Iroquoian people and a way Pre-Iroquoian women mediated violence during a time of increased warfare.

Dye, David (University of Memphis)

[59] *An Early Mississippian Mortuary Complex at the Gray Farm Site(40SW1) in Stewart County, Tennessee*

Charles H. Nash excavated the Gray Farm site (40SW1), located in Stewart County, Tennessee, in 1939 as part of the UT-WPA-TVA work in Kentucky Lake. Nash, assisted by John Alden and George W. Brainerd, investigated an Early Mississippian upland mortuary complex which exhibited a terraced landscape, multiple stage burial mounds, bundle burials, and mortuary scaffolds. At the time of excavation Nash believed the floodplain village to be "Tennessee-Cumberland" Mississippian, but was perplexed about chronological affiliation of the upland mortuary complex. T.M.N. Lewis and Madeline later defined the mortuary area as a Late Woodland Harmon's Creek affiliation.

[115] see Sharp, Robert V.

Dyrdahl, Eric [45] see Kling, Amber M.

Dziedzic, Erica (Michigan State University)

[226] *The Social Life of Art and Death: Interpreting Cultural Behavior from the Relationship between Ceramic Design Structure and Spatial Mortuary Patterns*

This paper evaluates how ceramic design structure can illuminate social differentiation in a cemetery context, testing the strength of a different line of mortuary evidence. The social role of design structure within a mortuary system has not been explored, yet it is a rich resource. The goal of this paper is to systematically examine ceramic design structure against the spatial order of burials as a comparison of mortuary data sets in the burial program of the Late Intermediate Period Chiribaya in Peru. These data will be compared with previous bioarchaeological interpretations.

Earle, Timothy (Northwestern University)

[149] *Political Economy and Specialization in the Benta Valley: Broader Comparatives in the Bronze Age World*

Specialization is central to the political economy. This paper examines the settlement patterning of the Benta Valley, exploring

specialization and trade in the Carpathian Basin during the Middle Bronze Age. There in the Benta Valley, control over particular products, such as animals, appears to be increasingly centralized to central settlements, while other specialization, such as in ceramics, was not centralized; ceramic production and exchange involved numerous, local producers. Why this happened will be analyzed, as well as how control over exchange, rather than over production, apparently drove a restructuring of the political economy and an increase in social stratification.

[145] *Discussant*

Earley, Caitlin (University of Texas at Austin) and Julia Guernsey (University of Texas at Austin)

[260] *Framed: The Textile Associations of Preclassic Geometric Bands*

This paper explores the symbolic repertoire of framing bands, geometric motifs, and their contexts in the Preclassic. While variously interpreted as sky bands, terrestrial bands, or schematized monster maws, the bands share a vocabulary of forms and structuring principles. We explore how these forms and structuring devices relate to textile and costuming traditions, and consider the conceptual overlap between these mechanisms for delineating space, wrapping scenes, objects, or persons, and literally framing narratives or imagery. These framing bands also extended into the architectural domain, evidencing the fluidity of this motif as a communicative device that may have carried locative associations.

Eaton, Marietta (NLCS - Bureau of Land Management), Rebecca Lasell (Bureau of Land Management) and Robin Burgess (Bureau of Land Management)

[75] *The National Landscape Conservation System and Cultural Resource Management: BLM's Multiple Use Conservation Mandate*

The BLM's National Landscape Conservation System (NLCS), created in 2000, is now poised to celebrate its 10th anniversary and the codification of its existence in 2009 with PL 111.11. With more than 27 million acres under this management umbrella the NLCS manages monuments and national conservation areas, wilderness and wilderness study areas, wild and scenic rivers, and national scenic and historic trails. Within these designations are important and diverse cultural resources. This poster will summarize archaeological and historic sites and scientific projects, as well as, challenges in managing these resources within the framework of BLM's conservation mandate in the context of multiple use.

[75] *First Chair*

Ebbitt, Alicia (Indiana University)

[196] *"Werl Mi Haad Den, Veri Haad": Student Perspectives about History, Archaeology, and the Ancient Maya*

A significant component of many public archaeology projects is a focus on primary-school education. To develop culturally relevant pedagogy and understand the impact and value of knowledge about history and cultural heritage, it is important to explore ideas students already have about these concepts and how students interpret and transform information they gather. In North-Central Belize, through contact with archaeological resources, research projects, and curriculum initiatives, students develop ideas about and interests in "the Olden Days," archaeology, and "the Mayas." In this paper I discuss key themes in student knowledge and some origins and potential implications of their ideas.

Ebeling, Jennie (University of Evansville)

[216] *The More They Stay the Same: Use of the Bible and Palestinian Ethnography in the Study of Ground Stone Tool Use in the Bronze and Iron Age Southern Levant*

This presentation will begin with an overview of the use of the Hebrew Bible and nineteenth and twentieth century Palestinian ethnography by archaeologists to illustrate ground stone tool use in the Bronze and Iron Ages. Due to changes in grinding technology, recent ethnography does not necessarily inform our understanding of the archaeological material; likewise, the biases of the biblical writers make the texts unreliable for reconstructing ground stone tool use in

the past. I will demonstrate how use-wear analyses can be used to reconstruct function, and suggest reasons why archaeologists essentially overlook the artifacts when discussing food preparation activities.

Eberl, Markus (Vanderbilt University)

[218] *Real/Fictive Lords/Vessels. A List of M.A.R.I. Lords on the Newly Discovered Andrews Coffee Mug*

E. Wyllys Andrews V's private collection of priceless Mesoamerican artifacts now holds a Maya ceramic vessel with a hieroglyphic inscription. While its recent provenance is known – it was presented to him during his retirement party –, its archaeological context remains obscure. I discuss the vessel and its long glyphic text. The vessel forms part of the Dynastic Vase tradition and celebrates the history of the M.A.R.I. lords. Comparable king lists on Dynastic Vases are of obscure historical value because their kings are rarely attested in other sources. Can they be taken for real?

Eckerle, William [234] see Cannon, Kenneth P.

Eckert, Suzanne (Texas A&M University) and William D. James (Texas A&M University)

[161] *Using LA-ICP-MS to Determine Production Provenance for Basalt Tempered*

The Rio Abajo region in central New Mexico was home to more than 20 large Pueblo villages during the 14th century. Potters in these villages produced basalt tempered pottery that has been recovered throughout the Rio Grande region. Due to the lack of successful petrographic provenance studies, archaeologists have been unable to pinpoint production of this pottery to a specific village or group of villages. A pilot study applying LA-ICP-MS to pastes and basalt tempers from Rio Abajo pottery was done to see if this technique can be used to determine production provenance in this region of the American Southwest.

Edmonds, Jason (Mississippi State University)

[236] *Mobility and Population Change in Northeast Mississippi: An Object-Based Seriation of Projectile Points as a Relative Paleodemographic Indicator*

Considerations of mobility have primarily focused on the differences in and among the kinds of mobility, rather than addressing why settlement patterns were mobile. This study addresses such questions within evolutionary theory. Using the concept of bet-hedging/waste, it is argued that mobility was selected for its population limiting properties. Relative changes in the numbers of projectile points in seriated classes were taken to indicate relative population change. The result suggests that rapid growth occurred only with the abandonment of mobility in the Gulf Formational period and indicates that in this instance mobility was a bet-hedging behavior.

Edwards, Matt (University of California, Santa Barbara)

[127] *Building a Landscape of Power: Middle Horizon Infrastructure of The Upper Nasca Valley*

During a period of rapid territorial expansion that began around AD 750, the Wari empire engaged in extensive construction of administrative and economic infrastructure throughout the Peruvian Andes. While these administrative centers, roads, and agricultural improvements surely served specific functions; when taken together they also would have formed an imposing political landscape upon which the power of the state to shape the world would have been clearly manifest. This paper will present evidence from recent research conducted at the site of Pataraya and its environs in the Nasca headwaters region of southern Peru.

Edwards, Richard (UW-Milwaukee)

[105] *GIS Catchment Analysis of Oneota Settlement Patterns near Lake Koshkonong, Southeast Wisconsin*

A GIS is used to conduct an environmental catchment analysis around four known Oneota sites in the Lake Koshkonong region of Southeastern Wisconsin; the Crescent Bay Hunt Club site (47JE904),

the Schmeling site (47JE833), The Twin Knolls site (47JE379), and Carcajou Point site (47JE814). Each of these sites contains an Oneota occupation dating to circa A.D. 1200-1400. The GIS is used to illustrate the environmental variables that were most important in determining settlement locations for the Oneota inhabitants of the region. To accomplish this goal, data on Oneota resource exploitation is combined with a model of prehistoric environmental conditions of 13th Century Lake Koshkonong. The model is based on examination of the General Land Office Survey notes and maps as well as study of the soils surrounding the four sites.

Edwards, Susan (Desert Research Institute), Carol Shimer (Desert Research Institute), Cheryl M. Martin (Desert Research Institute), Maureen L. King (Desert Research Institute) and Scott D. Ferguson (Desert Research Institute)

[211] *The Density Dilemma: The Challenge of Defining, Interpreting, and Managing Diffuse Lithic Scatters in the southern Great Basin* Archaeologists still struggle with how best to define and interpret diffuse lithic scatters within local and regional contexts, while government agencies have been charged with managing these important low-density resources. Typically, diffuse scatters are treated as discrete "sites" with boundaries determined by changes in artifact density. This approach focuses on higher-density concentrations within a continuous distribution while masking the nature of the intervening landscape. Searching for better balance between research goals and management needs, we examine a siteless survey approach and the utility of the archaeological district to investigate diffuse lithic scatters in three geologically distinct areas of southeastern Nevada.

Eeg, Holly [81] see Bowser, Brenda J.

Eerkens, Jelmer [161] see Lipo, Carl P.; [4] see Tushingham, Shannon

Efferson, Charles [197] see Richerson, Peter J

Efremov-Kendall, Nicholas (Fulbright Student 2009-2010, Ukraine)

[32] *Landscapes of Transition: Bronze to Iron Age in the Western Eurasian Steppe*

The Bronze to Iron Age transition in the Ukrainian steppe is associated with large-scale changes in settlement patterning, domestic economy, and social organization. Traditionally, this shift has been attributed to an ill-defined climatic shift that is used to explain an observed reduction in the number of known sites and the transition to mobile pastoralism. Both phenomena are possible responses to climatic shifts, however the two prevalent theories explaining these changes rely upon opposing climatic scenarios, underscoring the problem of simplistic climatic models. This paper explores these changes from a landscape perspective, attempting to break the circular arguments of previous approaches.

[32] *First Organizer*; [32] *First Chair*

Egan-Bruhy, Kathryn (Commonwealth Cultural Resources Group, Inc.) and Mark Bruhy (USDA Forest Service)

[70] *New Perspectives on the "Terminal Woodland" in Northern Wisconsin*

In northern Wisconsin, and elsewhere in the Canadian Biotic Province, late prehistoric populations have been referred to as "Terminal Woodland," distinguishing them from the agrarian Late Woodland populations to the south. Within the past 15 years, our understanding of the cultural landscape of the late prehistoric period in northern Wisconsin and surrounding areas reflects greater cultural diversity than was formerly recognized and a greater dependence on horticulture than was thought to exist in the "northwoods." This paper will briefly review new information relating to these new understandings.

Egan-Bruhy, Kathryn [150] see Weir, Donald J.; [150] see Hambacher, Michael J

Egeland, Charles [256] see Byerly, Ryan

Ehlers, Katherine (Museum of Texas Tech University) and Eileen Johnson (Museum of Texas Tech University)

[72] *Native American Petroglyphs on the Llano Estacado Escarpment* Rock art provides powerful representations of past populations and landscapes. Panels on sandstone cliffs at a ranch near Post, Texas display influences of at least two native populations present on the Southern High Plains. Variations in the style of structures, anthropomorphic and zoomorphic figures, and differences in the display of interaction between elements, indicate the influence of Southwestern and Plains peoples in the area. Specific elements that demonstrate different authorship include structures, a possible three-toed turtle, possible representations of agriculture, and people. Superimpositions show temporal differences, indicating that different groups influenced or were responsible for the creation of these petroglyphs.

Ehrhardt, Kathleen (Illinois State Museum)

[102] *The Protohistoric Copper-base Metal Industry from New Lenox* Over 170 pieces of copper base metal have been recovered from securely dated early protohistoric contexts at the New Lenox site. Formal, technological, compositional, and comparative analyses reveal that at least some of artifacts in the industry occur both in earlier late prehistoric and in later protohistoric assemblages documented elsewhere in the region. Native and European-derived copper-base metals are used to manufacture New Lenox artifacts, and the technological means through which the metals are manipulated appear to remain consistent throughout these critical periods.

[255] *Discussant* [102] *Second Organizer*

Ehrhardt, Kathleen L. [102] see Lurie, Rochelle

Eiler, Lorraine [164] see Rankin, Adrienne G.

Eiselt, B. Sunday (Southern Methodist University), Katy Pocklington (Southern Methodist University) and Nicola Muchnikoff (Southern Methodist University)

[193] *Vecino Archaeology and the Politics of Play* Francis Swadesh identified an 18th century vecino cultural pattern, which after American occupation, retracted into the isolated hills and tributary valleys of the northern Rio Grande. This paper investigates the impacts of the American invasion on vecino culture through a consideration of children's artifacts and fantasy play. As children were gradually excluded from the workforce and drawn into the home, they were simultaneously pulled into an expanding commercial market and public educational realm. Elders today observe that this historical process has disenfranchised local youth from traditional village life in the St Francis of Assisi Parish, New Mexico.

Eiselt, B. Sunday [193] *First Organizer*; [193] *First Chair*

Ek, Jerald (SUNY Albany)

[134] *Changing Patterns of Ceramic Sphere Affiliation in the Río Champotón Drainage, Campeche, Mexico*

Recent investigations of ceramic assemblages from sites in the Río Champotón drainage provide important information concerning shifting spheres of influence and long-distance exchange among polities in the Gulf Coast periphery of the Maya Lowlands. These data reflect a shift from regional, inland-focused interaction spheres to larger-scale, international linkages via coastal trade routes by the end of the Late Classic Period. This is most clearly indicated by participation in the Canbalam ceramic sphere, which encompassed coastal trade centers between Yucatan to Tabasco. These changes were part of a general pattern of increasing pan-Mesoamerican cultural linkages that characterized the Terminal Classic/Epiclassic period.

El Hajraoui, Mohammed [129] see Schurmans, Utsav A.

Eldridge, Kelly (U.S. Army Corps of Engineers) and Margan Grover (Bold Peak Archaeology)

[164] *Salvage Archaeology at the Snake River Sandspit Site in Nome, Alaska*

In 2005, the U.S. Army Corps of Engineers began constructing a new harbor entrance channel in Nome, Alaska. During construction, a late prehistoric semi-subterranean housepit was identified before it was bulldozed into the ocean with most of the associated artifacts. In 2006, another housepit and a midden were uncovered and subsequently excavated. This well-preserved Late Western Thule site was salvaged through the combined efforts of the Army Corps, volunteers from the Nome Eskimo Community and the City of Nome.

Elia, Ricardo (Boston University) and Amalia Perez-Juez (Boston University)

[82] *Teaching Heritage Management in an Archaeological Field School: An Example from Menorca*

Archaeological field schools traditionally train students in the practical skills of survey, excavation, recording, and laboratory analysis. With their direct exposure to real-world sites and contexts, field schools may also offer valuable hands-on opportunities for students to experience, study, and participate in heritage management, including topics like cultural tourism, outreach, preservation, and management. We describe our experience introducing a heritage management component to the 2009 Boston University Archaeological Field School in Menorca, Spain, an island with rich and diverse archaeological, historical, and natural resources.

Elia, Ricardo [34] see Ostovich, Marta E.

Ellenberger, Katharine (Binghamton University)

[88] *Building Community Through Archaeology: A Method for Indigenous Community Involvement in Archaeology on the Northwest Coast*

In the past decade it has become clear that there are significant intellectual and personal benefits to involving indigenous communities in archaeological research. In order to demonstrate that community archaeology is within the reach of all archaeologists, the process of appropriate community engagement should be described and made available in the archaeological community. In this spirit, I will outline the process that has been used to promote collaboration between the Lummi Nation and Western Washington University archaeologists. The project is a realistic guideline for increasing tribal involvement in archaeology without starting a new excavation project.

Ellick, Carol (University of Oklahoma) [180] Discussant [63] First Organizer; [63] First Moderator

Elliott, Elizabeth (University College Dublin)

[106] *Does Archaeology Matter? Young Adult Perspectives on Irish Archaeology*

This case study of 18-26 year olds in Dublin uses a combination of interviews and surveys to answer the question: Does archaeology matter to Ireland's young adults? By targeting three key areas: 1. Interest, Knowledge, and Participation, 2. Archaeology and Identity, and 3. Archaeology and Society, archaeologists can understand the role archaeology plays in young adults' lives and make informed decisions for the future of archaeology. By synthesizing these findings with previous research in North America and Europe, we can begin to identify the global trends and social phenomena that impact public perceptions of archaeology and consequently, archaeology itself.

Elliott, Michael (Jemez Mountains Research Center)

[152] *Over the Hills and Far Away: A Perspective on the Gallina to Jemez Migration Model*

For more than 70 years, archaeologists have speculated that residents of the Gallina Culture area of north-central New Mexico migrated to the Jemez Springs, New Mexico region in the late 13th century. This paper presents an examination and evaluation of the archaeological, osteological, and ethnographic evidence for this

model.

Ellis, Christopher (University of Western Ontario), Dillon Carr (Michigan State University) and Thomas J. Loebel (CAGIS - University of Illinois, Chicago)

[224] *The Younger Dryas and Late Pleistocene Peoples of the Great Lakes Region*

This paper examines possible effects of the Younger Dryas on Pleistocene cultures of the Great Lakes. Examining these effects requires precise temporal control over environmental and cultural events, which is currently lacking. Moreover, in some areas, such as the eastern Great Lakes, observed changes may correlate with factors not related in a direct manner to the Younger Dryas event like forest succession. Nonetheless, in more northern areas of the western Great Lakes region there are some suggestions that after initial penetration by Clovis-like groups use of these areas was minimized, perhaps in response to the Younger Dryas.

Elson, Mark (Desert Archaeology) and Henry Wallace (Desert Archaeology)

[128] *To Burn or Not to Burn: Regional Variability in Pre-Classic Hohokam Pit Structure Abandonment*

The Pre-Classic period (A.D. 550-1150) Hohokam of southern Arizona lived in semi-subterranean wood and adobe pithouse structures, generally arranged in family-level groups around an open courtyard. Partial and complete structure burning has long been known from this area, with little consensus among archaeologists as to its nature. Suggested causes include ritual-, accidental-, and conflict-related events. Data on structure burning from 400 pithouses throughout the Hohokam area indicate that this practice was not homogeneous, but locally specific, suggesting the possibility of intraregional differences in ritual. This study supports previous research suggesting a high degree of behavioral diversity within the Hohokam area.

Elston, Robert (University of Nevada, Reno), Dongju Zhang (Key Laboratory of West China's Environmental System (Ministry of Education), Lanzhou University, Lanzhou, Gansu, 730000, P.R.C) and Guanghui Dong (Key Laboratory of Western China's Environmental Systems (Ministry of Education), Lanzhou University, Lanzhou 730000, China)

[177] *Human Responses to the Younger Dryas in China*

In the Younger Dryas (12.9-11.7 ka), a weakened summer monsoon retreated to the south while winter westerlies became stronger, making China colder and dryer (especially in the north), and affecting the abundance and distribution of plant and animal resources used by humans. This paper critically reviews previously proposed models of human response to these changes (including the inception of agriculture) and suggests strategies for further research.

Elswick, Erika (Geological Sciences, Indiana University) and Tammie L. Gercke (Glenn A. Black Laboratory of Archaeology, Indiana University)

[257] *Soil Characteristics of the Angel Mounds State Historic Site: Providing Context for Artifact Interpretation and Preservation Potential*

Soil characteristics of the Angle Mounds provide a record of the environment through time, and provide context for the interpretation of the preservation of archaeological remains. Grain size distribution and geochemical analyses suggest they are dominated by fine sand, silt and clay-sized particles and are mineralogically homogeneous composed of illite, micas, quartz, chlorite, kaolinite, with potassium and plagioclase feldspars. Phosphorous (P) ranges from below detection to 6030 ppm with a mean value of 1690 ± 1600 ppm. The soil effective pH ranges from 4.87 to 6.40 ± 0.45 with a mean value of 5.79.

Elswick, Erika [257] see Gercke, Tammie L.

Emerson, Thomas (University of Illinois) and Timothy R. Pauketat (University of Illinois)

[15] *Rethinking Cahokian Identity*

Contradictory mono-ethnic versus multi-ethnic interpretations of Cahokian identity have emerged in the literature. We suggest that a multi-ethnic model better fits known regional evidence, especially given the shortcomings of past trade models. We review the redundant signatures of extra-regional connections, most notably with the Trans-Mississippi South, and the hints of relocated non-local contingents at Cahokia. We also review Skiri Pawnee ceremonialism and the implications of Caddoan-like fineware pottery in the region, leading us to call for more sophisticated models of Cahokian identities and descendants.

Endo, Naoko [39] *see Smith, Lisa M.*

Eng, Jacqueline (Western Michigan (University), Phillip Walker (University of California-Santa Barbara), Quanchao Zhang (Research Center for Chinese Frontier Archaeology, Jilin University), Shugang Yang (Henan Provincial Institute of Cultural Relics and Archaeology) and Shugang Yang (Department of Archaeology and Anthropology, National University of Mongolia)
[122] *The Arthritic Toll of Warfare, Farming, and Pastoralism among Populations of China and Mongolia in the Zhou Dynasty/Xiongnu Period*

Marked social changes occurred in East Asia during the first millennium BC, especially the latter half. China experienced not only the Zhou dynasty's fragmentation into contentious hegemonic states, but also advances in agriculture and the introduction of iron technology. In the northern steppe frontier, nomadic pastoral cultures arose and one of the strongest confederacies to emerge were the Xiongnu, who posed a threat to Chinese states. Bioarchaeological analysis of arthritic patterns in skeletal collections from sites in China and Mongolia dating to this turbulent time offer insight into the toll of changing subsistence strategies and increased warfare.

[122] *Second Organizer*

Eng, Jordan (Antiquus Archaeological Consultants Ltd.) and Ryan Sagarbarria (Antiquus Archaeological Consultants Ltd.)

[203] *"Pilevenience" – Salvaging Data from A Middle Period Site in the Interior Plateau of British Columbia*

Data are presented from a CRM study conducted on a Middle period site located in British Columbia's Interior Plateau. The nature of the study and inherent abundance of cultural materials recovered is a direct result of "salvage" operations. Diagnostic artifacts recovered represent not only the largest Lochnore phase (5000 to 3500 BP) assemblage, but also the co-occurrence of an associated Lehman phase (6000 to 4500 BP) component. Results from faunal and radiometric analyses are included. These data will enhance our knowledge of the Middle period and the poorly defined cultural and temporal interface between the Lehman and Lochnore phases.

Engelbrecht, William [38] *see Anselmi, Lisa M.*

Enloe, James (University of Iowa)

[119] *Theory, Methodology and Real Work: Applying Binford in the Field*

Lewis Binford has been the most significant figure in archaeology of the last fifty years. He has revolutionized how we think about theory and method, and how we go about doing archaeology. He inspired me to consider graduate school, and launched my career in this field. While problems and theories have come and gone, what has remained as the central core of Binford's influence is his insistence on methodology. His ideas about epistemology have resonated in the work I have tried to accomplish and in the lessons I have tried to pass on to my own students.

[85] *First Organizer*; [85] *Discussant*

Eppich, Keith (Southern Methodist University)

[77] *Tracking the Late-to-Terminal Classic transition at El Peru-Waka: A Ceramic Perspective*

Excavations at the Classic Maya center of El Peru-Waka yield both an unbroken ceramic tradition and occupational sequence that spans

the period traditionally considered the "Classic Maya Collapse." The end of the 8th century sees dramatic changes in political and social structure at this lowland center and holds a unique perspective on the events. Dating and tracking which events took place in which order requires a tight chronological control with especial attention paid to the subtle changes in ceramic slip, paste, and shape found in the site's indigenous potting tradition. These subtle changes are explored here and the results may serve as a metric for other sites in the Peten, regardless of their own events in and around the end of the Classic period.

[77] *see Navarro Farr, Olivia C.*

Equihua, Juan Carlos (CNRS – Universidad de Paris I, UMR 8096) and Veronique Darras (CNRS – Universidad de Paris I, UMR 8096)

[195] *The Pottery Production in Chupicuaro, Guanajuato (Late Preclassic Period): Recent Input of the Techno-typological Analysis of the Painting Vases*

The update of archaeological knowledge on Chupicuaro and a better appreciation of the relationships with the basin of Mexico, require to specify chronological data through the ceramic analysis correlated with the stratigraphic sequences and consolidated by radiocarbon dates. Recent excavations in the valley of Acambaro provided an abundant collection of ceramics which allow to precise the typology firstly proposed by M. Porter. Some of the problems and results of the techno-typological approaches are presented with a special focus towards the painted recipients and the transition between the phases corresponding to the development and peak of Chupicuaro (600 - 100 B.C.).

Erdman, Katherine (University of Minnesota - Twin Cities)

[183] *Weaving the Past and Present: Bringing a Modern Perspective to Understanding Ancient Artifacts*

Bringing non-academic perspectives into analysis remains a somewhat unconventional approach in archaeological research. During the spring of 2009, an assemblage of bone objects from Tel Anafa in Israel was examined for the first time by archaeologists. The objects were initially described as 'weaving implements' based on comparative examples from other excavations, but their exact function remained unclear. With the knowledge and skill of members from the Weavers Guild of Minnesota, it was possible to compare the ancient tools with modern examples to understand the role the morphology of the implement played in determining how it was used by ancient weavers.

Erek, Cevdet (Dr.Cevdet Merih EREK) and Benjamin S. Arbuckle (Baylor University)

[62] *A Living Place for the Last Hunters and Gatherers: The Epi-Paleolithic occupation of Direkli Cave (Kahramanmaraş, Turkey)*

Recent work at Direkli Cave has uncovered important new evidence for an Epi-Paleolithic microlith-producing tradition in the northeast Mediterranean region of Turkey (Kahramanmaraş province). Although centrally located with respect to better-known Epi-Paleolithic traditions in the western Taurus, Levant, and Zagros respectively, the Epi-Paleolithic occupation of this region is virtually unknown. In this paper we discuss recent finds from Direkli including the regional affinities of the lithic industry, an early example of figurative art, and also mobility and subsistence practices.

Eren, Metin (Southern Methodist Univer), Adam Durant (Cambridge University) and Christina Neudorf (University of Wollongong)

[183] *An Experimental Examination of Animal Trampling in Dry and Saturated Substrates in Kurnool District, Andhra Pradesh, South India*

Every archaeological site presents its own unique formation processes. Thus, when it comes to archaeological experiments that model these processes, the more the better. This poster presents the motivation, procedures, and results of an experiment conducted in February 2009 that examines animal trampling in dry and saturated substrates in South India. This experiment provides an important middle-range data set for future interpretations of South Indian sites,

and comparisons to other trampling experiments allow a "big picture" look at the minor and major influences trampling may have on artifact context and appearance.

Eren, Metin [256] *First Organizer*; **[256]** *First Chair*; **[256]** see Flores, Jodi R.; **[74]** see Willis, Lauren M.

Erickson, Clark (University of Pennsylvania)

[222] *Historical Ecology of Totorá Reeds in Lake Titicaca*
Andean peoples are often portrayed by archaeologists as powerless in the face of climatic fluctuation or degraders of their environment. In contrast, historical ecologists and landscape archaeologists show that they created and managed landscapes effectively. Although misinterpreted as wild, the natives have been cultivating and managing totora reeds for millennia. Totorá is used for roofing, boats, mats, basketry, floating settlements, and food, and thus, critical for dense populations in the development of complex societies in the Lake Titicaca basin. I compare the demand for totora to the distribution, reproduction, growth rates under human management to evaluate sustainability and environmental impact.

Erickson, Luke, Courtney Stoll (Environment and Archaeology, LLC) and Michael Conner (Associate Curator, Dickson Mounds Museum)

[150] *Temporal Affiliation or Geographical Situation: Ceramics of the Bay Creek Drainage, Lower Illinois River Valley, Pike County, Illinois*
Site 11PK1702, Pike County, Illinois, is best described as an "Edge-Area" site, straddling the Middle and Late Woodland Period shift. Ceramic analysis identified 35 vessels: 24 Middle Woodland, 9 White Hall, or at least Late Woodland, and two indeterminate vessels. Pike/Baehr and White Hall/Weaver are the predominate types represented. However, almost no Havana ceramics or transitional Havana-Pike to White Hall ceramics were identified. It appears that there was a decorative and technological break between the two components at the site. The almost complete lack of Havana ceramics and its implications for Bay Creek will be explored.

Eriksen, Berit (Centre for Baltic and Scandinavian Archaeology)
[177] *Socioeconomic Responses to the Younger Dryas event in Late Palaeolithic Scandinavia*

Due to the proximity of the Scandinavian ice sheet and the damming and subsequent deluge of the Baltic Ice Lake, the younger dryas event made itself particularly hard felt among the pioneer settlers of northernmost Europe. Despite severe climatic conditions, however, it seems that the process of colonization continued and several scholars have argued that even the, now submerged, North Sea continent (Doggerland) was settled by the Ahrensburgian hunters. The present paper will review recent Scandinavian research dealing with the timing and nature of the colonization process in relation to the younger dryas environmental preconditions.

Erlandson, Jon (University of Oregon), Phillip Walker (University of California, Santa Barbara), Todd Braje (Humboldt State University), and Tom Rockwell (San Diego State University)

[122] *Tuqan Man: Discovery, Context, and Chronology of a 9500 year old PaleoAmerican Skeleton from San Miguel Island, California*
In 2006, the top of a human cranium was found eroding from an arroyo wall over three meters below the modern surface, stratigraphically below an Early Holocene old shell midden on San Miguel Island. After consulting with representatives from Channel Islands National Park and the Chumash Indian Tribe, a salvage excavation documented that the skull was from an adult male buried in a flexed position in a pit dug below a 9500-year-old shell midden. Other than two large stones laid over the skeleton, no artifacts were found. We describe the discovery, context, chronology, and implications of the Tuqan Man discovery.

Erlandson, Jon [224] see Reeder, Leslie A.; **[122]** see Kuzminsky, Susan C.

Erlenwein, Eileen (University of Arkansas), George Avery

(Stephen F. Austin State University), H. Pete Gregory (Northwestern State University, Natchitoches), Jami J. Lockhart (Arkansas Archaeological Survey) and Michael Hargrave (ERDC CERL)

[73] *New Findings at Presidio Los Adaes, Louisiana: Results of Large-Area Geophysical Survey and Targeted Excavations*
Los Adaes, a Spanish military post, mission, and settlement located in northwest Louisiana, has been investigated with large area geophysical survey followed by test excavations. Historical documents, including a 1720 architectural plan and a 1767 scaled map, and findings from previous excavations, allow for several hypotheses to be tested by analysis of the geophysical maps and additional targeted excavations. The site is historically important as a center for economic and social interactions among French, Spanish, and Caddoan peoples ca. 1721-1773. Large area (.7 to 1.37 hectare) magnetic gradiometry, electrical resistance, conductivity, magnetic susceptibility, and ground penetrating radar surveys were conducted there in May, 2009, followed by test excavations during the ensuing winter.

Erwin, John [60] see Holly, Donald H.

Escalante, Nancy

[143] *Concepto histórico del cuerpo femenino dentro de los cacicazgos de la tradición cultural Valencia (1200-1500 ap)*
Con la incorporación de categorías como reproducción y producción de mantenimiento, se plantea un análisis del marco histórico en el cual se produjeron las figuras femeninas de la Tradición Cultural Valencia (1000 – 1500 a.P.). Estas constituyeron un elemento central de la iconografía de las sociedades de la región centro norte de Venezuela. Se persigue vincular algunas nociones sobre las representaciones del cuerpo femenino y el control sobre la reproducción, impartidos quizás por los linajes dominantes del cacicazgo, a través de los cuales se naturalizaron las relaciones asimétricas entre hombres y mujeres y las concepciones sobre lo femenino y la mujer.

Escamilla Ojeda, Barbara (Centro INAH Yucatán/AYERCPE A.C.) and Pedro Delgad Kú (Centro INAH Yucatán/AYERCPE A.C.)

[20] *La Obsidiana del Barrio Itzmal Ch'en de Mayapán, Yucatán*
Las excavaciones arqueológicas realizadas en el barrio del Grupo Itzmal Ch'en, han producido una muestra de artefactos de obsidiana, observando significativas diferencias entre los contextos hallados en el centro del sitio. Este material fue una de las materias primas preferidas para la fabricación de herramientas en la época prehispánica. La relevancia del estudio de los objetos de obsidiana, es de suma importancia para el entendimiento del comercio maya prehispánico, por tal motivo la presencia de obsidiana en Itzmal Ch'en es evidencia importante del intercambio entre los habitantes de Mayapán y el comercio de larga distancia durante el período Posclásico.

Eschbach, Krista (Arizona State University)

[254] *Resituating Northwest Florida Presidios within a Broader Context through Investigations at the Spanish Colonial Port of Veracruz, Mexico*
Between 1698 and 1763, Spanish officials conscripted and sent hundreds of Afromestizos from New Spain to Northwest Florida through the colonial Port of Veracruz. By the eighteenth century, the population of New Spain had experienced almost two centuries of cultural and biological miscegenation between Spaniards, Mesoamericans and Africans. Fifteen years of research at the Pensacola presidios has generated a breadth of data and discussion. Through analysis of historical and archaeological data recovered from investigations of Afromestizo barrios at the Port of Veracruz, this paper will begin to resituate Pensacola presidios within a broader temporal and geographical context.

Escoriza, Trinidad (Universidad de Almería- Spain) and Pedro Castro Martínez

[143] *Investigaciones sobre el trabajo y la explotación social en la*

Prehistoria del Area Mediterránea Ibérica. Feminismo, materialismo e historia

Para nuestra investigación prehistórica del Mediterráneo Ibérico, la teoría social y arqueológica basada en el materialismo, el feminismo, la teoría crítica y el realismo científico han sido claves. Nuestras preguntas se enfocan al trabajo social de mujeres y hombres, y la existencia o no de relaciones sociales de simetría-reciprocidad o dominación-explotación. La lectura social del arte rupestre levantino es un resultado conspicuo, así como el estudio de las condiciones materiales de la producción social y relaciones económicas y político-ideológicas en las sociedades de la región. Nuestro interés se centra en colectivos sexuales (mujeres) y sociales (servidumbre, grupos dominados) tradicionalmente desatendidos.

Eskenazi, Suzanne (HRA, Inc. Conservation Archaeology) and Heidi Roberts (HRA, Inc. Conservation Archaeology)

[144] *Cactus Processing in the St. George Basin, Washington County, Utah*

In April 2009, HRA conducted data recovery at site 42Ws4832, located on land owned by the State of Utah, School and Institutional Trust Lands Administration near Bloomington, Utah. The site contains eight slab-lined thermal features, which were visible on the surface only as fire-cracked rock scatters. The site is situated in an area containing few resources except cactus. HRA hypothesized that cactus species were the likely subsistence focus of the site's prehistoric occupants, and the pollen record suggests that cholla, prickly pear, grass seeds, and Chenopodiums were processed in the features. Radiocarbon samples returned dates of 990 +/-15 BP and 1175 +/-15 BP. HRA conducted experimental cholla roasting in the fully excavated features and sent the roasted cholla for nutritional analysis.

Espinosa, Silvana [47] see Belardi, Juan B.

Esqueda, Marcela (University of Pittsburgh)

[258] *Playing with Fire: Ceramic Production at a Rural Site in Northwestern Honduras*

While similarities in artifact assemblages exist within the valleys bordering the Rio Chamelecon, the manufacturing processes utilized for some of these artifacts varies considerably. Recent research at the site of Las Caleras in the Cacaupala Valley of Northwestern Honduras provides an example of how residents at a small rural site with environmental conditions unsuitable for pottery production, attempt to integrate themselves in an extended network of pottery producers situated along the Rio Chamelecon. This paper compares the manufacturing process of pottery at Las Caleras to other neighboring sites, both large and small, and discusses the possible implications for socio-political practice.

Estabrook, Richard [219] see Miller, Sarah

Euber, Julie (Arizona State University) and James Bayman (University of Hawaii at Manoa)

[163] *Bioarchaeology in Guam: Trends and Current Conditions*

In the coming years, the American military base on Guam will expand creating even more archaeological projects than in the past. With this in mind, it is important to determine which information collected from human skeletal remains will benefit future question-oriented bioarchaeological research. In this study, I compiled publications employing methods from bioarchaeology and physical anthropology and analyzed topical trends pertaining to Guam's past. Based on the results, I then suggest several potential avenues for future bioarchaeological studies and explore the plausibility of a database that would compile Chamorro mortuary and skeletal information.

Euraque, Dario (Trinity College) [65] Discussant

Evans, Damian (University of Sydney)

[153] *The Development of Urbanism and Water Management Systems in Early Cambodia*

The publication in 2007 of the first comprehensive map of settlement

and infrastructure at Angkor represents the culmination of nearly two decades of research into Cambodia's medieval capital by members of the Greater Angkor Project. More recently, the methods and theories applied at Angkor have been used to uncover, map and analyse residential patterning and water management systems around several other early temple complexes in Cambodia. This paper presents an overview of this ongoing research, and traces the development of Khmer hydraulic engineering over time and within a range of different environmental contexts.

Evans, Madeleine (Illinois Transportation Arch. Research Program) and Dale McElrath (Illinois Transportation Archaeological Research Program)

[146] *Early Occupations in the Midwestern Confluence Region*

This paper explores new evidence for the Late Paleoindian/ Early Archaic transition in southwestern Illinois. Excavated sites pertaining to the late Pleistocene and Early Holocene occupation of the American Bottom are rare because of the dynamic nature of the terrain in this major confluence area of the Mississippi, Illinois, and Missouri rivers. Four recently excavated sites in the northern American Bottom underlain by Savannah or Kingston terrace remnants, however, have yielded significant Paleoindian and Early Archaic materials. This paper will examine the CB North, Ringier, Nocht, and Cass sites and discuss their relevance to regional chronology and settlement models.

Evans, Madeleine [83] see Beck, Brenda; [83] see Butler, Amanda

Evans, Susan [88] see Nichols, Deborah L.

Evans, Tim [113] see Rivers, Ray

Everhart, Jennifer [74] see Henecke, Jennifer L.

Evershed, Richard [48] see Pitter, Sharmini

Fábregas Valcarce, Ramón [205] see Miller, Alexandra E.

Fadem, Cynthia (Earlham College), Andrew Moore (Rochester Institute of Technology), Jennifer R. Smith (Washington University in St Louis) and Marko Mendjusic (Republic of Croatia Ministry of Culture)

[9] *Soils & Site Choice in Neolithic Dalmatia*

As the Danilo Bitinj and Pokrovnik sites preserve the landscape context of early farming in Dalmatia, our site-specific geoarchaeology has the unique opportunity to inform the environmental context of earliest European agriculture. Site soils have been farmed for >7000 years, despite atypical chemistry. X-ray diffraction analysis reveals the parent material is silica-rich, despite ubiquitous carbonate terrain. Soil stable isotopic analyses indicate stability in local and regional climate conditions throughout the soil's life. These factors suggest site choice was guided by the differential productivity of these deeper, silica-rich soils relative to the shallow, poorer soils of the surrounding karst terrain.

Faivre, Jean Philippe [8] see Turq, Alain

Falabella, Fernanda (Universidad de Chile) and Oscar Andonie (Universidad de Chile, Departamento de Antropología)

[23] *Manejo diferenciado de materias primas en la producción cerámica Aconcagua de Chile central. Una evaluación mediante análisis de activación neutrónica instrumental*

Hace unos diez años iniciamos una colaboración entre científicos del área de la química y física de la Comisión Chilena de Energía Nuclear y arqueólogos de la Universidad de Chile, con el fin de generar un espacio interdisciplinario de colaboración enfocado a la solución de problemas de procedencia de cerámica prehispánica. Esta interacción se ha mantenido y consolidado desde entonces posibilitando el desarrollo de interesantes proyectos. En este trabajo presentaremos los resultados de los análisis de activación neutrónica instrumental (INAA) orientados a responder preguntas sobre la

organización de la producción cerámica de las comunidades Aconcagua del período Intermedio Tardío de Chile Central y como hemos ido afinando la comprensión del problema, a través del resultado que entregan distintas categorías de vasijas.

Fan, Wenquan [189] *see Pechenkina, Ekaterina*

Fang, Hui [155] *see Li, Min*

Farnum, Julie (Montclair State) and Elizabeth Righter (State Archaeologist, Division for Archaeology and Historic Preservation, St. Thomas, U.S. Virgin Islands)

[23] *Multi-disciplinary integration in the study of the Pre-Columbian Tutu Village, St. Thomas, US Virgin Islands*

The multi-disciplinary integration of experts in many specialty areas is becoming an essential part of significant research studies of past societies. We will discuss aspects of the design and collaboration to complete a large multi-disciplinary project. The Tutu project, a landmark project in Caribbean Archaeology, will be used to demonstrate the integration of work from specialists in physics, geology, chemistry, archaeology and others to studying the Tutu Village Site occupation and reconstructing social organization, diet, technology, and various other important aspects of life on Pre-Columbian St. Thomas, US Virgin Islands

Fash, Barbara (Harvard University)

[153] *Enclosed Courtyards as Watery Realms in Maya and South East Asian Environments*

Although the reservoir systems in SE Asia and the Maya area were the primary urban water retention features, smaller enclosed courtyards that collected and channeled water into the reservoirs allowed for retention on a personal scale. Symbolism often associated with courtyards indicates their importance in architectural layouts and their associations with water and fertility. Comparing from both tropical culture areas, this paper will explore the role the enclosed courtyard played in past social organization and water management, and how their water features can impact sanitation and sustainability issues.

Fast, Natalie (BLM- Canyons of the Ancients National Monument)

[75] *Canyons of the Ancients National Monument Cultural Landscapes*

Established as a National Monument by President Clinton in June 2000, Canyons of the Ancients contains 164,000 acres administered by the Bureau of Land Management. Since 2000, several large block intensive cultural resource inventories have been conducted. These inventories covered 13,500 acres and recorded 1,192 sites. Almost 26% of the Monument has now been inventoried, an unprecedented coverage for a BLM area, and approximately 6,350 sites total are documented. This poster presentation will provide a synthesis of inventory results and new information on Ancestral Puebloan settlement and land use in the Monument.

Fatkin, Danielle (Knox College), Andrew Wilson (University of Liverpool), Benjamin Porter (University of California, Berkeley), Bruce Routledge (University of Liverpool) and Katherine Adelsberger (Knox College)

[92] *In Search of Empire: On-Site Survey at Dhiban (Jordan)*

Researchers excavating multi-period sites have the challenge of how best to understand their site's long-term habitation history without excavating the entire settlement. Dhiban, Jordan, poses similar issues for its excavators. Although archaeologists have worked here for many years, periods of the site's history remain obscure. The current investigation of Dhiban's habitation history is necessary to distinguish between true indications of settlement expansion and abatement and apparent abatement due to lack of data. By combining GIS, surface collection, and test pits with old excavation data, the survey team was able to identify and investigate changes in settlement size.

Fatkin, Danielle S. [259] *see Adelsberger, Katherine A.*

Faull, Kym [55] *see Barnard, Hans*

Fauman-Fichman, Ruth (University of Pittsburgh)

[13] *Alliance or Aloofness in Tlaxcala Prehistory?*

Much has been made of the role Tlaxcala played in the Spanish Conquest of Mexico. Our understanding of Postclassic period Aztec Realpolitik comes predominantly from a Mexica worldview. What we know about Tlaxcala settlement and political orientation in earlier periods is based on Garcia Cook or Snow's work from the late 1960's and 1970's. The role of Cholula or Teotihuacan in earlier time periods is alternately viewed as huge or marginal. The multi-component site of Calcahuas, located close to the present-day city of Tlaxcala in the municipio of Totolac provides a small scale perspective on these issues.

Faust, Katherine (UC Riverside)

[260] *Skin Deep: A Comparison of Formative Period Olmec and Postclassic Huastec Body Iconography*

The Formative period Olmec and Postclassic Huastec cultures of the Gulf Coast Region developed two of the major Mesoamerican iconographic traditions. Separated by time and space, both cultures depicted human bodies "tattooed" with abstract symbols in a unique manner when compared with the material productions of other Mesoamerican cultures. Thus, although the Las Limas statuette and the sculpture known as the Huastec Youth belie distinct aesthetic and ideological systems, they share important stylistic and conceptual features. This paper explores the style and meanings of these bodily inscriptions and considers the possibility of recognizing echoes of Formative period Olmec iconographic style in Postclassic Huastec art.

Fauvelle, Mikael (California State University, Northridge)

[134] *Feasting and Social Complexity at La Blanca, Guatemala*

Feasts provide venues through which individuals and groups can publicly compete for wealth and prestige. As such, competitive feasting provides an attractive model for studying the emergence and development of social complexity. This paper presents data on the distribution, size and form of ceramic feasting vessels at the Middle Formative site of La Blanca, Guatemala. Comparisons between elite house mounds allow for the examination of differences between elite and non-elite consumption and of the role of feasting as a means of elite aggrandizement. Results are contextualized with regard to the regional development of social complexity during the Formative Period.

Faux, Jennifer (SUNY Buffalo)

[169] *Mapping the Past: An Assessment of the Half-Conical Figurine Workshops at Teotihuacan*

The figurine assemblages of Teotihuacan have been intensively studied by archaeologists in the past, yet little is known regarding the Half-Conical figurines; specifically the location of the figurine's workshops. This paper will address the distribution of the Half-Conical figurine assemblages at Teotihuacan in hopes of determining the specific location of Half-Conical workshops at Teotihuacan. Based on the results of the maps the possible location of Half-Conical workshops was evaluated.

Fay, Amelia (Memorial University of Newfoundland)

[27] *Mikak's House: Excavations of a Late Eighteenth Century Inuit Settlement*

In 1767, Mikak was one of nine Inuit captured by British sailors off the coast of Labrador, Canada, and later taken to London, England. Mikak helped secure the Moravian missionaries' proposed land grant, enabling them to establish their first mission station in Nain in 1771. Mikak lived at Khernertok, a sod house settlement on Black Island, Labrador in 1776. Excavations at Khernertok will foster our knowledge of the changing late eighteenth century Inuit economy. The Inuit and their lifeways were not entirely superseded by Europeans; they were active agents in the changing social and

economic landscape of the eighteenth century.

Fayek, Mostafa [123] see Hull, Sharon K.

Fazioli, K. Patrick (University at Buffalo)

[243] *Reassessing the 'Proper Study' of Medieval Archaeology: Twenty Years Later*

Over the past several decades, medieval archaeology (AD 500-1500) has become one of the fastest growing subfields in our discipline, thanks to an increase in urban rescue projects as well as continued interest in identifying the sociopolitical origins of "Europe". More importantly, medieval archaeologists are developing increasingly sophisticated research agendas that transcend just "proving" or "disproving" traditional historical narratives. However, with few exceptions, medieval archaeology remains largely outside broader theoretical and methodological debates within mainstream Anglophone archaeology. This presentation examines some underlying reasons for this unfortunate lack of dialogue, and calls for more concerted attempts to bridge this disciplinary gap.

[243] *First Organizer*; [243] *First Chair*

Feathers, James (University of Washington)

[72] *Dating Buried Soils Below Rock Structures*

Stone circles ("tipi rings") and other rock alignments are common archaeological features in the northern High Plains and adjacent Rocky Mountains. Although important for understanding hunter-gatherer adaptations and settlement in this region, most of these features have not been dated. This poster presents the application of optically stimulated luminescence (OSL) of sediments underneath the rocks in order to date when the rocks were placed. Results from rock structures from the Absaraka Mountains of northeastern Wyoming and from the Kutoyis bison jump site in north central Montana show that reasonable dates can be obtained.

Feathers, James [182] see Rosenstein, Dana Drake

Fedje, Daryl (Parks Canada), Duncan McLaren (University of Victoria), Quentin Mackie (University of Victoria) and Terri Lacourse (University of Victoria)

[224] *Younger Dryas-age Environment and Archaeology on the Northwest Coast*

The paleontological record from Haida Gwaii (formerly the Queen Charlotte Islands) demonstrates a rich terrestrial and marine fauna from early post-glacial to earliest Holocene time and, an archaeological record extending to at least 10,600 14CBP. Although environmental changes were substantial during the Younger Dryas, we have identified three bear hunting sites dating to this time. Elsewhere on the Northwest Coast a small number of sites contain components of this age. Together these sites provide a small window on early human occupation despite most Younger Dryas era shorelines having been drowned to at least 75 m below modern levels.

Fenn, Thomas (University of Arizona), Eric W. Ritter (Bureau of Land Management, Redding), Joaquin Ruiz (University of Arizona) and John T. Chesley (University of Arizona)

[255] *Transmissions and Transformations in Protohistoric Baja California: Copper-Based Metals from Laguna Guerrero Negro*

An assortment of Colonial Period objects were recovered through survey and excavation at protohistoric Cochimi residential sites along Laguna Guerrero Negro (LGN), central Baja California, Mexico. A sample of copper-based objects recovered from residential loci in the LGN region was subjected to compositional and isotopic analyses with the purpose of exploring provenance for the materials. Furthermore, metallographic analyses also were employed to examine modifications and adaptations of materials by indigenes for local usage. Preliminary evidence suggests that LGN brasses were imported, from Europe or possibly East Asia, while unalloyed copper objects originated from other locations, potentially mainland Mexico.

Fenn, Thomas [255] *First Organizer*

Fennell, Christopher (University of Illinois)

[125] *Multivalent Histories and Archaeology of a Diverse Frontier Town*

Several universities, a state museum, and local and descendant communities are collaborating in exploring the histories of a town established in 1836 on the American frontier. New Philadelphia, Illinois was founded by a free African American, and it grew over several decades of existence into an integrated town with residents of African American, European American, Canadian, Irish, and English heritage, among others. This project addresses the challenges and rewards of analyzing past multiethnic and interracial social relationships through interdisciplinary methods, and of serving the interests of diverse groups presently focused on enhancing the national memory and heritage of this town.

Fenner, Lindsay (University of Nevada Reno) and Chrissina Burke (University of Nevada Reno)

[232] *What pluvial beach ridges say about prehistory: New investigations along Pleistocene Mud Lake, Nye County, Nevada*
Investigations at Pleistocene lakes throughout the twentieth century provided a great deal of knowledge concerning the prehistoric peoples of the Great Basin. Continuing this tradition is the most recent work conducted at pluvial Mud Lake, Nye County, Nevada. This project, focusing on beach ridges, geologically active areas, and previously known sites, aims to provide more information concerning the chronology, subsistence, and mobility of the prehistoric inhabitants of this area. With temporal diagnostics of Paleoindian age through the present, Mud Lake continues to be a unique investigation into prehistory.

Fenner, Sr., Dale [234] see Zedeno, Maria N.

Feranec, Robert [4] see Lovis, William

Ferguson, Jeffrey (University of Missouri), Karl Laumbach (Human Systems Research, Inc.), Margaret Nelson (Arizona State University), Stephen Lekson (University of Colorado) and Toni Laumbach (New Mexico Farm and Ranch Heritage Museum)

[192] *Characterization of Carbon-Painted Ceramics from Southwestern and South Central New Mexico*

Carbon-painted ceramics from three sites in southwestern New Mexico have been interpreted as evidence of migration by Northern Pueblo groups into southwestern New Mexico from the Four Corners region during the 13th century. Similar ceramics are found in very limited quantities on El Paso Phase sites in south central New Mexico. Recent compositional analysis of carbon-painted ceramics from the Pinnacle, Gallinas Springs and Roadmap sites has identified characteristic chemical signatures that suggest local production. These data are compared with a limited sample of carbon-painted sherds from an El Paso phase site in the Tularosa Basin.

Ferguson, Jeffrey [144] see LeTourneau, Philippe D.; [200] see Oswald, Chris M.

Ferguson, Jeffrey R. [73] see Naunapper, Linda S.

Ferguson, Scott D. [211] see Edwards, Susan R.

Ferguson, T. (University of Arizona) and Barbara J. Mills

[14] *Reuniting Southwestern Ethnography with Archaeology*
A Southwestern ethnologist recently told us that most of the interesting research in Southwestern ethnography was now being done by archaeologists. This situation has resulted from a number of factors including fewer sociocultural anthropologists working in the Southwest, increasing numbers of archaeologists responding to the demands of heritage management, the desire of tribes to become active partners in research, and renewed theoretical perspectives that require linkages between the past and the present. In this paper we evaluate how and why this situation has come about and what this might mean for the future of Southwestern archaeology.

Fernandez, Gerardo (Universidad Autonoma de Zacatecas)

[23] *La Arqueometría en el Contexto de la Educación Superior*
 A raíz del desarrollo constante de nuevas técnicas en arqueometría, se discuten los enfoques que pueden utilizarse para incluir este corpus de conocimientos científicos en los programas formativos para arqueólogos. Las alternativas se desglosan en dos vertientes: Incluir materias técnicas en los programas correspondientes (lo que involucra una decisión sobre qué especialidades deben ser incluidas en una propuesta curricular limitada), o bien, se puede optar por la interdisciplina incluyendo especialistas de diversas áreas en la formación de estudiantes. Cualquiera sea la ruta que se tome, la inclusión de la arqueometría en los programas formativos debe considerar limitaciones institucionales, el tipo de profesionista que se está formando y el mercado laboral disponible.

Fernandez, Patricia

[191] *Costa Rica Metallurgy: Local Productions and Social Networks Established with CR, Panamá and Nicaragua*
 This paper presents the results of a study in which has been possible to characterize the pre-hispanic metallurgical production in Costa Rica in terms of the provenance ore sources, technology and contextual variables. The analytical study on pre-hispanic metal artifacts and ore sources from Nicaragua, Costa Rica and Panamá use diverse techniques, such XRF and EDS through is possible to identify social networks between Panamá, Costa Rica and Nicaragua. This study pretends to contribute to the discussion about regional interaction related about production and circulation of metallic objects.

Fernández León, Elisa [191] see Aguilar, Ana Cristina

Fernstrom, Katharine (Towson University)

[247] *Archaeology and the Construction of Euro-American Identity: Tiffany & Co. at the 1893 Chicago Exposition*
 The surveys and excavations of Squier and Davis, in the midwestern US, form one cornerstone of 19th century scientific knowledge and debates about pre-European America. These arguments and debates were not limited to scholarly texts, but were also incorporated into popular culture, and into decorative arts created for public display at the 1893 Chicago Columbian Exposition, and for private display in the home. For example, Tiffany & Co. produced one set of silver vases incorporating and contradicting Antiquarian Stephen Peet's religious arguments; these vases underscore the pervasive cultural importance of archaeology to the infrastructure of American identity.

Ferreira, Francisco [18] see McEwan, Colin

Ferring, Reid (University of North Texas)

[231] *Geology and Formation Processes at the Aubrey Clovis Site*
 The Aubrey Clovis site is buried 7.5-9 m below the flood plain of the Trinity River in north central Texas. This large multi-component occupation was situated near a spring fed pond and the river channel. Artifact and faunas in two camps and a bison kill/processing area were quickly buried by fine-grained overbank deposits, preserving an excellent record of features and artifact clusters, documenting a range of activities dated to ca. 11,550 rcbp. Data from soils, bone taphonomy and spatial patterning are used to reconstruct the site formation processes during and after the brief occupations.

Ferris, Jennifer [120] see Andrefsky, William

Ferris, Neal (University of Western Ontario)

[60] *Constant Contacts and Profound Localisms: The Implications of Interregional Interaction for "Contact" Archaeology*
 The importance of interregional interaction in the Eastern Woodlands has been long established. Nassaney, Sassaman, Fox, Jamieson and others point to prosaic, spiritual and non-material manifestations of interaction to underscore how knowing the world - conceptually, materially, cosmologically - beyond the palisade or local drainage helped shape internal innovation among societies. But this growing cosmopolitan sense of the world in the centuries before European contact has been characterized as a period of "profound localism" by

scholars buttressing post-contact assumptions of dramatically changed Indigenous behaviour. Acknowledging the sophistication and antiquity of interregional interaction re-contextualizes European "contact" within this long term and ongoing Native-centric worldview.

Fie, Shannon (Beloit College) and William Green (Beloit College)

[162] *Archaeology at Beloit College: New Approaches for an Established Program*
 Beloit College trains many undergraduates who become professional archaeologists. Archaeology at Beloit also engages students who pursue other careers. On-campus museum and archaeological resources, and Beloit anthropology's longevity and tradition of innovation, contribute to our success. Current restructuring of the anthropology major offers new opportunities for students interested in archaeology. The goal is to provide students with the necessary skills to conduct research. Key elements of the revised curriculum include distinct stages at which students develop, present, and assess research. Along with continuing field and lab opportunities, the new curriculum promises to engage students more deeply in doing anthropology.

Fiedel, Stuart (Louis Berger Group)

[90] *Is That All There Is? The Weak Case for Pre-Clovis Occupation of Eastern North America*
 After decades of futile exploration and argumentation, the case for a pre-Clovis human presence in eastern North America still relies on just a handful of sites. The evidence ranges from nearly credible (Cactus Hill, Meadowcroft, Wisconsin kill sites) to very implausible (Topper, Saltville). Despite credulous acceptance by mass media, wildly speculative hypotheses, suggesting a European origin of the Clovis complex and its abrupt demise due to a comet impact, are probably fallacious.
[224] Discussant

Fiehn, Oliver [4] see Tushingham, Shannon

Field, David (English Heritage) [147] *First Organizer*; **[147]** *First Chair*

Field, Judith (University of Sydney) [132] Discussant

Field Murray, Wendi [7] see Cutright-Smith, Elisabeth

Fields, Virginia (Los Angeles County Museum of Art)

[260] *X Marks the Center of the Universe*
 The essential criteria for identifying Mesoamerican divine kings are manifested by clothing, paraphernalia, and occasionally text. This paper addresses the criterion of pose in order to better understand the nuance and metaphor embedded in depictions of royal figures. Early rulers wear specific regalia associated with the maize god; a corollary and consistently depicted pose is the focus of this paper.

Figol, Timothy J. [55] see Malainey, Mary

Figueroa, Alejandro (University of South Florida)

[204] *The Clash of Heritage and Development in the Island of Roatán, Honduras*
 The present study examines the ways and extent to which archaeological sites in developed and undeveloped areas on the island of Roatán, Honduras, have been damaged in recent years. Impact assessment data collected in 2009 are evaluated and used to identify possible mitigation measures that take into account the local socioeconomic context, national and international policy and law, as well as the various stakeholders with vested interests in the island's cultural heritage.
[204] First Organizer; [204] First Chair

Filin, Sagi [147] see Nadel, Dani

Finley, Judson (University of Memphis) and Laura Scheiber (Indiana University)

[72] *A Pilot Provenance Study of Intermountain Ware Ceramics in Western Wyoming*

In this study we examine 50 sherds from four sites to understand ceramic vessel source area variation in the Central Rocky Mountains and Wyoming Basin. Intermountain Ware ceramics are a diagnostic marker of Shoshone ethnicity, and our central hypothesis explores changing mobility during the terminal Late Prehistoric and early Historic Periods ca. AD 1700-1830. We use instrumental neutron activation analysis (INAA) and petrographic analysis to characterize clay and temper mineralogy. INAA places ceramic artifacts into four groups with some overlap between sites in southwest and northwest Wyoming. Temper composition supports INAA indicating ceramic vessels may have been transported long distances before their eventual discard.

Finley, Judson Byrd [228] see Scheiber, Laura L.

Finney, Bruce [175] see Misarti, Nicole; [27] see Lech, Veronica

Fischer, Alysia (Miami University)

[17] *Gender and Glass: An Historical and Contemporary Consideration*

Cross-culturally, glassblowing has historically been a man's profession. There have been many barriers to women becoming glassblowers, including cultural beliefs about women's roles in society and assumptions about women's physical abilities. Beginning in the 1960s, studio glassblowing was practiced in the US within an art, rather than craft, context and found its way into universities. Though this shift made it possible for women to engage in glassblowing, written histories continue to highlight achievements of men and rarely mention women. This paper reconsiders that history, the demographic changes since that time, and the continued barriers to women working as glassblowers.

Fischer, Ben [165] see Davis, Judy L.

Fish, Paul (University of Arizona) and Suzanne Fish (University of Arizona)

[242] *Trincheras Sites: Landscapes, Summits, and Ideology*

After A.D. 1200, hill sites proliferate across vase areas of northwest Mexico and the southern reaches of the U.S. Southwest. This trans-regional pattern is often linked to the intensification of conflict. However, we argue that ideology provides an equally vital and valid framework for understanding the societal significance of this late prehispanic phenomenon. Using case studies from the Rio Magdalena Basin of northwest Sonora and the Tucson Basin of southern Arizona, we examine trincheras sites as differential elements of settlement pattern and landscape and their features and summit precincts as facilities of ritual practice. Regional ethnography offers intriguing models for the nature of summit features, their relationship to ceremonial cycles and settlement hierarchies, and the ritual landscapes into which they fit.

Fish, Suzanne [242] see Fish, Paul R.

Fisher, Chelsea (College of Wooster)

[204] *Resorting to the Resort: A Museum's Relationship With the Archaeology of Roatán Island, Honduras*

Despite over 100 years of informal and formal visits, surveys, and excavations, little is known about the prehistory of the Bay Islands, Honduras. Recent and ongoing construction associated with the growing tourism industry on the islands has had a significant impact on the island's archaeological resources. Yet, tourism has also popularized interest in the island's ancient inhabitants. This poster considers the structure and function of an archaeology museum at one resort on Roatán Island, and assesses its perceived effectiveness in conveying information about the prehispanic islanders and the need to protect archaeological sites.

Fisher, Christopher (Colorado State University)

[11] *Political Ecology and the Built Environment: New Insights from*

the Lake Pátzcuaro Basin, Michoacán, Mexico

A regional political ecology approach has been central to long-term coupled human/environment work in the Lake Pátzcuaro Basin, Michoacán, Mexico. Here I present the results of the research, outline the political ecology approach used, and suggest avenues for new applications.

[135] First Organizer; [135] see Pezzutti, Florencia L.; [135] see Batista Martinez, Raquel; [11] see Fisher, Christopher T.; [135] see Ahrens, Corrie L.

Fisher, Jacob (University of Washington)

[213] *Processing and Consumption of Rabbits at Antelope Cave, Arizona*

Antelope Cave, a Virgin Anasazi site located in northwestern Arizona, offers a large faunal assemblage dominated by jackrabbits (*Lepus californicus*) that has been minimally impacted by post-depositional processes. Using data from this site, I discuss how butchering and consumption practices of the past can be elucidated from statistical analysis of faunal remains. Supporting evidence from human coprolites and experimental data on rabbit roasting and boiling are presented to provide additional lines of evidence. It is anticipated that such data will offer important information for understanding processing decisions at a site possibly related to communal jackrabbit drives.

Fisher, Lynn (Univ of Illinois Springfield), Corina Knipper (University of Mainz), Rainer Schreg (Römisch-Germanisches Zentralmuseum) and Susan Harris (University of Tübingen)

[184] *Neolithic Chert Acquisition Features on the Swabian Alb, Germany*

Recent investigations at the chert quarry site of Asch-Borgerhau, near Blaubeuren, Germany, documented visible surface features and chert acquisition pits dating from the Early/Middle to Final Neolithic. This poster investigates the form and fill of quarry features in 6 test trenches. Variations in pit fill and in the density and distribution of raw material, artifacts, and charcoal suggest that a diverse set of chert acquisition and production activities shaped this extensive archaeological landscape. Comparisons to quarry features in neighboring regions are used to frame hypotheses about the organization of Neolithic chert acquisition on the Swabian Alb limestone plateau.

Fisher, Lynn [184] see Harris, Susan K.

Fisher, Philip (Washington State University) and William Andrefsky Jr (Washington State University)

[232] *Partitioning the Middle Archaic in the Northern Great Basin*

The Archaic period in the northern section of the Great Basin is not well understood. A sequence of 11 radiocarbon dates was used to partition the Middle Archaic occupation along the Owyhee River in southeast Oregon into distinct assemblages. Principal Components Analysis was used to assess similarities and differences in assemblage composition during this period of occupation. The 11 assemblages consist of various lithic artifacts, shell, mammal, and non-mammal bone. Results show the site was used for different activities over a 3,000 year span of time.

Fisher, Victor (Towson University)

[88] *Themes in Environmental Archaeology*

A nationwide survey of universities offering a course in "Environmental Archaeology" affirmed that instructors utilize a broad range of materials from geographically diverse areas and are uneven in their employment of scholarship from other disciplines. This paper describes some common and unifying themes that have been found to underlie the different approaches.

Fitzhugh, Ben (University of Washington)

[197] *Under the Hood of Intensification: Towards a More Useful Construct*

Economic Anthropologists and Archaeologists have long been interested in the concept of "intensification" as a framework for

understanding aspects of cultural evolution and the underpinnings of social complexity. Whereas conventional anthropological applications of 'intensification' focus most often on evolutionary results of intensified production (more food per capita), behavioral ecologists seek to explore individual motivations and consequences of intensified effort (more work per unit output). This paper will explore a key semantic confusion arising from the juxtaposition of these two approaches as a means of developing a bridging model linking the two aspects of intensification at both adaptive and evolutionary scales.

Fitzhugh, William [161] see Wolff, Christopher B.

Flad, Rowan (Harvard University), Gwen Bennett (McGill University), Kunyu He (Chengdu City Institute of Archaeology) and Timothy Horsley (University of Michigan)
[155] *Research at Songjiaheba: Survey, Excavation and Geophysics at a small Settlement Site*

An international collaborative research project focused on the Chengdu Plain of Sichuan Province has been using surface survey and augering to systematically survey a 300 square km area surrounding a late Neolithic walled town. During this survey, dozens of small sites have been discovered. This paper reports on the discovery of and subsequent magnetometry work and excavations at the site of Songjiaheba in the survey zone. For this region, this is the first use of geophysics and the first attempt to employ several strategies to investigate a small settlement site of the Early Bronze Age.

Flad, Rowan [155] *First Organizer*; [95] *Discussant*

Fladerer, Florian [184] see Bosch, Marjolein D

Fletcher, Roland (University of Sydney)
[153] *Global Cross-comparisons of Climate Change and Collapse: Logical Issues and Implications*

The great low-density agrarian cities in Lowland Mesoamerica, Sri Lanka and SE Asia between 250 BCE and 1150 CE represent a distinctive path to urban life in tropical environments. Yet they all experienced a long process of collapse, apparently associated with climate change. This paper will investigate the logical issues involved in cross-regional analyses of relationships between community behavior, and the long-term ecological interaction between low-density urbanism and global climate change. The analysis has implications for the potential trajectories of the increasingly prevalent, low-density urban settlements of the industrial world.

[153] *Second Organizer*

Flores, Jodi (University of Exeter) and Metin Eren (Southern Methodist University)
[256] *Reporting Skill-level In Experimental Archaeology: How Often It Is Done And Why It Is Important*

As a sub-discipline Experimental Archaeology has contributed to our understanding of history for over a century, but in the last 20 years it has become vital for understanding archaeological formation processes and for testing models of technology. Nevertheless, an experiment is most useful if it can be replicated, and an experiment's results are most valuable when all major influencing inputs are reported and understood. In this paper we present the results of a survey documenting the presence and method of reporting skill-level in published experiments. We discuss why reporting skill-level is important, and how it might be achieved.

Flores, Louise [122] see Sholts, Sabrina B.

Flores, Oscar [45] see Kling, Amber M.

Flores Colin, Alberto [109] see Shaw, Justine M.

Flores Escudero, Paul [67] see Pajuelo-Flores, Eva

Floss, Harald

[157] *Lithic Raw Material Procurement Patterns in the Aurignacian of the Swabian Jura, southwestern Germany*

The Swabian Jura belongs to the most important areas of palaeolithic occupation in Central Europe. The Swabian Aurignacian has yielded an outstanding amount of information about early Upper Paleolithic chronology and the arrival of anatomically modern humans in that area. It has as well yielded about 50 examples of mobile art and numerous items of personal adornment. The analysis of lithic raw materials tends to detect mobility patterns of early Upper Paleolithic hunter gatherers and to confront these results with those of the last Neandertals in this part of Central Europe.

Flynn, Christopher [219] see Walz, Gregory R.

Fogelin, Lars (Univ. of Arizona)

[194] *Fallback Philosophy: The Worst Offense is a Perfect Defense*
This paper critiques the use of the negation strategy by processual archaeologists and constructivism by post-processual archaeologists. I argue that archaeologists rarely employ a negation strategy or constructivism in the creation of archaeological explanations. Rather, archaeologists only deploy these theories in defense of explanations created using other means. In either case, archaeologists create an impenetrable fortress of skepticism that only diminishes their archaeological conclusions.

Foley Winkler, Kathleen (University of Wisconsin- Milwaukee)

[105] *Oneota and Langford Mortuary Practices from Eastern Wisconsin and Northeast Illinois*

Two archaeologically identified mortuary programs for Developmental Horizon Oneota in southeast Wisconsin suggest different underlying social and/or political structures. Three key issues are addressed. First, a case is made for the ways that burial data are expected to inform about social, political, and economic structures in the late prehistoric Midwest United States. Second, eastern Wisconsin Oneota burial programs are compared with contemporaneous Langford and Oneota sites of northern Illinois. Last, data collected provide a regional discussion of culture contact and diversity and are used to examine whether or not violence was present among the Wisconsin Oneota sites.

Follensbee, Billie (Missouri State University)

[260] *Gender-Neutral and Gender-Ambiguous Costume in Formative Period Gulf Coast Cultures, and its Implications*

Recent studies of sex and gender in Formative Period Gulf Coast art and archaeology reveal that certain costume elements are strongly gender-associated, while others are gender-neutral. Still other attire may be more strongly associated with one gender, but in certain, specific situations may appear on members of the opposite gender. These more ambiguous garments appear to be primarily associated with a status or an office. The fact that costume associated with different levels of status appears on both male and female figures, and on individuals of differing age, is particularly meaningful for our understanding of Formative Period Gulf Coast society.

Fontana, Marisa

[217] *Of Walls and War: Fortification and Warfare in the Mississippian Southeast*

This paper explores late pre-contact indigenous fortifications in the American Southeast to examine what these constructions can tell us regarding the nature of Mississippian warfare. I use the Mississippian site of Canebreak in east-central Alabama as a case study to illustrate how archaeologists can determine the difference between defensive and non-defensive architecture in the context of Mississippian warfare. The timing of the appearance and development of fortifications has the potential to show patterns that document the evolution of sociopolitical relationships between neighboring sites and/or polities—the cycling of “raiding and trading,” or war and peace.

Foor, Thomas [39] *see* Prentiss, Anna Marie

Ford, Anabel (UCSB)

[241] *The Sustainable Landscape of the Ancient Maya*

From the initial settlement of the Maya lowlands 3,000 years ago, populations grew, cities ebbed and flowed, and land use became intense. The prosperity of the Classic and the continuity of language and practice into colonial times underscores successful adaptation to the landscape built on experience that back into the Archaic and founded on the milpa-forest garden management system. The Maya adaptation depended on an intimate understanding and dynamic use of their landscape. Based on our predictive model of the Maya settlement, we present a model of the land use and calculate a population density for the El Pilar area.

[241] *Discussant*

Ford, Ben (Texas A&M University)

[247] *Changes in Perception and Perceptions of Change on the Lake Ontario Shore*

Littoral environments are never static; water rises and falls, transportation networks open and close, and resource come and go on daily, seasonal, and longer time scales. The perception of these changes also shifts with time and variations in culture. Perceptions of less mutable features of the Lake Ontario shore (e.g. the international boundary and the threat of storms) have shifted with time as well. How maritime cultures perceived both change and continuity affected their interactions with the shore environment and the substance of the archaeological record. Data for this analysis was drawn from a combined terrestrial and maritime archaeological survey.

Ford, Ben [19] *see* Crabtree, Stefani A.

Formica, Tracy (URS Corporation)

[179] *Lithics Really Do Talk Back: A Comparison of Sites 33PE838 and 33PE839*

Phase III archaeological investigations at 33PE838 and 33PE839, both multi-component Archaic, Woodland, and Late Prehistoric period sites in the Rush Creek watershed, Perry County, Ohio, yielded some 18,000 lithic artifacts. As lithics are enduring and the most common type of artifact generally found at prehistoric sites in the Ohio Valley region, site interpretation generally is heavily weighted by lithic data interpretation. This paper compares the lithic assemblages from sites 33PE838 and 33PE839. To aid interpretation of archaeologically-derived lithic assemblages, the results reiterate the need for a flexible analysis framework, gathering information from multiple lines of evidence, and experimental replication studies.

Formosa, Sue [163] *see* Blake, Michael

Forne, Melanie (Cancuen Project), M. James Blackman (Smithsonian Institution), and Ronald L. Bishop (Smithsonian Institution)

[229] *Fine Grey and Fine Orange: Early Presence and Foreign Provenience - Interpretations for Long-Distance Trade from Cancuen*
In the Maya Lowlands, fine grey and fine orange ceramics are among the strongest markers for chronology and cultural contact. Long term studies using compositional analyses have permitted us to determine manufacturing sources and subsequent routes of dissemination. Archaeological recovery has generally resulted in Chablekal Fine Gray being placed earlier in the ceramic sequence than Fine Orange Ware. Recent investigation at Cancuen however, has revealed the presence of an early Fine Orange, which appears to come from newly recognized sources. Here, we present these new findings and situate Cancuen's involvement in a long distance movement of pottery.

[229] *First Chair*

Forsman, Leonard A. [203] *see* Lewarch, Dennis E.

Forsythe, Lauren (Southern Illinois University Carbondale) and Heather A. Lapham (Southern Illinois University Carbondale)

[26] *Cut Mark Analysis and Tool Identification at the Berry Site Using*

Scanning Electron Microscopy

Fort San Juan, built in 1568 adjacent to Joara, a large Native American town in western North Carolina (known collectively as the Berry site), provides a unique opportunity to examine the relationships that developed between the Spanish soldiers and the native townspeople. We examined cut marks left on animal bones discarded in fort middens using a scanning electron microscope to determine if stone or metal tools were used to butcher and prepare meat for consumption within the garrison. Our results indicate the butchery scars were made by stone tools, which suggests the soldiers were supplied with meat by the native Joarans.

Forte, Maurizio

[230] *3D Collaborative Environments in Archaeology*

This paper aims at introducing an innovative approach to cyber-archaeology in relation to the need to investigate what happens in 3D immersive collaborative environments where every user is embodied in cyberspace through participatory activities. Different virtual platforms of participatory learning and collaborative environments are able to create diverse outcome for research and training. UCM is currently working on the creation of a network of collaborative immersive environments. They will allow scholars to collaboratively interpret and reconstruct archaeological artefacts, sites and landscapes on the basis of participatory immersive interactions (Powerwall, Teleimmersive Systems) and 3D web virtual cyberspaces.

Fortier, Andrew (Illinois Transportation Archaeological Research Pr)

[30] *Preliminary Analysis of Prehistoric Dog Coprolite Samples from the American Bottom, Southwestern Illinois*

Coprolites are fossilized feces that are rarely encountered in open-air archaeological contexts in the Midwest. Recent Excavations at the Janey B. Goode site in metropolitan East St. Louis have recovered just over 100 discrete, well-preserved, desiccated coprolite samples that date from A.D. 900-1000. Preliminary analysis indicates that these coprolites are from dogs. Analysis is ongoing and is aimed at reconstructing diet, health standards and the genetic make-up of this dog population. Macro-analysis has revealed the undigested remains of animal bone, teeth, fish scales, plant remains, sinew and hair. Future blood panels, and parasite/bacteria analyses will be conducted to determine levels of health and nutrition.

Fortin, Louis (Washington State Univ.)

[259] *Depositional Sequences at Cox Ranch Pueblo, New Mexico: A Geoarchaeological Perspective*

Cox Ranch Pueblo (LA 13681), New Mexico is a Chacoan great house community established ca. A.D. 1050 – 1130. Research was completed to aid in the identification of the depositional processes that affected Cox Ranch Pueblo during post-abandonment, specifically Roomblocks 1 and 4. Off-site natural samples were also collected for reference. Samples collected from these units were put through a suite of pedological analyses (pH, electro-conductivity, % organic, % CaCO₃, particle size) to determine the differences in natural and cultural strata. Results were then compared with previous geoarchaeological analysis of alluvial processes to identify regional similarities in the deposition sequence.

Foster, Elise (U.S.D.A. Office of the General Counsel)

[86] *Proposed Amendments to ARPA on Restitution and Use of Funds Collected*

ARPA enforcement since the statute was enacted has shown that fines and penalties collected in enforcement actions can be applied to restoration and repair of resources. However, this does not uniformly occur. The Government can optimize archaeological resource protection without an increase in spending by enacting certain amendments to ARPA. The suggested amendments will: 1) make restitution mandatory in ARPA enforcement cases; and 2) create statutory authority for agencies to use funds collected through penalties, fines and restitution to fund restoration and repair of resources or to otherwise further the purpose of ARPA.

Foster, Jennifer (University at Buffalo)

[243] *Social Circles: Rathes and Status in Early Medieval Ireland*
Over 40,000 raths dot the countryside in Ireland; these defensive-looking bank-and-ditch enclosures have long been considered the homes of the middle and upper classes of the Early Medieval period. But recent archaeological evidence suggests otherwise: not all raths have yielded "high status" material upon excavation, while others may have remained vacant. This paper will examine the multiple roles raths held in the Early Medieval landscape: who lived within their walls and who did not, where other people lived, and how perceptions of "status" cloud archaeological interpretation.

Fowler, Catherine (University of Nevada) [211] Discussant**Fowler, Don (University of Nevada Reno) [248] Discussant****Fowles, Severin (Barnard College, Columbia University)**

[14] *On Narrative in Southwest Archaeology*
I propose a return to the grand narrative in Southwest archaeology—or, at least, a return to a serious engagement with those metahistories inevitably constructed from archaeological statements by the public. Over the past three decades, critiques of social evolutionary theory have prompted widespread retreat into questions of the individual, the short-term, the historically contingent and the idiosyncratic, accompanied by a growing theoretical focus on more intimate matters of meaning, memory, perception and agency. Fine. But ignoring old metahistories hardly makes them disappear. Compelling counternarratives are needed, and here I look for guidance to both indigenous Pueblo and anarchist perspectives.

Fox, William (Canadian Museum of Civilization)

[60] *Reciprocal Symbols*
Individual examples of symbolically equivalent item exchange over considerable distances during the early seventeenth century are presented. Such events are considered within the context of rapidly changing social structures - the evolving sixteenth/seventeenth century "shatter zone" in eastern North America.

France, Christine [161] see Speakman, Robert J.**France, Elizabeth (Metcalf Archaeological Consultants, Inc.), Elizabeth Paris (University at Albany, SUNY) and Jonathan White (University at Albany, SUNY)**

[20] *Delving into Debitage: The Spatial Distribution and Scalar Variation of Shell and Lithic Production at Mayapan Houselots*
Shell ornament and lithic tool production occurred at varying scales in houselots of different Mayapan neighborhoods. This paper compares the variation in frequency and type of production reflected in shell and stone tool-making debris at domestic contexts across the city and identifies several localities where surplus production and multi-crafting is evident. Major lithic workshops focused primarily on late production stages while all phases of marine shell-working were commonly represented. We identify differences in the continuum of production between houses with modest quantities of debris and surplus workshops and the significance of these patterns for understanding occupational specialization at the city.

Frank, Ross (Dept. of Ethnic Studies, U.C. San Diego) [193] Discussant**Frankl, Michael [90] see Stewart, R Michael****Franklin, Kathryn (University of Chicago)**

[34] *Medieval Settlement Patterns, Trade Routes and Political Topography in the Kasakh Valley, Republic of Armenia*
Trade and travel through the Armenian highlands integrated larger political spheres and local developments throughout the medieval period (3rd- 14th centuries AD). This paper presents preliminary investigations of the system of roads, settlements, monasteries and fortresses within the Kasakh river valley, in the Aragatsotn region of

Armenia. Survey results were combined with remotely sensed data within ArcGIS. This system was augmented with historical research, inscriptions, and extant archaeological data to give chronological control to patterns of settlement and movement. Least-cost-path analysis and other methods demonstrate the changing relationship between medieval patterns of settlement and 'natural' routes through the landscape.

Franzen, John [114] see Drake, Eric C.**Frederick, Kathryn (Wayne State University) and Meghan Howey (University of New Hampshire)**

[163] *Displaying a Living Past, Calling for Stewardship : A Case Study of Cross-Disciplinary Museum Discourse from the University of Michigan Biological Station*

Museums aim to fill the gap between academics and publics. This poster explores the process of designing a museum exhibit aimed at crossing a different gap, between archaeology and other sciences. The University of Michigan Biological Station, a world-class environmental research center located in Northern Michigan, is teeming with archaeological sites yet only very recently has archaeology occurred here. This poster describes the challenges and benefits in designing an exhibit for UMBS that both brings the past to life and effectively imparts the message to a community known for their environmental stewardship that cultural conservation deserves equal place in stewardship.

Freedman, Jacob (Gray & Pape, Inc.)

[252] *Deep Testing Methodology, The "Black Dirt" Peat Deposits, Warwick, New York*

This paper describes the methods used to investigate the "Black Dirt" peat deposits located in the Town of Warwick, New York. Fieldwork consisted of 2, 3- by 3-meter hand excavated "environmental boxes." These boxes permitted the recovery of bulk soil samples to the base of the peat deposit, approximately 2.2 m.b.s. To accomplish this, de-watering, hydraulic shoring, a manually operated crane, and fall protection systems were used to permit safe, OSHA-compliant excavation. These samples will be used to reconstruct the post glacial environment to better understand the Pine Island Archaeological District and general climate trends in the Northeast.

Freedman, Jacob [252] see Pretola, John P.**Freeman, Jacob (Arizona State University)**

[119] *Lewis Binford's Impact on the Science of Humankind: A Graduate Student Perspective*

Lewis Binford's impact on the science of humankind is discussed from a graduate student perspective. Lewis Binford's contributions to the science of humankind have been profound. Yet perceptions of these contributions vary. Variability in perceptions among graduate students is discussed and compared to current graduate student mentors. Finally, these perceptions are compared to the author's own experiences and perceptions.

Freidel, David (Southern Methodist University) and F. Kent Reilly III (Texas State University)

[115] *Architecture, Cosmology, and World Renewal at the Formative Period Mesoamerican Site of La Venta*

Jim Brown cites evidence that the Great Mortuary at Spiro was a cosmogram representing the world at the moment of creation. Brown postulates that this material tableau linked to rituals of world renewal. The enclosed court at La Venta, with its restrictive construction and placement of caches and sacred bundles, served as an Olmec architectural configuration that also functioned as a cosmic diagram serving as a stage for rituals of world renewal. The commonality in cosmograms at these two exemplary North American ceremonial centers suggests the presence of a foundational religious sensibility informing ritual practice in these two cultural areas.

Freidel, David [77] First Organizer**Freter, AnnCorinne [30] see Weaver, Sarah A.**

Freter-Abrams, AnnCorinne (Ohio University) and Elliot Abrams (Ohio University)

[241] *Reconstructing the Paleodemographic Trends Associated with the Maya Late Classic/Terminal Classic Depopulation of the Copan Valley, Honduras: A Multi-Scalar Approach*
Paleodemographic reconstructions require multiple lines of data and multiple scales of analysis before sufficiently nuanced population trends can be discerned. Archaeological research in the Copan Valley, Honduras has produced a rich data set from which to examine the Late Classic/Terminal Classic population trends associated with the "Collapse" from a multi-scalar perspective. This paper, employing architectural, survey, and excavation data, reconstructs the complex sociopolitical process of the valley's depopulation. By articulating regional settlement trends with building-specific abandonment events, agricultural processes and detailed chronology, a multi-scalar picture of paleodemographic trends emerges.

Freund, Kyle (University of South Florida) and Robert H. Tykot (University of South Florida)

[123] *Lithic Technology and Obsidian Exchange Networks in Bronze Age Nuragic Sardinia (Italy)*

The study of Sardinian Bronze Age lithic technology and the exchange networks which created and maintained an island-wide identity as seen through the presence of its distinctive nuraghi has received little attention despite the wealth of knowledge it is capable of yielding. This research provides one of the first comprehensive studies of Bronze Age obsidian artifacts by combining typological analyses from two sites with source data gleaned from the use of X-Ray Fluorescence (XRF) technology.

Frink, Liam (University of Nevada Las Vegas)

[17] *Gendered Specialized Production of Seal Pokes and Storage among western Arctic Hunter-gatherers*

Seals and their products were the backbone of Arctic communities; critical as food, tools, clothing, medicines, fuel, and central to community identity. But little research has shed light on the techniques of processing and storage. An innovative invention were seal pokes—whole seal skins wherein dried fish were stored and seal fat was rendered into oil. This paper explores the use and manufacture of seal pokes and storage and investigates possible archaeological signatures and if this method of storage may have fluoresced during the early colonial period as a demand for fish and oil for trade intensified.

Fritz, Carole and Gilles Tosello (Centre Emile Cartailhac, Université de Toulouse)

[104] *Master or Apprentice? Tradition or innovation? Man or woman?: Reflections on the identity and role of the artists in Paleolithic societies of Europe*

In studies of European Upper Paleolithic art, results are usually at the level of a cultural group. It is less easy to approach Paleolithic art at the level of the individual artist. For example, what was the part of women? Thanks to microscopic analyses of engravings, we can identify the degrees of aptitude or experience, apprenticeship, and the transmission of techniques. Clearly, there are some rules for drawing. Does the respect for or transgression of these norms reflect some aspects of freedom? Using some selected examples, we discuss how to better perceive the anonymous artists through their practices.

Fritz, Crystal

[92] *Pottery and Emergent Complexity in Southeastern Arabia*

The concept of heterarchy as an organizing principle has been usefully employed in the study of emergent complexity in new world archaeology. Heterarchy has proven particularly useful for the study of societies located in marginal environmental zones. This paper applies the concept to understanding a dramatic increase in settlement in Iron Age period (1100-600 BCE) in arid Southeastern Arabia. A regional analysis of ceramic production and distribution reveals a concrete representation of heterarchical organization

facilitating emergent complexity.

Fritz, Gayle (Washington University in St Louis)

[52] *Food, Labor, and Sexual Politics at Fort San Juan: The Archaeobotany of Early Contact in the Southeastern U.S.*

What decisions did native food producers at the village of Joara in western North Carolina make when a small force of poorly provisioned Spanish soldiers came to dinner in 1567 and didn't leave? Who decided whether or not to feed the intruders? Are Iberian food preferences or aversions manifested in the archaeological record? Did the Joaran farmers—probably women—benefit or suffer (or both) from the presence of foreigners—all men—who needed their crops for survival? Archaeobotanical remains from the Berry Site are examined and compared to those from other early Spanish contact sites in the Southeast in order to address these issues.

Frouin, Millena [18] see Meddens, Frank

Fucella, Phillip [181] see Modzelewski, Darren

Fuller, Michael (St. Louis Community College)

[62] *Spirit Beings Associated With Caves in Missouri*

Archaeological and ethnographic evidence provides insights for the Native American beliefs in spirit beings associated with caves and rock shelters in Missouri. Large caves with albino crayfish may have been associated with spirit beings such as the Mohenka Shinka. Breathing caves and caves with surging springs are found in several parts of Missouri; at least some of these were seen as sacred places. Possible sacred cave and rock shelter sites include the cave at Big Moniteau Rock, Cliff Cave, and the Mitchell Site rockshelter.

Fullerton, Ben (Geo-Marine, Inc.), Arlo McKee (Geo-Marine, Inc.) and Duane Peter (Geo-Marine, Inc.)

[231] *Cultural Dynamics during the Late Prehistoric Period in Northcentral Texas*

Investigations at site 41COL172 within the woodlands/prairie ecotone of northcentral Texas have revealed numerous Pennington Punctated-Incised ceramic sherds in association with bison remains between A.D. 1000 and 1300. Three prevailing models exist for the late prehistoric use of the woodlands/prairie ecotone: (1) Caddoan hunting parties from the east ventured out onto the prairie when bison were present; (2) Caddoan farmers migrated into the area to establish new villages; and (3) a local population occupied this ecotone and borrowed readily from surrounding cultures. This well preserved site containing bison remains and early Caddo-influenced pottery provides new evidence for evaluating these models.

Funk, Caroline, Brian Hoffman (Hamline University) and Debra Corbett (United States Fish and Wildlife Service)

[79] *Aleut Landscapes and Seascapes: The Rat Islands, Alaska*

Survey and site testing on Rat and Kiska Islands in the western Aleutians during Summer 2009 revealed new site types and demonstrated more intensive use of the islands than documented in earlier studies. The research focuses on identifying ecosystem changes resulting from invasive species predation, Aleut resource management and on understanding Aleut and Russian cultural and environmental adaptations during contact between the societies. The work counters historic records to show that Aleuts were present in larger numbers, lived more fully on the landscape than expected, and did indeed modify landscapes and wildlife to satisfy their way of life.

Furey, Rachel (UC Santa Cruz) and Diane Gifford-Gonzalez (UC Santa Cruz)

[48] *Foodways, Ritual, and Identity at an Early Colonial New Mexican Pueblo: the Archaeofaunal Evidence*

Relatively little is known about the cultural backgrounds of the early colonial inhabitants of Paa-ko/San Pedro (LA162), New Mexico. Historical and metallurgical evidence shed some light on their technological heritages and possible social origins, but faunal data complicates and enriches our understanding of everyday practices. We explore how selection and handling of wild and domestic

ungulates, lagomorphs, and birds elucidates foodways and ritual lives of Paa-ko's inhabitants. We suggest a syncretic, yet fundamentally indigenous, quotidian life ran in tandem with introduced technological practices and persons. We discuss implications for gender and parallels in other colonial settings.

Gabe, Caroline (University of New Mexico)

[193] *Plaza Communities and the Vecino Household: An Archaeological Perspective*

How does plaza organization influence the expression of vecino household structure and spatial configuration? The plaza village is a common historical expression in northern New Mexico, which evolved in tandem with the political changes that shaped the Spanish frontier. Plaza organization affected the associated individuals and households within vecino villages and the spatial organization of gendered activities. Taking the Ranchos de Taos and Taos parishes as a case study, this paper analyzes plaza community layouts from multiple perspectives, as well as their possible affects on social organization and community arrangement.

Gabelmann, Olga

[94] *A Society in Change?: The Formative Period in the Cochabamba Valleys*

The Formative Period society in the Cochabamba region is often depicted as a homogeneous, non-stratified, agriculturalist society with purely monochrome pottery and a lack of monumental architecture. Recent excavations in Santa Lucía revealed a pottery production center with separate workshops and a production output that goes far beyond the producers needs, hence creation of surplus. In addition, the site played an active role in long-distance trade with the highlands, the lowlands and the Pacific coast. This gives room for new interpretations. Is the Formative society more complex than it appears?

Gage, Mathew D. [24] see Yerka, Stephen J.

Gaines, Edmund [21] see Sanchez Miranda, Guadalupe

Galassini, Stacy [213] see Towner, Ronald

Galaty, Michael (Millsaps College), George Bey (Millsaps College), and Timothy Ward (Millsaps College)

[78] *Laboratory Approaches to Cross-Cultural Comparative Archaeology*

The W.M. Keck Center for Instrumental and Biochemical Comparative Archaeology at Millsaps College in Jackson, Mississippi is designed to compare processes of state formation in the Yucatan, Mexico and in Albania, where two very different paths to social complexity were followed. In this paper we examine the gains to be made through systematic laboratory analysis of artifacts from similar archaeological cultures located in two very different parts of the world. Our ongoing research demonstrates the distinctive role to be played by archaeometry in the emerging field of cross-cultural comparative archaeology.

Galeazzi, Fabrizio (University of California Merced) and Paola Di Giuseppantonio Di Franco (University of California Merced)

[189] *The Western Han Dynasty Museum: from the 3D data collection to the 3D spatial analysis*

In 2008 the idea of a Western Han dynasty virtual museum was conceived by the "Xian Jaotong University of Technology" and the "University of California Merced". In two years it has been possible to collect a huge amount of 3D data using different laser scanner techniques. We are going to show the data archive made for the preservation of tangible heritage at risk and communication models made for revealing the intangible heritage.

Gallardo, Francisco [122] see Torres-Rouff, Christina

Gallareta Cervera, Tomas (University of North Carolina at Chapel Hill)

[109] *Reconstructing Social Shifts through Monumental Architecture: a Maya Palace-Temple Case from Kiuc, Yucatan, Mexico*

Due to their hybrid nature, people and objects cannot be analyzed as separated entities; the changes in one entity are necessarily reflected in the other. Monumental architecture, an object constructed to last a long time in a defined space, becomes a receptacle of accumulated meaning, memory and the social identity of communities interacting with it in their daily life. By reconstructing the social biography of a Maya palace-temple, through the building's recovered architectonic sequence and its general characteristics, I explore the possible social implications in the life of ancient Maya dwellers through this structure's 1800 years construction history.

Galle, Jillian (Monticello), Fraser Neiman (Monticello), Ivor Conolley (The University of the West Indies, Mona) and Leslie Cooper (Monticello)

[201] *Identifying Change in Household- and Specialist-Produced Coarse Earthenwares from 18th and Early-19th Century Jamaican Slave Villages*

Archaeologists have long been intrigued by hand-built, open-fired earthenwares on 18th and 19th-century domestic sites occupied by enslaved Africans. In Jamaica, these wares are accompanied by locally-made, glazed, and/or kiln-fired ceramics likely manufactured and marketed by enslaved specialists. Here we use data from over 600 shovel-test-pits excavated from the Papine slave village located outside of Kingston, Jamaica to explore the relationship between household-produced wares and specialist-produced ceramics. After establishing a village-wide chronology, we use systematic, quantitative evidence to track how the importance of household- and specialist-produced locally-made coarse earthenwares changed over time at Papine.

Galle, Jillian [201] see Neiman, Fraser D.

Gallison, James [33] see Church, Michael K.

Gallivan, Martin (William & Mary) and Justine McKnight (Archeobotanical Consultant)

[247] *A Cultural Interpretation of Horticultural Transitions in the Chesapeake*

Drawing on new archaeobotanical data and direct dates on maize from the Chesapeake region we offer an historical account and a cultural model of Native foodways before and after maize's introduction. Maize first appears within Late Woodland settlements marked by persistent places, unusual landscape features, ceremonial events, and political centers. The special status of places with early maize is particularly relevant east of the Blue Ridge where Native societies were not horticulturalists prior to maize adoption. The incorporation of maize involved not simply an embracing of a new plant, but the reshaping of social relationships to accommodate becoming food growers.

Gallivan, Martin [225] see Atkins, Ashley; [225] Discussant [247] First Chair

Gallo, Joseph (ITARP/University of Illinois) and Miranda Yancey (ITARP/University of Illinois at Urbana-Champaign)

[187] *Exploring a Late Nineteenth-Century German Neighborhood in Old North St. Louis*

Old North St. Louis, now blighted due to a half-century of decline, was founded as an independent village in 1816. It later became a focal point of German immigration to St. Louis shortly after its annexation in 1841. Block 1136 developed from 1860 to 1910 as a densely populated neighborhood of skilled workers of German ethnicity. In 2003, excavations in a portion of this block exposed three privy vaults. These features were abandoned ca. 1875-1885 after city sewer facilities became available. This paper analyzes these features and relates them to broader issues of socioeconomics and sanitation practices.

Gallo, Joseph [15] see *Kruchten, Jeffery D.*

Gamble, Clive (Royal Holloway University of London)

[119] *From Baby Grayling to Grey Beard: Lewis Binford as an Archaeological Learning Strategy*

Two opening quotations to *New Perspectives in Archaeology* pitted the archaeological pessimist (Smith) against the optimist (Sears). "There must be limits," Sears wrote, "but until we have tried we shall not know what these limits are." Lewis Binford's career has been about testing those limits combined with a genius for recognising patterns in archaeological data. His 1968 claim that "the practical limitations on our knowledge of the past are not inherent in the nature of the archaeological record" remains the most liberating statement archaeology has ever received. Here I will celebrate Lew as a learning strategy for a world Palaeolithic.

[58] *Discussant*

Gamble, Lynn (University of California, Santa Barbara)

[154] *Subsistence Practices and Feasting Rites: Chumash Choices after European Colonization*

What is interesting about the Chumash Indians of south central California is the persistence of long-established subsistence activities and the holding of religious feasts after European colonization. Although the Chumash used metal tools introduced by the Spanish to fashion cooking vessels and tools, they continued to produce these traditional items and consume traditional foods. In other words, they actively chose what to adopt from the Spanish based on their needs. Moreover, the continued use of baskets for the processing, cooking, and serving of plant resources reflect the significance of female gender roles both before and after Spanish contact.

[81] *Discussant*

Garber, James [54] see *Powis, Terry G.*

Garcia, Dante (Zona Arqueologica de Monte Albán)

[103] *La Tumba 01 de San Pedro Ixtlahuaca: Una Escena Funeraria del Posclásico Temprano en el Valle de Oaxaca*

En el año 2008 se realizó el rescate de la Tumba 01 en el sitio arqueológico de San Pedro Ixtlahuaca. La fachada presentó un rasgo distintivo en la arquitectura funeraria zapoteca, 3 nichos que contenían 6 figurillas antropomorfas y una cabeza efígie, de las cuales, 5 se hallaron en el nicho principal y correspondían a deidades del complejo del Maíz, representado una escena ritual personificando a sus antepasados y pidiendo a sus dioses proteger a la mujer enterrada en su camino por el inframundo, la cual debió tener un papel muy importante dentro de su sociedad en el culto a estos dioses.

Garcia, Krista (University of Alabama)

[134] *Evaluating Access to Common Ceramics at Xunantunich, Actuncan, and San Lorenzo, Belize*

This paper evaluates differential access to common Late and Terminal Classic pottery across three sites in the Upper Belize River Valley using Hirth's distributional approach. Petrographic analysis following Stoltman's methods was run on Cayo Unslipped and Mount Maloney ceramics from Actuncan, Xunantunich, and San Lorenzo. This analysis documented six paste groups based on type and treatment of inclusions as opposed to potentially highly variable stylistic traits. The distribution of paste groups within specific structures and contexts will be used to evaluate the possible presence of a market economy at Xunantunich.

[134] *First Chair*

García Moreno, Cristina [57] see *Dominguez, Nancy*

Gardella, Kristen (University of Pennsylvania)

[245] *Inka Feasting and the Past: Spaces of Celebration, Integration and Memory Construction at Tiwanaku, Bolivia*

Feasts are transformative processes whereby the sharing of food and drink creates social and political bonds and fulfills debts and obligations. During the Late Horizon (approximately AD 1438-1534),

the Inka Empire expanded and consolidated geographical boundaries and strengthened social relations between indigenous communities through large-scale public events. This paper presents the results of zooarchaeological analysis of remains from feasting events at Tiwanaku, Bolivia. Data suggest that spaces utilized for herding, preparing and consuming camelids were important nodes for the creation and preservation of social and cultural affiliations and collective memory in the Lake Titicaca Basin.

[245] *First Organizer; [245] First Chair*

Garden, Mary-Cate

[237] *Creating New Heritage Places: Authenticity, Value and Landscapes*

The regeneration of urban industrial sites into 'new' historic districts, conservation areas and/or heritage places highlights discourses on value, identity and authenticity. As signifiers of both past and present; these 'new' heritage places are key components of the urban landscape. However, as boundaries are redrawn and new values ascribed (often from outside) to established sites, older understandings of place, identity and 'pastness' are challenged. An ongoing regeneration project, 'Titanic Quarter', in Belfast NI offers a timely opportunity to explore how the notion of value is used and understood; shaping perceptions of authenticity, 'pastness' and a sense of place.

Gardner, A. Dudley (Western Wyoming College), Laura Pasacreta (Western Wyoming College), Russel Gibb (Geometria Auckland New Zealand) and William Gardner (Yale University)

[120] *Formative Period Fields and Storage Systems in Northwest Colorado between 1700 and 500 BP*

The Fremont utilized a variety of field locations to insure success in crop production. These fields appear to have been located in flood plains, on alluvial aprons, and on mesa tops. Storage facilities in the Piceance, Douglas Creek, and Cottonwood Drainages were situated close to these fields but corn caches can be found at a variety of localities. This paper will look at the relationship between fields and storage facilities for the period between 1700 and 500 BP in Northwestern Colorado. The paper will also briefly address the reason for selecting certain field locations in the region.

[120] *First Chair*

Gardner, William [120] see *Gardner, A. Dudley*

Gardner-O'Kearny, William (Portland State University)

[203] *Hearth Variability at Lower Columbia River Villages*

Domestic hearths are evidence of household production, although not always fully explored as such. Hearths in two contemporaneous Lower Columbia River plank-house villages illustrate the potential. Meier is a single large house with marked variation in hearth size, with smaller hearths in the house's north end and a massive hearth complex in the south. This may be a communal hearth with the smaller one reserved for people living at the house's northern end. In contrast, hearths at the multi-plank house Cathlapotle site are more uniform in size and structure, while associated faunal remains are more variable, suggesting inter-household production differences.

Garduno Ambriz, Mauricio [199] see *Ohnersorgen, Michael*

Garfinkel, Alan P. [232] see *Binning, Jeanne Day*

Garfinkel, Yosef (Hebrew University of Jerusalem)

[96] *Early Administration at Tel Tsaf: A 6th millennium BC site in the central Jordan Valley*

The Chalcolithic site of Tel Tsaf, Israel (5200-4650 BC Calibrated), yielded large courtyard structures including rounded silos, the world's earliest examples of barrel-shaped granaries. The large-scale storage indicates surplus accumulation on a scale never unearthed before, a millennium before the rise of urban societies in Mesopotamia. The accumulation of wealth is indicated by large dwelling, elaborates pottery, and exported exotic items from Anatolian, Mesopotamia and Egypt. In addition ca. 140 clay sealings and a stone seal were found,

indicating an administration system which was practiced at Tel Tsaf, in conjunction with the large scale silos and the intensive long distance exchange networks.

Garniewicz, Rex Garniewicz [239] *see Pope, Melody K.*

Garraty, Christopher (Statistical Research, Inc.)

[200] *Social Identity and Political Competition in a Culturally Diverse Landscape: Decorated Pottery from the Mescal Wash Site, Southeastern Arizona*

An analysis of Middle Formative period (A.D. 750-950) decorated sherds from the Mescal Wash site in southeastern Arizona highlights the use of painted serving vessels as media for expressing social identity under conditions of political competition and instability. Southeastern Arizona was a culturally diverse landscape, and interaction among peoples of different backgrounds was recurrent, creating a heightened awareness of identity. A large excavated collection and fine-grained chronology permitted a detailed quantitative study of changes in decorated ceramic use, which suggests that social identities were fluid and ephemeral in response to rampant social change and disruption.

Gary, Jack [26] *see Proebsting, Eric L.*

Garza, Silvia, Claudia Alvarado (Proyecto Xochicalco) and Mauricio Valencia (Proyecto Xochicalco)

[195] *The Defensive Character of Xochicalco (A.D. 650-1100)*

The walled city of Xochicalco is considered a fortification due to the ditches and bastions. It has been proposed that many cities after Teotihuacan decline have a defensive function. These military attributions have been questioned. Some scholars have said that walls in other archaeological sites in Mesoamerica and beyond, had ritual, ceremonial or territorial delimitation character. Recent excavations supported by former explorations at one of the main entrance to the city, show that between A.D. 650 and 1100 these architectural features had a defensive function, even though they enclosed areas where different kind of activities were conducted, including ritual ones.

Gatsov, Ivan

[147] *Flint Hoards form the Prehistoric Settlement at Pietrele Romania and the Problem of Raw Material Procurement*

During the excavation a number of three hoards, consist of blades and super-blades (blades longer than 200 mm) have been found in two of the houses, which belong to trench B. The above presented hoards include specimens from different technological categories – crested specimens, blades and super ones and retouched tools as well. The heterogenic character of these hoards – especially the third one, where except super blades appeared crested specimens and retouched tools suggest a rather utilitarian character, than a symbolic or prestigious one. Due to the context they were found in, they can be linked to a great extend with storage purposes.

Gaudzinski-Windheuser, Sabine [184] *see Kindler, Lutz*

Gauthier, Rory P. [19] *see Bellorado, Benjamin A.*

Gaylord, Donald (Thomas Jefferson Foundation) and Derek Wheeler (Monticello)

[166] *The Stewart-Watkins site at Monticello: an Investigation of Household Economies and Site Structure at the Domestic Sites of Free White Laborers and Enslaved African Americans*

William Stewart and Elisha Watkins were free, white workmen who resided at Monticello, the Virginia plantation of Thomas Jefferson. Stewart and his family lived there from 1801 until 1807. Watkins, his wife, and two slaves later lived at the same house for a year in 1809. Our poster will examine the spatial patterning of different artifact classes at the Stewart-Watkins site to distinguish variability in activity areas at the site. These patterns will be compared with those found at domestic sites of enslaved African Americans to determine if variability in household economies can be inferred.

Gebhard, Rupert [184] *see Wagner, Ursel*

Geib, Phil (University of New Mexico) and Edward Jolie (University of New Mexico)

[118] *Direct Evidence of Early Holocene Dietary Expansion on the Colorado Plateau: Interpreting the Constituents of Dated Human Feces*

Though limited by recovery, human feces are unmatched in value for investigating changes in diet breadth. Several sites on the Colorado Plateau of the American Southwest have yielded sufficient numbers of early Holocene human feces to begin charting when humans started to intensively exploit small seeds and of which species or genera. The plant remains from directly dated specimens of several key sites are considered with regard to resource ranking, seasonality, local environmental setting, and site use histories. Consumption of low ranked resources by 8000 BC is evident at Dust Devil Cave but not until 1000 years later at Cowboy Cave.

Geib, Phil [118] *see Jolie, Edward A.; [84]* *see Kemp, Brian M.; [118]* *First Organizer; [118]* *Second Chair*

Geller, Pamela [174] *Discussant*

Gerke, Tammie (Glenn A. Black Laboratory of Archaeology), Erika Elswick (Indiana University), J. Barry Maynard (University of Cincinnati)

[257] *Bone Temper: The likely Source of Elevated Phosphorus in Angel Mounds State Historic Site Ceramics*

Bone tempered ceramics (BTC) have been identified in the Middle Ohio River Valley and American Bottoms region, Missouri. However, there is no known identification of BTC between these locations. This study provides the first known chemical data on ceramics from Angel Mounds which determined, via XRF, that 70% of ceramics (n=40) have elevated P2O5 concentrations (>1 wt% P2O5) reflecting the possible presence of bone. SEM element mapping indicates that fine-grained phosphate is disseminated throughout the ceramics indicating that highly processed bone was utilized as the likely temper. These results provide new insights into ceramic manufacturing techniques employed at Angel Mounds.

Gerke, Tammie L. [257] *see Marshall, Joel; [257]* *see Elswick, Erika R.*

Geurds, Alexander (Leiden University)

[191] *Regionality and Monumental Sculpture in Pacific and Central Nicaragua*

This paper discusses the study of cultural interaction and its retaining of the archaeological culture concept in relation to Pacific and Central Nicaragua. First, I provide an overview of the continuous use of both concepts and their accompanying questions for the better part of the last seventy-five years. In the second part, I challenge some of the assumptions embodied by these concepts by using a case study of monumental sculpture in Central Nicaragua. I outline an alternative of shifting focus to the cultural practices developed by communities at the local and regional level rather than looking for stylistically comparable traits.

Ghazal, Royal (University of Chicago)

[92] *Risky Business: An Archaeological Inquiry into the Politics of Solidarity and Ritual De-Commodification in Bronze Age Oman*

This paper contributes to a growing body of research in archaeology and related fields concerning the archaeology of intercultural interaction and systems of exchange in prehistoric/pre-market societies. It questions how the inhabitants of ancient Oman produced, maintained, and ritualized new senses of community in the late third millennium BC in reaction to new trans-regional systems of trade, the exploitation of new resources, and new areas of craft specialization. In this presentation, I argue that the social risks of foreign interaction were offset by the technical production and emulation of foreign goods and the de-commodification of goods through communal

burial.

Gibb, Heather (University of Missouri-Columbia)

[74] *Metric Refitting Using Modern Deer (Odocoileus spp.)*

Anatomical refitting has been used to monitor the spatial distribution of animal skeletons throughout a site and to reconstruct meat sharing. What has not been tested is whether the assumptions of bilateral symmetry and of inter- and intra-membral matching are valid. These assumptions are evaluated using a modern collection of deer (*Odocoileus* spp.) bones from known individuals, focusing on linear measurements because these are more objective than visual comparison of skeletal elements. The assumptions are found to be largely unsupported. In large archaeological samples, individual specimens will likely be found to have more than one possible matching or "refitting" specimen.

Gibb, James (Stevenson University) and April M. Beisaw (Heidelberg University)

[180] *Blogs, Videos, and Volunteers: Some Lessons We Have Learned*

The Port Tobacco Archaeological Project has been engaged in public outreach since day 1. We maintain a daily research blog that we post to even when we are not actively working on the project. We have a YouTube Channel and a Flickr site so everyone can see what we are up to. We include volunteers in the field and the lab and are often outnumbered by them. We constantly reach out to the public; they just don't often reach back. By presenting our challenges, and failures, we hope to help others create realistic expectations for public outreach.

Gibb, Russel [120] see Gardner, A. Dudley

Gibbons, Michael [185] see Kuijt, Ian; [185] see Moore-Shay, Laura; [185] see Lash, Ryan P.

Giesso, Martin (Northeastern Illinois University), Lorena Sanhueza R. (Universidad de Chile), Michael Glascock (Missouri University Research Reactor, University of Missouri at Columbia), and Valeria Cortegoso (CONICET, Universidad Nacional de Cuyo, Mendoza, Argentina)

[123] *Provenance of Obsidian Artifacts from Sources in Central Argentina and Central Chile*

Obsidian was used in central Argentina and central Chile since the Early Holocene. Based on XRF and INAA analysis of more than 600 artifacts from archaeological sites we map the distribution of obsidian from three Andean sources and three source from the eastern extra-Andean region, from 33 to 37 degrees south. We interpret temporal changes that occurred in obsidian procurement and distribution. The results suggest stronger use of the cordilleran sources over those located in the lowlands, and increase in the number of used sources through time. Data presented here is related to another on geochemical characterization of obsidian sources.

Giesso, Martin [161] see Glascock, Michael D.

Gifford, Chad [45] see Kling, Amber M.

Gifford-Gonzalez, Diane (U of California - Santa Cruz) [48] see Furey, Rachel; [208] *Discussant*

Gijanto, Liza (Syracuse University)

[53] *The Atlantic Trade, Local Preference, and Expressions of Wealth: Feasting and Beads at Juffure, The Gambia*

The village of Juffure and associated British trading factory were integrated into the Atlantic World for several centuries. As the commercial center of the Gambia River moved from upriver to the Atlantic Coast, the residents of Juffure gained unprecedented access to wealth and trade goods from across the Atlantic. The changes in local production, development of new industries, and access to imports and wealth all contributed to resident's interpretation and creation of their socio-economic standing through material means.

The material categories highlighted in this paper represent both the incorporation of European imported goods into everyday expressions of wealth and the translation of this wealth into previously established practices—specifically practices associated with public display such as dress and foodways. To do this, two different assemblages related to public display are presented—glass trade beads and the remnants of feasting.

Gil, Adolfo [161] see Glascock, Michael D.

Gilbert, Phoebe [27] see Potter, Ben A.

Giles, Bretton (Binghamton University)

[36] *Comparing the Double Headed Birds Associated with the Hopewell Horizon*

This paper begins to tackle the distribution, formal variation, and meaning of the double head bird theme during the Early to Middle Woodland period. I argue, based on a reassessment of Shetrone's Burial 11 and the design incised on a femur from Hopewell Mound 25, that double headed birds were an important Ohio Hopewell iconographic theme. I then delve into how Ohio Hopewell depictions of doubled headed birds articulate with similar designs from the Illinois and the Lower Mississippi River Valleys. In particular, I explore how these double headed bird images varied, as well as what they might have meant.

Gillam, Christopher [24] see Johanson, Erik N.

Gillespie, Susan (University of Florida)

[13] *Maps as Re-presentations: A Case Study of Complex A, La Venta, Mexico*

This study reveals how knowledge of La Venta, an Olmec regional center, has been biased by mapping conventions. Information about La Venta is derived primarily from Complex A, last excavated in 1955 and since destroyed, which is now known only through graphic representations. A review of published Complex A maps demonstrates how these drawings have superseded textually presented excavation data in disseminating archaeological knowledge. Because of the reliance on maps, the most important 1955 conclusions regarding Complex A have been neglected. Moreover, accepted interpretations based on spatial patterns apparent in maps are shown not to be supported by stratigraphic evidence.

[13] *First Chair*

Gilliland, J.

[217] *Excavations at the Copperhead site (3CW951), an Open-Air site in Northwest Arkansas*

Data recovery at the Copperhead site (3CW951) was conducted by Burns & McDonnell from 2003 through 2005. Excavations revealed Middle Woodland, Late Woodland, and Mississippian period occupations at the site. The Middle Woodland occupation at the site appears to be related to the Gober complex defined by Hoffman. One of the primary activities carried out at the site was the manufacture of hoes from locally available Atoka argillite. Nineteen specimens of a previously little known projectile point type called Sorter's Bluff were also recovered from the site.

Gillis, Nichole (Public Archaeology Laboratory, Inc.)

[25] *Beyond Immigration: The Pre- and Post-Contact Period Archaeology of Ellis Island*

While Ellis Island is best known for its role in US immigration, the New York Harbor islet has a rich and varied occupational history. Archaeological investigations at Ellis Island have identified significant features and deposits associated with each of its major periods of use ranging from pre- and post-contact period shell midden deposits, to 19th Century military fortifications associated with Fort Gibson, and structural remains associated with the first and second immigration stations. Distributional analysis of cultural deposits and structural features is used to further test hypothesis on the historical transformation of this once 3-acre oyster island.

Gilman, Patricia (University of Oklahoma)

[248] *Farmers Who Forage: Low Populations in the Mimbres Region of Southwestern New Mexico*

Archaeologists have assumed that large pithouse sites in the Southwest housed many people and that they were the foci of sedentary occupations supported by an agricultural economy. Based on reconsideration of Pithouse period sites in the Mimbres region of southwestern New Mexico, I argue that population sizes of even the large villages were much smaller, perhaps only a single family. Furthermore, their presumed agricultural economy was wedded to a degree of mobility that we associate with foragers. This research indicates that, because there were relatively few people, they could maintain a fairly sedentary, agricultural existence while still also being residentially mobile.

Gilmer, Anastasia (Texas A&M University) and Kelly E. Graf (Texas A&M University)

[232] *Preliminary Sedimentological and Stratigraphic Observations in the Late Pleistocene-Early Holocene Deposits of Bonneville Estates Rockshelter, Eastern Nevada*

Bonneville Estates Rockshelter lies on the western fringe of the Bonneville Basin and has provided one of the longest stratigraphic sequences of human occupation in the Great Basin, beginning at ca. 13 ka and extending to the present. Amazing preservation of the site's earliest deposits has provided some intriguing clues to late Pleistocene-early Holocene human occupation of the eastern Great Basin with over 30 hearth features and associated radiocarbon dates, cut-marked faunal remains, diagnostic lithic remains, and preserved bone needles and cordage. Here we present the stratigraphy, radiocarbon dates, and preliminary results of sedimentological analyses of these early deposits.

Gilreath, Amy (Far Western)

[211] *Rock Art at Pahrnatag, Nevada*

Pahrnatag is easily recognized as stylistically distinct from other rock art styles found in the Great Basin and Utah, and is, in fact, confined to a small zone in central Nevada. Heizer and Hester's 1978 report on Black Canyon is the first published archaeological study of this style, and for that reason Black Canyon can be regarded as the type-site for the style. It is often referenced in passing, but scholarly publications or even focused grey-literature studies of Pahrnatag-style rock art sites within the past 30 years are alarmingly scarce. A recent study examined all of the panels at the type site in detail, and thorough survey of the surrounding landscape identified a number of associated sites. What the study has revealed about the age of this rock art style, and the factors that account for its narrow temporal and spatially restricted distribution are presented.

Gingerich, Joseph (University of Wyoming)

[90] *Biface Morphology and the Occupation of the Plenge Paleoindian Site*

The first report on the Plenge site appeared over thirty years ago. Since this study, collectors have continued to investigate this important Paleoindian site. To date, nearly 200 fluted points have been collected from the site. Biface analyses suggest the presence of numerous fluted-point styles and the on-site manufacture of points. These data provide an opportunity to further evaluate technological change and landscape use throughout the late Pleistocene. The repeated use of the Plenge site during this time period and the utilization of local lithic sources show similarities to other large Paleoindian sites in the region.

[90] *First Organizer*; [90] *First Chair*; [90] see Miller, D. Shane

Giordano, Brock (Monmouth University) and Michael Nassaney (Western Michigan University)

[255] *Crafting Culture at Fort St. Joseph: An Examination of Labor Organization through a Technological Investigation of Tinkling Cones*
The study of craft production in the context of Native-European interaction during the Middle Historic period in the western Great Lakes region continues to be a topic of continued scholarly interest.

The craft production of such items like tinkling cones and rivets for patching kettles exemplify how European raw materials were being transformed into new objects. By examining the technological histories used in the production of tinkling cones, this research illustrates that the production of tinkling cones was being produced in independent workshops as opportunistic activities to fit the demands of life on the Colonial frontier at Fort St. Joseph.

Giron, Mario (CalState-LA) and Jeremy Coltman (California State University - Los Angeles)

[107] *Epigraphy and Iconography of a Polychrome Vase Found at Midnight Terror Cave*

During the 2009 season at Midnight Terror Cave, Belize, several dozen fragments of a Late Classic ceramic vessel were recovered in the entrance chamber of the cave. Restoration revealed approximately half of an elaborately painted polychrome vase. A partially intact hieroglyphic inscription around the rim represents a Primary Alternative Sequence as opposed to the more common Primary Standard Sequence. The painting depicts a human and an avian figure. Similarities in style and iconography are noted with representations on other vases in the corpus of Maya painted ceramics. Analysis of the vase provides insights into ancient Maya mythology and religion.

Gjesfjeld, Erik (University of Washington)

[123] *Analysis of Ceramics from Kuril Islands, Russian Far East*

Advances in archaeological sciences over the past decade have allowed archaeologists to effectively integrate scientific data with questions of social interaction. This research strives to decipher spatial and temporal patterns of cultural transmission, social exchanges and population fluctuation in the Kuril Islands of the Russian Far East. Most importantly, this poster will emphasize the use of archaeological scientific methods of luminescence dating, XRF and INAA to help develop ceramic datasets with which to test social interaction hypotheses.

[113] see Phillips, Stephen C.

Glaab, Rigden (Washington State University)

[120] *Studying Social Resilience through Correspondence Analysis: A Case Study from North Central Utah*

This paper will employ correspondence analysis to study variation in debitage data obtained during the 2008 season of the Tavaputs Archaeological Research Project. The relationship of these data will be interjected into an ecological model called Resilience Theory to identify the correlations between material variation and debitage reduction strategies. The aggregated results are tailored into four typological categories which form a foundation to study trajectories of material use across the Tavaputs Plateau, Utah. Subsequent discussion will focus on elucidating the behavioral characteristics that may be embodied in these respective strategies with regards to social resilience.

Gladwell, Randi (Vanderbilt University)

[245] *The Role of Camelids in Ritual Contexts at Khonkho Wankane (Bolivia) during the Formative Period*

This paper examines the role of camelids in ritual contexts at Khonkho Wankane, a Formative Period (1-400 AD) archaeological site located in the Southern Lake Titicaca Basin. Camelid remains from two temple complexes, the Sunken Temple (Late Formative 1) and the Dual Court Complex (Late Formative 2), are compared to identify variation in the selection, use, and deposition of camelid remains. A shift in the cardinal orientation (from north-south to east-west) of these two complexes suggests significant changes in the inhabitant's ritual practices over time.

Glascok, Michael (University of Missouri), Adolfo Gil (Museo de Historia de San Rafael, Mendoza, Argentina), Gustavo Neme (Museo de Historia de San Rafael, Mendoza, Argentina), and Martin Giesso (Northeastern Illinois University)

[161] *Trace-Element Characterization of Obsidian Sources in Central Argentina and Central Chile Using XRF and INAA*

In order to advance studies of obsidian recovered from archaeological sites located in central Argentina and central Chile, geological samples from eight major obsidian source areas in the region have been collected and analyzed. Both XRF and NAA have been employed to determine the chemical compositions and to identify combinations of elements useful for differentiating between the individual sources and their subsources. Successful provenance studies are now possible throughout this region.

[23] *Discussant*

Glascok, Michael D. [161] see Woods, Julie A.; [73] see Naunapper, Linda S.; [123] see Giesso, Martin

Glassman, David [91] see Wrobel, Gabriel D.

Glenn, Jonathan (GAI Consultants)

[179] *Living on the Edge: Excavations at the Jacob Kocher Homestead (33MO77)*

The Jacob Kocher Homestead site was investigated as part of mitigation efforts for the Rockies Express East Pipeline project. Occupation of the site dates from the second quarter of the 19th century, and appears to represent Swiss settlement in Monroe County, Ohio. Its rural, somewhat isolated, setting on upland slopes of 20-40% incline pose questions of site selection, development, and utilization. The socio-economic conditions within the context of the surrounding community, the subsistence strategies practiced at this site, and construction methods of the buildings will be examined in relation to the chosen environment for site placement.

Gloux, Sabrina (ArchaeoTek) and Andre Gonciar (ArchaeoTek)

[101] *Integrating DNA analyses to Bioarchaeology or Physical Anthropology studies: The potential benefits in approaching unknown populations as the Noua Culture*

Although physical anthropology methods are well developed a great deal of information is still missing if limited to gross morphology analyses. When applied to bioarchaeology, DNA analyses provide information such as family relationships, group contacts, migrating patterns, ancestry and so on. The purpose of this paper is to present the potential benefits of DNA analyses in approaching unknown populations such as a Noua Culture cemetery from Middle Bronze Age Transylvania comprising around 300 individuals. Exhaustive bioarchaeological analyses as well as DNA analyses will be conducted to compare osteological data to archaeological data in order to better interpret and understand the life and dynamics of these populations.

Glover, Jeffrey (Georgia State University), Dominique Rissolo (Waitt Institute for Discovery) and Jennifer Mathews (Trinity University)

[212] *The Costa Escondida Project: Archaeology and Community Engagement along Quintana Roo's North Coast*

We established the Costa Escondida Project in 2006 to investigate the pre-contact and historic maritime cultures and landscape of northern Quintana Roo, Mexico. While removed from the intense tourism of the Caribbean coast, this area has a burgeoning eco-tourism industry associated with Holbox Island and whale shark migration. This paper will discuss our experiences as an archaeologically-focused project working with the various stakeholders in the region (the Chiquilá-San Ángel ejido, an eco-tourism coop, and the Yum Balam Biosphere Reserve) and more importantly outline a research strategy that is transparent and will actively engage these stakeholders as the project progresses.

[212] *First Chair*

Glover, Jeffrey [109] see Amador, Fabio E.

Glowacki, Donna (University of Notre Dame), Charles Reed (Washington State University), Julie A. Bell (National Park Service), R. Kyle Bocinsky (Washington State University) and Shanna Diederichs (National Park Service)

[19] *Making Sense of the Actual: Settlement Trends in the Southwestern Colorado VEP Study Areas*

The models and simulations constructed by Village Ecodynamics Project researchers are only as good as the data that goes into them. Because of this reality, we are investing considerable effort into improving existing site data, particularly for the largest sites, through new fieldwork conducted via the multi-year Community Center Survey. Building on the work of MVNP archaeologists and supplemented thus far by one season of fieldwork, we present our initial look at small site and community center settlement patterns in the Mesa Verde VEP II study area and compare them with those established for the VEP I study area.

Glowacki, Donna [84] see Lipe, William D.; [200] see Perry, Michael

Glowacki, Mary

[145] *Imperialism in the Middle Horizon: A Reprisal of the Classic Paradigm, Cuzco, Peru*

Traditionally, the Middle Horizon has been characterized by the presence or influence of Wari imperialism throughout ancient Peru. With lesser known areas of the Andes now being explored, this view is considered passé, monolithic, and lacking heuristic value. While it is true that many peoples of the Middle Horizon may not have fallen under the rubric of direct imperial control, others certainly did, and it is this variability that is classically "imperial." This paper reviews Wari evidence from Cuzco in light of the "classic" imperial paradigm. It examines the role of interregional exchange in this process and resulting social changes.

Gnecco, Cristóbal (Universidad Del Cauca)

[222] *The Geopolitics of Archaeology in South America*

This paper discusses the current context in which South American archaeology unfolds, showing the different approaches taking by practitioners and how non-academic actors are entering the historical scene. The paper hopes to be a tribute to Dave Browman's contextual preoccupations.

Goebel, Ted (Texas A&M University), Bryan Hockett (U.S.D.I. Bureau of Land Management) and Kenneth Adams (Desert Research Institute)

[224] *Climate and Environmental Change in North America's Great Basin during the Younger Dryas, and Its Effect on Human Populations*

Evidence from multiple proxy records indicates that pluvial-lake levels across the Great Basin rose significantly during the Younger Dryas, 12.8-11.5 ka, and that conditions were cooler and possibly wetter than preceding and succeeding periods. Here we review the evidence for these climatic shifts and consider the effects they had on humans in the region, especially the greater Bonneville and Lahontan basins. A well-watered Bonneville basin was a boon for early humans; however, in the Lahontan basin higher lakes may have had the opposite effect, since archaeological sites of the Younger Dryas are rare in comparison to the subsequent early Holocene.

Goebel, Ted [21] see Smith, Heather L.; [224] *First Organizer*; [224] *First Chair*

Gogte, Vishwas [121] see Oka, Rahul C.

Gokee, Cameron (University of Michigan)

[53] *Household and Community during the West African Iron Age: A Surface Perspective from Diouboye, Senegal*

Extensive household compounds in West Africa pose a problem for excavation methods and the archaeological study of diverse household and community forms during the later Iron Age (500-1500 CE). Recent fieldwork at the site of Diouboye in eastern Senegal illustrates how surface feature mapping and artifact sampling, with interpretive support from excavated contexts at the same site, can provide data sufficient to reconstruct domestic architecture and activities during the final occupation phase. Spatial analyses of these data, in conjunction with ethnographic and historic evidence, provide a preliminary archaeological window wide enough to interpret intra- and inter-household organization at Diouboye.

Goldberg, Paul (Boston University) [8] see *Aldeias, Vera I.d.*; [8] see *Dibble, Harold L.*; [157] see *Miller, Christopher E.*; [8] see *Sandgathe, Dennis M.* [126] *Discussant* [126] *First Chair*

Golden, Charles (Brandeis University)

[160] *Dynamics Landscapes and Political Developments in the Maya Kingdoms of Piedras Negras and Yaxchilan: New Perspectives Provided by Remote Sensing, Archaeology, and Epigraphy*
Data from remote imagery, archaeological survey, and epigraphy are used to explore the landscapes of the neighboring Classic period Maya kingdoms of Piedras Negras and Yaxchilan. Looking at the period from the foundation of both dynasties to their collapse (AD 350 – 810), I examine how vistas across the built environment, and movement to and from the political capitals, shaped the political practices of rulers and royal courts, and transformed notions of political space that were extended out across the entire polity, with very different results in each kingdom.

Goldstein, David (S. Carolina Inst. for Archaeology and Anthropology) [132] *Discussant*; [188] see *Muñoz, Lizette A.*

Goldstein, Lynne (Michigan State University)

[115] *Aztalan: Objects, Rituals, and Time*
Archaeologists have spent time, energy, and paper linking the archaeological site of Aztalan in southern Wisconsin to the Mississippian site of Cahokia near St. Louis, Missouri. James A. Brown shifted focus to the meaning of rituals at Mississippian sites. This paper examines a series of ritual objects and symbols from Aztalan, asking why these particular objects may have been selected for use, and whether they were used for the same purposes here as at Cahokia or other Mississippian sites. Rather than looking only at the objects themselves, the focus here is on their context to determine use and whether use is comparable across sites and time. [173] *Discussant*

Goldstein, Paul [226] see *Johnson, Kent M.*; [226] see *Nado, Kristin L.*; [226] see *Plunger, Elizabeth*

Goldstein, Robin C. (Northwestern University)

[188] *Changing Landscapes: Politics in the Majes Basin during Wari Hegemony (550-1050 C.E.)*
Previous studies have often looked at Middle Horizon dynamics as a single phase; however, recent research demonstrates significant political and social dynamism during this period, in particular between the early and late MH. In the Majes-Chuquibamba region of Arequipa, the local political landscape also underwent profound change. Using multiple scales of analysis, I interpret local developments in the Majes-Chuquibamba region in light of broader processes occurring within the Wari Empire. Although largely politically autonomous, some local leaders in the Majes-Chuquibamba region benefited significantly by allying themselves with Wari imperial interests.

Golitko, Mark (University of Illinois at Chicago) and John Edward Terrell (Field Museum of Natural History)

[121] *Applications of LA-ICP-MS to the Study of Holocene Social Networks on the Sepik Coast of Papua New Guinea*
The Sepik coast of northern New Guinea is seen as a potential stopping point between SE Asia and island Melanesia, and therefore potentially important in transmission of cultural practices in the past. However, there is little understanding of how the coast was tied into broader Melanesian social networks. We report here on the chemical analysis by laser ablation-inductively coupled plasma-mass spectrometry (LA-ICP-MS) of ceramics and obsidian flakes recovered from the Sepik coast spanning the last two millennia of prehistory, demonstrating continuous involvement in broader Melanesian obsidian exchange, as well as a long term history of exchange along the coast itself.

Golitko, Mark [121] see *Dussubieux, Laure*; [121] see *Sharratt, Nicola O.*; [139] see *Meierhoff, James W.*

Gomez, Esteban (The Colorado College), Rosemary Joyce (University of California, Berkeley) and Rus Sheptak (University of California, Berkeley)

[65] *Public Participation and Archaeology as "Textured History": The Case of the Omoa Project*

During the administration of Dario Euraque, we developed and carried out two seasons of fieldwork at the fort and town of San Fernando de Omoa, northern Honduras. This multi-year colonial archaeology project has amply documented the experiences of the mixed-race African population, colonial Spanish officials, and indigenous labor force that helped form this town. In addition to our research, we have given public lectures of our work, and participated with community members in workshops on the importance of archaeology to local communities. Our participation in these activities was fostered by an explicit policy of community engagement initiated by IHAH.

Gómez Cortés, Alejandra [221] see *Carballo, David M.*

Gomolak, Andrew (Holloman Air Force Base NM)

[152] *Lift Up Thine Eyes Unto the High Lands*

In 1990, the distribution of Rosa, Bancos, Largo and Gallina sites in time and space, as represented by the site data in the New Mexico Archaeological Records Management System, was presented at the SAA meeting and the Chimney Rock Conference. An explanation based on the cyclical feasibility of high altitude agriculture and long term stability of material culture was introduced. As of 2010, hundreds of sites have been added to the record within the study area. In light of the data now available, the explanation forwarded in 1990 survived,... or did it?

Gonciar, Andre (S.U.N.Y. at Buffalo)

[101] *Extracting Emotion: Funeral Behavior in Late Bronze Age, Transylvania (Romania)*

Archaeological studies are based on pattern identification (contextualization) and recognition (actualization). The degree of similarities between contexts is the result of repetition and reproduction of practice through space and time. Potentially stable contexts (i.e. Bronze Age burials), resulting from highly regulated socio-cultural behavior, can display deviations escaping contextual rationalization. It could be theorized that in specific environments, the deviant behavior is the result of an emotional event that overrides rational constructs. Emotion in this context could be approached through the impact it has on the archaeological record to understand the motivation of the gesture that modifies an established behavioral pattern.

[101] see *Gloux, Sabrina*

Gongaware, Laura (Texas A&M University, Nautical Archaeology Program) and Kristen Vogel (Texas A & M University)

[80] *Missouri's Battle to Protect Its Shipwrecks: Then and Now*
Known as the 'Gateway to the West', Missouri was the means by which many of America's pioneers traveled west. By land or river, the journey was difficult and many lives and steamboats were lost in the process. These steamboats were often full of valuable goods attracting many modern day salvage attempts. In 1987, Wayne Lammers brought the destruction of the Missouri Packet to the attention of the Missouri legislature. Since then Missouri has been at the forefront of states legislating to protect its shipwrecks. Despite the existence of these laws, salvagers continue to destroy Missouri's unique and valuable steamboat heritage.

[80] *First Chair*

Gongaware, Laura [80] see *Vogel, Kristen*

Goñi, Rafael [47] see *Belardi, Juan B.*

Gonzalez, Albert (Southern Methodist University)

[193] *Turley's Mill: The Archaeology of Vecino Resistance*

The opening of the Santa Fe Trail and the annexation of New Mexico

by the United States strained the fabric of New Mexico's vecino society. Turley Mill, the Arroyo Hondo grist mill and whiskey distillery that became the focal point for the Taos Rebellion of 1847, represents the force of that strain. The aim of this paper is to analyze the recently excavated mill as an example of vecino resistance to Anglo intrusion in northern New Mexico. More specifically, the paper will explore the economic aspect of Anglo intrusion through an examination of excavated materials, architecture, and documents.

Gonzalez, Albert [200] see O'Brien, Lauren

Gonzalez, Sara (University of California, Berkeley)

[181] *An Ethical Archaeology? Decolonization, Collaboration and the Archaeology of Colonialism*

In recent years archaeologists have touted collaborative and community-based archaeologies as a more ethical form of archaeological practice. While community-based research situates community members and archaeologists as equal partners, or stewards, conducting this kind of research creates new ethical dilemmas for archaeologists. For example, how do we balance our responsibility to the community with our commitment to professional integrity or honesty? How do we disseminate the results of research that may negatively impact a community or portions thereof? This paper will address these questions as they relate to collaboration with the Kashaya Pomo Tribe at Fort Ross State Historic Park.

[66] *First Organizer*, [66] *First Moderator*

Gonzalez, Silvia [56] see Monroe, Cara

Gonzalez-Licon, Ernesto (INAH-ENAH, Mexico)

[195] *Pasado y Presente de las Investigaciones Arqueológicas en Oaxaca México*

Se hace un balance de las investigaciones arqueológicas realizadas en la región oaxaqueña hasta ahora. Inicio con descripciones de los primeros viajeros que recorrieron la zona, sigo con las excavaciones de mexicanos y extranjeros en el siglo XX, y termino con las que se han ejecutado en este siglo XXI. Discuto los aportes y avances de los trabajos desde una perspectiva teórica y metodológica y concluyo con la evaluación de los temas y regiones más y menos estudiados.

Goodale, Nathan (Hamilton College), Ian Kuijt (University of Notre Dame), Jim Higgins, Maddy Gunter (Hamilton College), Mellisa Coles (University of Notre Dame)

[185] *Tracking the Dead: Early Christian Gravestone Production and Distribution*

Researchers have a very poor understanding of the ritual, economic, and social interconnections between isolated early Christian period (c. 5th – 9th century) coastal communities along the coast of Connemara, Ireland. Drawing upon preliminary XRF documentation and stylistic comparison of headstones from High Island, Inis Air, Bofin Island, Caher Island and at Teampaill Chiaráin on Inishmore, we explore the questions of production of headstones, the geographical spread of these from known source areas, and the placement of headstones within different island communities. This research provides critical new perspectives on the Early Christian landscape of this region.

[185] *Second Chair*

Goodale, Nathan [185] see Kuijt, Ian; [185] see McNeill, Casey M.; [19] see DeFrank, Laura; [120] see Andrefsky, William

Goode, Cynthia

[179] *Investigation and Analysis of the Hadley Industrial School for Girls, Hendricks County, Indiana*

Site 12HE347 is a late-nineteenth to early twentieth-century school known as the Hadley Industrial School for Girls. Phase 2 excavations revealed evidence of a yard midden and features including a cesspool and a privy. Artifacts recovered show evidence of school activities such as reading, writing, laundry, sewing, cooking, canning/preserving and painting. Ceramic analysis indicates that vessels were most likely donated to the school due to their variety of

decorative styles and maker's marks. This site has the ability to address questions regarding gender and social power, institutionalized behavior and moral regulations, and socioeconomic status and consumer choice.

Goodman-Elgar, Melissa [259] see Bettencourt, Nichole S.

Goodwin, Whitney (University of South Florida)

[204] *Indigenous Populations of the Island of Roatán, Honduras and Their Mainland Neighbors: Implications for the Future of Heritage Tourism on the Bay Islands*

Based on data from the 2009 field season of Project Roatán, this study examines the ways in which native islanders of the Postclassic period (AD 900-1500) expressed their social identity and cultural affiliations with contemporaneous groups on mainland Honduras through their ceramic traditions. The results of the study are then used to critique the ways in which archaeological data have been used and misused in the heritage tourism industry to represent past inhabitants of the island. The future of tourism and issues of representation on the island are also considered.

[204] *Second Chair* [204] *Second Organizer*

Goodyear, Albert (SC Institute of Archaeology and Anthropology)

[90] *Clovis and Post Clovis Paleoindian Manifestations in the Central Savannah River Region*

The central Savannah River region in the Coastal Plain of Georgia and South Carolina occupies a significant geographic niche in the South Atlantic Coastal Plain. At 33 N, it was a major geographic ecotone during the Pleistocene-Holocene transition 16 to 10k yrs. ago. An abundant supply of chert attracted Paleoindians over a 2,000 year period. Systematic surveys and excavations over the past 25 years have provided a reasonable framework to examine technological and settlement responses in this region of the Southeast. A possible demographic decline occurred during the Younger Dryas based on a reduction in post Clovis projectile points. Dalton is a response to modern climatic conditions.

[224] see West, Allen

Gopher, Avi (Tel Aviv University) and Ran Barkai (Tel-Aviv University)

[58] *A Fireplace, Blades and Scrapers: Tool Kits and Spatial Organization at AY Qesem Cave, Israel*

Recent excavations at Acheulo-Yabrudian Qesem Cave (late Lower Paleolithic, 400-200 kyr) revealed a generally clear spatial pattern within the central chamber showing a repeated use of large fireplace, specific (yet unstudied) faunal remains within and nearby, and, distinct blade-dominated (Amudian) and scraper-dominated (Yabrudian) areas around it. This enables a glance into the meaning of intra-Acheulo-Yabrudian variability and contributes towards a new understanding of Middle Pleistocene hominin adaptation and capabilities at the end of the Lower Paleolithic in the Levant. The discovery of Hominin teeth at Qesem Cave may provide a link between the abovementioned cultural processes and biological evolution.

Gopher, Avi [58] see Shimelmitz, Ron

Goralski, Craig (Cal Poly Pomona, RCC-Norco)

[156] *Gone, But Not Forgotten: Ceramic Production and Exchange in the El Cajon Region, Honduras*

Research conducted by Hirth and colleagues in the El Cajon region of Honduras during the 1980s continues to yield useful data and fresh perspectives on Honduran chiefdoms dating to the Formative and Classic Periods. In this paper, the author revisits ceramic data from the El Cajon project, applying INAA to samples from sites in the region as part of a larger INAA project. These data reveal patterns of ceramic production and help to model interaction between the El Cajon region and neighboring chiefdoms.

Goring-Morris, Nigel [186] see Hovers, Erella

Goss, Donald [215] *see* Brugam, Richard B.

Gottsfeld, Andrew (University of Kansas) and Rolfe D. Mandel (University of Kansas / Kansas Geological Survey)

[259] *Modeling the Geologic Potential for Cultural Resources in the Upper Neosho River Basin, East-Central Kansas*

A GIS-based geoarchaeological approach was used to develop a predictive model for locating surficial and buried cultural resources in the upper Neosho River basin of east-central Kansas.

Lithostratigraphy and digital soil survey data (SSURGO) were used to estimate the relative ages of geomorphic surfaces and the underlying late Quaternary deposits. Radiocarbon dating combined with soil-stratigraphic investigations was used to test the model. Results of this study indicate that surface soils are fairly reliable indicators of the relative age of landforms and genetically related packages of sediment and associated buried soils.

Graf, Kelly (CSFA, Texas A&M University) and Nancy Bigelow (Alaska Quaternary Center, University of Alaska Fairbanks)

[224] *Human Technological Responses to the Younger Dryas in Central Alaska*

Human response to climatic conditions during the tumultuous terminal Pleistocene has long been a concern of archaeologists and paleoecologists alike. Some researchers propose that production of microblade technology was an optimal choice for foragers placed in high-risk situations such as subsisting in arctic environments during the late Pleistocene. The microblade-bearing Denali complex in central Alaska, dating to 12.8-11.5 ka, may represent a human forager response to decline in climatic conditions and associated decrease in wood availability. Using archaeological and paleovegetation data from central Alaska, we explore the possible relationship between technology and regional ecology during the Younger Dryas cold event.

Graf, Kelly E. [232] *see* Gilmer, Anastasia G.

Graff, Sarah [48] *see* Rodriguez, Enrique

Grafft-Weiss, Amber and Sarah Miller (Florida Public Archaeology Network)

[26] *T'Omb It May Concern: The Use of GPR for Public Engagement in Cemeteries*

For the purposes of public outreach the Northeast Center engaged the public in several demonstrations of GPR use with a cemetery conference as the culminating event. This poster will provide insights into using GPR to gain access to new partners in the community and address their research questions to frame the study. The project involved working with a variety of preservation organizations dedicated to managing historic cemeteries, working with volunteers on said historic sites, and getting the results of the demonstration to the public. The conference included tours, lectures, and workshops.

Grafft-Weiss, Amber [219] *see* Miller, Sarah

Graham, Elizabeth [5] *see* Prentice, Andrea

Graham, Russell [224] *see* Schubert, Blaine

Grange, Roger (U of South Florida and New Smyrna Museum of History)

[170] *Saving 18th Century New Smyrna: Public Archaeology In Action*

During the British Period in Florida the New Smyrna settlement (1768-1777) was part of the British effort to populate East Florida. The settlement pattern of modern New Smyrna Beach overlaps that of 18th century New Smyrna creating a complex setting for historical and archaeological research. This paper reviews the efforts of local volunteers, historians, archaeologists and civic officials to recover part of their city's heritage through archaeology and historical research. Some sites have been excavated, others have been lost

and some have been preserved during the past decade and the future will bring many more challenges.

Graves, Michael [230] *see* McCoy, Mark D.

Graves, Tim [235] *see* Beasley, Virgil

Graves, William M. [33] *see* Wegener, Robert M.; [14] *see* Altschul, Jeffrey H.

Gravlin-Beman, Ashley [178] *see* Brown, Clifford T.

Gray, Anna (Project Director/Archaeologist)

[33] *Refuge in the Borderlands*

Political boundaries are often viewed as formidable and concrete. Historically, however, marginalized people have used borderlands as places of refuge where they could, with relative ease, move between nations. Two archaeological sites excavated during the U.S./Mexico border project illustrate the subversive use of the in Southern Arizona by Chinese and Mormon immigrants. This paper summarizes the results of archaeological investigations at these sites and discusses broader historical migration patterns that led to their formation.

Greaves, Russell (Peabody Museum, Harvard)

[119] *How Ethnoarchaeology gets Scientific Eyes: Binford's Dynamic Ethnoarchaeological Tools to build Archaeological Views beyond Static Technology and Just-so Individual Events*

Lewis Binford has helped revolutionize the roles and methods of ethnoarchaeological inquiry into formation of the archaeological record. While other approaches focus on direct analogies with past technologies, his influential work studied people using modern tools in contexts of activities relevant to improving knowledge of past behaviors. Binford's views of technology showed that activities organize associations and roles beyond expectations based on artifact material class and the temporal scale of ethnographic experience. Binford inspired me to examine dynamic ethnoarchaeological relationships of subsistence and technological use moving beyond classificatory orientation to seek patterns addressing deeper time scales of archaeological site formation.

Greber, N'omi (Cleveland Museum of Natural History) and Robert Horn (Earlham College)

[176] *Interpreting Earthen Walls as Markers of Knowledge*

Questions concerning origins and purpose of hundreds of earthen walls that formed the ancient landscape of the Middle Ohio Valley were integral in 19th and early 20th century avocational and ultimately professional publications. Relatively recent field work provides new data on chronology and use of several large earthwork sites. Using old and new data we consider size and accuracy of earthworks built as simple geometric shapes. We discuss context for earthwork construction seen in aspects of the builders' physical, social, and symbolic worlds. We suggest possible contextual changes in interpretations or implementations that resulted in particular earthwork constructions.

Green, Debra [153] *see* Junker, Laura L.

Green, Roger [68] *see* Weisler, Marshall I.; [68] *see* Clarke, Andrew C.

Green, William and Kimberly Nagle

[236] *Digging Deep along the Fall Line: Archaeological Investigations of a Deeply Stratified Early Paleoindian Through Mississippian Site Near Columbia, South Carolina*

The Tree House Site (38LX531) is a large, deeply stratified multi-component site located along the Saluda River near Columbia, South Carolina. Archaeological investigations conducted by S&ME from 2006 through 2008 revealed stratigraphically intact deposits spanning the Early Paleoindian through Mississippian Periods. Artifacts were found as far as 3.25 m below the ground surface, with chronometric dates of cultural deposits ranging from 10,135±60 to 540±40

radiocarbon years before present. This paper summarizes the results of our investigations, and discusses the importance of the site and how it was used during the last 13,500 years.

Green, William (Logan Museum of Anthropology)

[127] *Persistent Placemaking in the Upper Mississippi River Valley: Ritual, Settlement, Interaction, and Appropriation*

The Upper Mississippi River Valley comprises a set of striking landscapes. Yet even within its diverse terrain, certain places literally stand out: mountains that appear to rise from water, mile-long ridges barely wide enough to camp on. While the cultural landscape is by definition a product of human agency, these dramatic natural landforms have served as unique, easily identified landmarks for millennia. Archaeological, ethnographic, and ethnohistoric data from the Turkey River Mounds State Preserve in Iowa and Perrot State Park (Trempealeau Mountain and adjacent Trempealeau Bluffs) in Wisconsin indicate periodic reappropriation of ideologically-charged or ritual space at these places.

Green, William [162] see *Fie, Shannon M.*

Greene, Alan (University of Chicago) and Charles Hartley (University of Chicago)

[240] *The Structure of Ceramic Analysis: Multiple Scales and Instruments in the Analysis of Production*

As the analytical capabilities for the detection and interpretation of pottery attributes have expanded, the essential distinction in ceramic investigation between "structural" and "compositional" data has provided a framework for situating various analyses. In contrast to studies relying solely on compositional attributes, we outline a holistic approach that combines elemental data with information pertaining to formation, decoration, and firing techniques in an anthropological effort to delineate the socioeconomic aspects of particular pottery industries. We argue that the inclusion of such "structural" data is essential to forming a systematic understanding of ceramic production across geographies, political economies, and artistic traditions.

Greene, Alan [240] *First Organizer*; [240] *Second Chair*; [240] see *Hartley, Charles W.*

Greenlee, Diana (U of Louisiana - Monroe), Berle Clay (Cultural Resource Analysts), Evan Peacock (Mississippi State University), Michael Hargrave (ERDC CERL) and Rinita Dalan (Minnesota State University Moorhead)

[251] *Preliminary Results from Excavations in the Plaza at Poverty Point*

In the summer of 2009, a joint University of Louisiana-Monroe and Mississippi State University field school placed small excavation units over four large circular magnetic anomalies in the southern plaza at Poverty Point. The anomalies had been discovered during near-surface magnetic gradiometry survey and further examined via sediment coring and downhole magnetic susceptibility measurements. Our goal was to characterize physically, chemically, geophysically and chronometrically the deposits associated with the anomalies. Here we summarize the fieldwork and compare what we found with what was predicted based on the near-surface and downhole magnetic data.

[251] *Second Chair* [251] *Second Organizer*

Greenlee, Diana [160] see *Chenoweth, Michael Sean*; [251] see *Hill, Mark A.*

Greenwood, Brianne (Missouri Department of Transportation), Jane Lee (MoDOT) and Michael Meyer (MoDOT)

[187] *Defining What's Important: Urban Archaeology in St. Louis*

The planning for the new Mississippi River bridge in St. Louis, a cooperative project between the Missouri and Illinois Departments of Transportation, has required the evaluation of a large segment of the city's industrial center. To avoid the pitfalls of a poorly designed urban archaeological project, MoDOT archaeologists developed a complex

research design for this large-scale project. The research design focuses on deposits, not sites, and depends on defining appropriate methodologies and developing a robust model for evaluation significance. By evaluating interrelated properties, the end result will be research that will define what is significant in St. Louis.

Greer, John (Greer Services Archeology) and Mavis Greer (Greer Services Archeology)

[22] *Graffiti: To Clean or Not to Clean, that is the Question*

Cleaning rock art sites and cave interiors of graffiti is popular and is often supported without question. The practice has been questioned recently due to aboriginal art removed during cleaning and a general lack of professional evaluation before removal. Other assumptions need to be evaluated, such as definition of graffiti versus potentially preservable art; whether use is attracted by previous use (graffiti attracting graffiti) rather than particular places attracting repeated use; what modern graffiti should be preserved; and who determines preservation or destruction of graffiti. Study and evaluation should be done prior to massive impromptu cleaning efforts commonly being done.

Greer, John [171] see *Greer, Mavis*

Greer, Mavis (Greer Services) and John Greer (Greer Services)

[171] *The Record of Northern Plains Warfare in Rock Art*

Conflict scenes on the Plains contain weapons, armor, and fighting postures. Separating warfare from other kinds of physical or spiritual conflict is difficult because these functions are portrayed in similar styles. Early abstract symbolism changed to more figurative dominated by humans, shields, weapons, and eventually scenes showing people pierced with spears and arrows, warriors holding severed heads, mounted warriors taking pedestrian slaves, and groups fighting. This shift in subject reflects changing values and practice, but other indicators are necessary to determine if scenes refer to warfare, simple conflict, rites of passage, ritual behavior, dances, games, hunting, or other group behavior.

Greer, Mavis [22] see *Greer, John*

Greer, Melissa and Linea Sundstrom (Day Star Research)

[220] *Coup Counts and Corn Caches: Contact-Era Plains Indian Accounts of Warfare*

Plains Indian documents such as rock art, winter counts, ledger-book drawings, and hide paintings record a wide range of motives, tactics, and outcomes for intergroup fighting. Different kinds of conflict recorded in these native documents include: large-scale attacks on horticultural villages; small-scale raids for horses, captives, and scalps; sustained campaigns to keep enemies (including non-Indians) out of hunting territories; defensive actions; and at least one captive-rescue operation. Some conflicts are more likely than others to have left archaeological remains: in fact, the archaeological sites known as the Larsen and Leavenworth sites are mentioned in the Lakota winter counts. Other forms of conflict are not likely to show up archaeologically. This raises questions about whether sites like Crow Creek should be considered anomalous or representative of Late Prehistoric Plains life-ways.

Gregg, Michael [126] *First Organizer*

Gregonis, Linda

[40] *Kiva's Contribution to History, Historical Archaeology, and Ethnology*

Since its inception, Kiva has produced writings related to the history, historical archaeology, and ethnology of the Southwest and northern Mexico. Articles have covered a wide range of topics from a census of Tumacacori Mission to the battle of Cibecue to descriptions of the Yaqui Easter ceremonies and the Santa Fe Fiesta. Among the journal's important contributions are the 1962 Johnny Ward's Ranch, an ongoing series of articles on the Seri, and 1994's *The Pottery and Potters of Mata Ortiz, Chihuahua*, which has had popular success. Kiva has been privileged to celebrate the cultures of the region

through such pieces.

Gregory, Danny [85] *see Patch, Shawn*

Gregory, H. Pete [73] *see Ernenwein, Eileen G.*

Gremillion, Kristen

[154] *Cultural Transmission of Botanical Knowledge in Postcontact Eastern North America*

The exchange of plants and botanical knowledge across ethnic lines is a well known feature of culture change following European contact with North America. Such innovations spread partly as a function of their frequency. Limited interethnic contact thus favors cultural inertia because people tend to copy the practices of their parents and peers in the absence of alternatives. Inertia can be overcome by the opportunity to observe and positively evaluate unfamiliar methods of cooking, cultivating, and consuming plants. Archaeological and historical evidence provide partial support for this model, but the absence of resources, individual autonomy, and social equality introduce important constraints.

Grier, Colin (Washington State University) and Patrick Dolan (Washington State University)

[203] *Human Settlement, Coastal Landforms, and Later Holocene Sea Level Change in southwestern British Columbia*

Reconstructing sea level change is critical for modeling ancient settlement on the Northwest Coast. Sea levels have been documented for the early Holocene on the southern British Columbia coast, but fewer data exist to characterize more recent changes. We present data derived from archaeological contexts on cusate spits, an important coastal landform in the southern Gulf Islands. Our data accord well with recent characterizations of later Holocene sea levels as rising gradually over the last five millennia. We stress, however, that human modification and management of coastal environments must be considered to reconstruct how sea levels and human activity correlate.

Grier, Colin [201] *see Benz, Emily J.*; [203] *see Lukowski, Susan M.*

Griffel, David (USDA Forest Service LE&I (Retired))

[86] *Solutions For Successful ARPA Investigations*

A number of important lessons have been learned in ARPA investigations carried out by the Forest Service and other land management agencies over the past 30 years. Recommended investigative practices based on these lessons will be reviewed in this presentation. Future ARPA investigations will benefit from implementing these practices and are far more likely to result in successful prosecutions.

Griffin, Stefanie [258] *see Hall, Lauren*

Griffith, Cameron (Indiana University)

[196] *Recent Advances in Cave Management and Archaeotourism Development in Cueva Borbon (Pomier), Dominican Republic*

Since the very first scientific investigations into the Taino use of cave sites, Caribbean cave archaeology has developed in the midst of burgeoning public interest in subterranean sites. As a result of this interest, in the Dominican Republic, like elsewhere in the world, several archaeologically sensitive cave sites have been opened for tourism. This paper presents the history and latest developments in the conservation efforts and archaeotourism management for the site of Cueva Borbon (Pomier), and focuses on the wider social context of the modern activity occurring within the cave.

[196] *First Organizer*; [212] *Second Organizer*

Griffith, Tabitha (Geo-Marine Inc.), Nancy A. Kenmotsu (Geo-Marine Incorporated), and William Russell (Geo-Marine Incorporated)

[33] *Exploring Classic Period Mimbres Settlement along the Border: Excavations at Columbus Pueblo, Luna County, New Mexico*

Recent excavations at Columbus Pueblo, a Classic Period Mimbres

settlement on the US border, are being used to explore the issue of settlement intensity and migration within Mimbres society. Few southern Mimbres sites have been subjected to subsurface exploration. This paper will explore the extent to which site occupants were casual visitors or migrants from Mimbres settlements to the north who adapted their cultural norms to accommodate an environment and social landscape that differed from ancestral homelands to the north.

Griggo, Christophe [58] *see Boeda, Eric*

Grijalva, Daniel [81] *see Bowser, Brenda J.*

Grillo, Katherine (Washington University in St. Louis)

[53] *"You Can't Cook with a Deaf Pot": Ethnoarchaeological Research into Pottery and Pastoralism in East Africa*

Although pottery is frequently found in association with early pastoralist sites in East Africa, few ethnoarchaeological studies have examined pottery production and use as they may relate to pastoral mobility, subsistence, and/or ideology. This paper details twelve months of fieldwork among Samburu cattle pastoralists in northern Kenya aimed at redressing this problem. The Samburu employ an extensive system of pottery production and use despite their history of relatively high residential mobility. Discussed here will be pottery's perhaps surprisingly central role in Samburu society, one reason for which may be its ability to aid in the mitigation of constant environmental risk.

Grillo, Katherine [53] *see Hildebrand, Elisabeth*

Grimm, Eric (Illinois State Museum)

[224] *Vegetation and Climate Change in the Upper Midwest during the Younger Dryas Interval*

Previous studies in the Upper Midwest have indicated changes in vegetation and climate generally coeval with the Bølling-Allerød and Younger Dryas intervals. New pollen studies with high temporal resolution and dating control indicate that climate change in the Upper Midwest lagged Greenland by 300-400 years. A warming trend began in the late Bølling and peaked in the early Younger Dryas. Near the Great Lakes, a distinct cooling trend is then evident beginning about 300 years after the beginning of the Younger Dryas interval in Greenland. A new modeling study indicates that the Bølling-Allerød and Younger Dryas intervals were very wet.

Grimm, Sonja B. [177] *see Weber, Mara-Julia*

Grofe, Michael (American River College)

[89] *The Copán Baseline and the Outlier Stelae: The Orion Hearthstones and the Solar Zenith*

This paper provides a new interpretation of the purpose of the Copán baseline between Stela 10 and Stela 12 as marking the rising azimuth of the Orion Nebula, the central point of the Maya asterism known as the three-hearthstones. References to these hearthstones appear on monumental texts that discuss the Era Base date of 4 Ajaw 8 Kumk'u, while Stela 12 states that Ruler 12 witnessed the hearthstones "at the edge of the sky" on the date 9.11.0.0.0, when the sunrise also appeared behind Stela 12. Additional astronomical alignments are evident among two other Outlier Stelae commissioned by Ruler 12.

Gronenborn, Detlef (Roemisch-Germanisches Zentralmuseum)

[61] *The Development of Complex Society in Temperate Europe: Lessons from Eastern North America*

The Temperate European Holocene culture history trajectory encompasses the full range of forms of human socio-political organization from small-scale hunter-gatherer groups at the end of the Pleistocene to the Early Modern states. Environmentally Temperate Europe is comparable to Eastern North America but its cultures evolved differently and, from a historical perspective, at a faster pace with complex agrarian societies emerging by 4000 cal BC. Nevertheless similarities are striking albeit not contemporaneous. These similarities are outlined and the possibilities of a mutual

understanding discussed.

[61] *Second Organizer* [61] *Second Chair*

Grote, Todd [29] *see Pedler, David*

Grove, David (Univ of Florida)

[156] *Gateway Communities and the Early Formative period Basin of Mexico*

In 1978 Ken Hirth used the "gateway community" model from geography to elucidate Formative period interaction patterns in central Mexico. This presentation revisits the model in terms of the Early Formative period Basin of Mexico, where two sites dominate the literature: Tlatilco and Tlapacoya. Although separated by 24 miles and a large lake, their ceramic assemblages are usually discussed as if identical. However, significant differences actually occur in those assemblages. The gateway community model aids in understanding those differences and reveals the two sites' contrasting interregional interaction patterns.

Grove, Margaret (Retired Professor/Independent Researcher)

[143] *Archaeomythological, Archaeological, and Theoretical Considerations: A Historicity of Feminism Found in Northern Australian X-Ray Rock Art*

Rock art research in Australia's Arnhem Land has revealed a historical time line of women decorated with marks of honor: the X-ray rock art convention. It dates to approximately 8,000 years ago, and continues into the present day. Massive numbers of female figures replace those of the males in this X-ray convention. This presentation will discuss the rise in number of female figures in the X-ray rock art complex along with the mythological importance and indigenous cultural meaning contained in the body markings. Theoretical considerations become reality as the visual world intersects with oral and written discoveries.

Grover, Margan [164] *see Eldridge, Kelly A.*

Gruber, Thomas [235] *see Toney, Elizabeth M.*

Guasch, Rosa [55] *see Lamuela-Raventos, Rosa M.*

Guderjan, Thomas (University of Texas at Tyler)

[91] *The Blue Creek Project: A Brief History and Current Research Domains*

Since 1992, annual fieldwork has been undertaken in northwestern Belize with the general goal of understanding multiple aspects of the Maya site of Blue Creek and its neighbors. The project's history and dynamics, in terms of both intellectual approaches and fieldwork, are outlined. Then, the current research domains (World Systems Theory: Modeling Maya Cities and Their Political Economies; Collapse: The end of the World as they Knew It!; Wetlands and Dryland Agriculture; Creating a GIS database) are discussed.

[91] *First Organizer*; [91] *First Chair*; [91] *see Wolf, Marc*

Gudino, Alejandra (Human Environmental Sciences University Missouri) and Ron Lippi (University of Wisconsin Marathon County)

[23] *How to get along: Lessons from a tropical rain forest*

This paper explore the roles of the archaeologist as a bridge between disciplines and as a custodian of the image of modern days archaeologists researching in laboratories and libraries and digging all around the world as "ownership and keepers of the past. We will explore some thoughts and suggestions on implementing and designing an interdisciplinary research project.

[23] *First Organizer*; [23] *First Chair*

Guengerich, Anna (University of Chicago)

[45] *Regionalism and Political Control at the Inka Border: Ceramics from Posic, Chachapoyas*

The region of Chachapoyas in northeastern Peru was occupied in the Late Horizon by a number of distinct cultural groups who fiercely resisted Inka incorporation. The Chacha-Inka site of Posic was

constructed as part of Inka attempts to consolidate this internally diverse and rebellious province. Unlike elsewhere in Chachapoyas, where Inka political models relied on architectural and ceramic styles from the heartland, administrators at Posic made use of local ceramics in their occupation of the site. This may have resulted from a differential strategy adopted to control a distant area at the borders of their political domination.

Guenter, Stanley (Southern Methodist University)

[77] *The Stelae of El Peru-Waká*

More than 40 stelae have been found at the Classic Maya site of Waká and these present a number of trends over the four centuries in which they were carved. Through an analysis of stylistic elements and technical measurements of these monuments, these chronologically significant features not only illuminate the ways in which the stela cult changed through time, but also provide a method through which archaeologists can date eroded monuments. Furthermore, comparison of this data with similar data from neighboring sites is indicative of the relationships between the elite of Waká and the other kingdoms of northwestern Peten.

[77] *see Lee, David*

Guenter, Marissa (Bureau of Land Management, Burley, Idaho)

[223] *The Two-Faced Trails of Southern Idaho: Legitimate Routes and Bogus Blazing*

Previous volunteer efforts to document national historic trail systems in southern Idaho have greatly contributed to federal land management goals; however, in some cases, this well appreciated enthusiasm has resulted in imprecise interpretations of trail locations. The routes, legitimate and bogus, will be studied by way of a multi-component research design that combines a comprehensive examination of historical documentation, in addition to systematic field investigation. Issues concerning the validity of alternate routes, as well as the continued use of trail systems into the early 20th century will be also be addressed. The objectives of this ARRA project are to refine previous efforts and record the Oregon and California Trail according to Federal Trail Data Standards. These efforts will not only offer trail system details pertinent to federal land management goals and historic preservation laws, but also result in the creation of a maintainable database congruent and communicable with other national historic trail system records.

Guerin, Guillaume (University of Bordeaux), Christelle Lahaye (University of Bordeaux), Norbert Mercier (CNRS) and Pierre Guibert (CNRS)

[8] *OSL and TL dating of the Roc de Marsal (Dordogne, France): Preliminary Results*

In 2005 a first TL dating campaign gave 5 TL ages for burnt sediments and flints, from the base of the stratigraphic sequence. During the 2009 excavation period, the need for further evaluation of the site chronology led us to take a series of samples: sediment samples from three sections and a number of combustion zones are under study for OSL dating, and burnt flints are the object of a TL dating procedure. In this paper we propose to discuss the preliminary results of these luminescence ages for the sedimentary deposits and human occupation periods.

Guernsey, Julia [260] *see Earley, Caitlin*

Guerra Santander, Ericka [188] *see Wernke, Steven A.*

Guibert, Pierre [8] *see Guerin, Guillaume*; [8] *see Skinner, Anne*

Guidi, Katherine [150] *see Weir, Donald J.*; [150] *see Moffat, Charles R.*

Gullberg, Steven (James Cook University)

[89] *Cosmology of Inca Huacas: Designed Effects of Light and Shadow*

The Incas honored and venerated many features of both natural and man-made landscapes that they felt to be endowed with superhuman

powers. In Quechua these shrines were known as huacas, and at the time of the Spanish conquest they numbered in the thousands. Several aspects of Incan astronomy are explored, as well as the context within which it served Incan society. The approach of this research is holistic in that it considers multiple levels of meaning including cultural motifs, topographic and astronomical contexts, sightlines, and light and shadow effects - especially those of solstices, equinoxes, zenith and anti-zenith suns.

Gumerman, George (Northern Arizona University) [209] First Organizer; [209] Discussant

Gunter, Maddy [185] see Goodale, Nathan B.

Gürsan-Salzmänn, Ayse [183] see Massey, David

Gusick, Amy (University of California, Santa Barbara)

[56] *The Punta Arena Site: The Early Years*

Michael Glassow began investigations at Punta Arena on Santa Cruz Island in the 1980's. This unique site has deposits dating as early as 8700 BP and as late as 2000 BP. Glassow took advantage of this extended time span to understand the complex relationship between human behavior and environmental change, with a focus on the red abalone deposits that accrued during the Middle Holocene. My current research expands on Glassow's work by focusing on the Early Holocene deposits at Punta Arena in an attempt to broaden our understanding of temporal changes in maritime adaptations and their affect on human behavior.

Gutierrez, Gerardo (University of Colorado)

[156] *Distribution of Teotihuacan-Style Censers in Eastern Guerrero*

In this paper I will address the appearance and distribution of Teotihuacan style-censer in Eastern Guerrero and propose several possibilities to explain the role of Teotihuacan in the mountains and Pacific slope of Eastern Guerrero. I will also analyze the iconography of these "peripheral" censers, so in an attempt to better understand the military and religious ethos of Teotihuacan as seen from a distant region of Southern Mesoamerica.

Gutierrez, Maria (CONICET, INCUAPA), Gustavo Martinez (CONICET-INCUPA-UNICEN), and Heidi Luchsinger (East Carolina University)

[47] *New Evidence for the Survival of Pleistocene Fauna and the Archaeological Silence of the Middle Holocene in the Southeastern Pampean Region (Argentina)*

Two major issues in Pampean archaeology include the survival of Pleistocene fauna into the Early Holocene and the "archaeological silence" of the Middle Holocene. The Paso Otero 4 site (Río Quequén Grande Valley, Argentina) provides direct evidence pertaining to both issues. Faunal remains of extinct armadillo (*Eutatus seguini*) date to ca. 7700 BP and the archaeological record of this site has been radiocarbon dated to ca. 7700-5500 BP. This paper discusses how the evidence contributes to our understanding of these issues as well as the context of the regional archaeological record for the Pampas during the Middle Holocene.

Gutierrez, María de la Luz (Instituto Nacional de Antropología e Historia)

[242] *Las Vírgenes Volcanoes: Social Agents in the Process of Enculturation of Landscape in Central Baja California, México*

Vírgenes volcanoes are the most conspicuous features in central Baja California. Ancient tectonic and eruptive events could have been a sufficient reason for the indigenous to assign them special meaning, however, there is additional evidence that emphasizes their great importance: raw material deposits, springs, and a strange rock art place. Were these landmarks object of special veneration? How these sacred domains did interact with people and structured their habitual and ritual actions? This paper will try to demonstrate that these volcanoes held a deep symbolism for the native cosmivision and acted as social agents in the formation of their identities.

Guzman, Scott [112] see Sinclair, Chloe

Gyucha, Attila [61] see Parkinson, William A.

Haas, Jonathan (The Field Museum), Alvaro Ruiz (Instituto Cultural del Norte Chico) and Winifred Creamer (Northern Illinois University)

[114] *Reuse of Late Archaic (3000-1800 B.C.) Monumental Sites in the Norte Chico Region of Peru*

The Norte Chico region witnessed a florescence of large sites with monumental architecture in the 3rd millennium B.C. The terraced platform mounds, sunken plazas, upright monoliths and U-shaped layout established architectural and site patterns that radiated out and evolved into various manifestations from Sechin Alto, to Chavin de Huantar to Tiwanaku. These sites left an indelible mark not just Andean history, but also on the local landscape. They served as focal points for ceremonies, offerings and burials in later time periods – all intrusions in the archaeological record. The reuse of these sites demonstrates they were recognized as significant ancestral places for more than 2000 years after abandonment.

Haas, Jonathan [138] see Rutherford, Allen

Haas, W.R. [113] see Mills, Barbara J.

Haas, William (The University of Arizona)

[248] *Low-Level Food Producers and the Pursuit of Game on the Rainbow Plateau, Arizona*

In his observations on Basketmaker materials, A.V. Kidder noted an abundance of hunting-related goods amongst a dearth of game consumption evidence. More recent subsistence analyses reveal that Basketmaker cultigen consumption was comparable to that of later Pueblos. Towards reconciling this apparent contradiction, I use optimal foraging theory to show that early agricultural colonists to the Rainbow Plateau would have invested in the pursuit of game species even if they were rarely consumed. A significant correlation between the spatial distribution of Basketmaker sites and the habitats of high-ranked game species on the Plateau further supports this hypothesis.

Haas, Jr., Wm. Randall [200] see Trowbridge, Meaghan A.

Haeusler, Werner [184] see Wagner, Ursel

Hahn, Lauren [178] see Braswell, Geoffrey E.

Hajic, Edwin (GeoArc Research), David W. Benn (Bear Creek Archaeology, Inc.) and E. Arthur Bettis, III (University of Iowa)

[29] *Fluvial History and Archaeological Site Distribution in the American Bottoms, Central Mississippi River Valley*

The CMV reach is characterized by terraces, fans and paleochannel belts that represent a range of valley depositional environments, some strongly influenced by the Missouri River below its mouth. Frequency and density of sites of different periods are examined in relation to landform sediment assemblages (LSAs) and LSA areas, and compared to the 300-mile reach upstream. Results reflect differential impact of a number of factors including a history of surface-oriented survey and testing; episodes of LSA removal and burial; site surface exposure versus burial; cultural preferences for landforms; a long-term research focus on Cahokia; and, the Missouri River.

Hajic, Edwin [146] see Kolb, Mike; [173] see Styles, Thomas R.

Hale, Kelly (Arizona State University)

[34] *Valhalla I am Coming: Viking Masculinity in the English Danelaw*

This paper explores the gendered experience of the Viking men who established and maintained the Danelaw in early medieval England (c. AD 800 - 954) through a contextualized analysis of mortuary behavior. The Viking inhumations of England provide a means for investigating the expression and construction of a masculine identity by individuals participating in a dangerous, conflict-ridden frontier.

The burial data suggest that for the Vikings interred throughout the Danelaw, "warriorhood" and masculinity were intertwined identities that were reinforced through embodied action, symbolic adornment and shared beliefs regarding the afterlife.

Hale, Micah (UC Davis)

[197] *The Ideal Free Distribution and Discontinuous Socioeconomic Shifts*

The Ideal Free Distribution (IFD) model can be modified to predict discontinuous socioeconomic change among hunter gatherers, while retaining original model assumptions. I treat adaptive strategies as qualitatively different niches in the IFD model, one of these having a minimum population density requirement and lower initial niche quality, but higher maximum density thresholds. These conditions predict cyclical colonizing attempts prior to the successful occupation of the new, density dependent niche, followed by rapid depopulation of the original niche. I apply this model to explain an abrupt shift from Time Minimizing to Energy Maximizing in the archaeological record of southern California.

[197] *First Organizer*

Hall, Conor [123] *see Boehm, Andrew*

Hall, Lauren (CSU Stanislaus), Chelsey Rhudy (CSU Stanislaus), Jenica Szirmay (CSU Stanislaus), Melissa Muñoz (CSU Stanislaus) and Stefanie Griffin (CSU Stanislaus)

[258] *The Manufacture and Use of Ground Stone Implements in the El Paraíso Valley, Western Honduras*

Ground stone implements, the workhorses of domestic food production and processing, provide invaluable information about the daily life and affiliations of the people who made, procured, and used them. In this paper, we examine ground stone tools recovered from Classic period rural settlements in the El Paraíso Valley to explore daily practice and the intra- and interregional interactions in which residents engaged. In doing so, we draw on the analysis of formal attributes, use wear, raw material, and procurement patterns to gain a better understanding of these vital quotidian implements and their role in the household and beyond.

Hall, Robert (University of Illinois at Chicago)

[99] *Those Two Maya Days of Creation: Why 542 Days Apart?*

The Maya creation story of the inscriptions describes a first day of creation on August 11, 3114 BC, and a second day of creation 542 days later on February 3, 3112 BC., with no ties to the agricultural year. The 260-day Chorti Maya agricultural year begins with observance of a first day of creation on February 8 and a second day of creation on April 25 and concludes in late October. Evidence is drawn from Spinden and the Madrid Codex to suggest that the Chorti creation rites may be survivals of observances that predate the Maya calendar.

[140] *Discussant*

Hall, Thomas (DePauw University)

[32] *World Systems Analysis in Eurasian Archaeology: Recent Findings, Questions, Debates, and Speculations*

This paper is intended to be a discussion "stimulus" by reporting recent findings, citing recent literature, raising some questions about Eurasian archaeology, AND asking some questions about world-systems analysis [WSA] derived from Eurasian archaeology, and to do some speculating. There are many questions and debates within WSA, especially WSA that is exploring ancient world-systems and their roles in shaping the modern world-system. These questions and debates are both theoretical and empirical, and typically at that stage where the theory – data – revision – more data – more revision cycle is moving rapidly. Thus, I seek to encourage archaeologists working on Eurasia not only to use recent WSA, but also to add to and/or emend it based on their findings. In short the "stimulus" is aimed toward the inductive side of the scientific process, where revisions of theory are driven by recent data.

Halligan, Jessi (Texas A&M University)

[236] Preliminary Geoarchaeological Interpretation of a Submerged Paleoindian Site in the Aucilla River, Northwest Florida

Thousands of osseous and stone Paleoindian artifacts have been recovered from the Aucilla River of northwestern Florida. Many of these lack context, limiting cultural interpretations. In this dissertation research, terrestrial and submerged coring and excavation are used to reconstruct the geoarchaeological context of a submerged sinkhole containing Paleoindian and Early Archaic components. Targeted excavation of Late Pleistocene cultural components are used to discuss human activity at this site. This record will then be compared to data from previously-excavated sites to create a synthetic site formation model for the region and to examine Paleoindian cultural patterns in the Aucilla basin.

[73] *see Lemke, Ashley K.*

Halperin, Christina (University of Illinois)

[54] *Maya State Collapse and Changes in Household Ritual: History-Making from a Microscale Perspective*

In contrast to the politics of the state, households are often portrayed as the ultimate bearers of "tradition." Nonetheless, when an archaeology of households is considered from a practice-orientated perspective, small-scale reproductions and changes not only become more visible, but can be seen as contributing factors to larger structural transformations. This paper examines household rituals, social practices, and symbolism during and after the so-called Classic period collapse to reveal the dynamic ways in which households negotiated, reproduced, and reinvented traditions. Special emphasis is placed on ceramic figurines, ritual termination deposits, and caches from Belize and Guatemala to highlight ways in which history-making manifested on a household-level.

Halteman, Justin [73] *see Lemke, Ashley K.*

Hambacher, Michael (CCRG, Inc.), Charles R. Moffat (CCRG, Inc.), Kathryn C. Egan-Bruhy (CCRG, Inc.), and Michael F. Kolb (Strat Morph Geosystems, Inc.)

[150] *Data Recovery Excavations at 11ST540: Changing Use of Floodplain Environments Reflected at a Multi-Component Archaic Site in the Lower Illinois River Valley*

Large-scale data recovery excavations were conducted at 11ST540, Scott County, Illinois. The site is situated on a buried sand ridge on the Illinois River floodplain. Excavation of over 800 square meters identified a nearly 1 m thick deposits of cultural materials, nearly 100 features, and a large artifact assemblage including floral and faunal remains. Diagnostic artifacts and radiocarbon dates indicate primarily late Helton phase and Titterington phase occupations. Recovered data reflects changes in the settlement/subsistence strategies and use of the Illinois River floodplain during these periods.

Hambacher, Michael [150] *see Weir, Donald J.*

Hamilton, Tara (University of Nevada, Reno)

[120] *Morphology and Chronology of Pinto series projectile points of the Great Salt Lake Desert, Utah*

The chronology of Pinto series projectile points in the Great Basin and the Mojave Desert has been the subject of much debate. Pinto points have been found in both early and late contexts associated with dates spanning the Prearchaic and Archaic Periods. This lack of temporal specificity may relate to differences in regional morphology through time coupled with misidentification of other point types as Pinto series. These issues will be discussed using a collection of 287 Pinto series points from the Great Salt Lake Desert of northwestern Utah.

Hammerstedt, Scott (University of Oklahoma)

[59] *Works Progress Administration Archaeology in Western Kentucky: Excavations at Annis Village*

The Works Progress Administration archaeology program in Kentucky, under the general direction of William S. Webb, conducted excavations at numerous sites throughout the state. This paper examines work conducted in 1939-1940 by Ralph Brown and in 2002-

2004 by Penn State at Annis, a single-mound Mississippian site along the Green River in Butler County, Kentucky. The varying strengths of WPA and modern archaeological techniques complement each other and allow for a meaningful examination of site structure and organization.

[59] *see* Regnier, Amanda L.

Hammond, Norman (Boston University) [229] *Discussant*

Hancock, Beverlye [76] *see* Whittington, Stephen L.

Handwerk Kurt, Elizabeth (Windsor Museum, Colorado)

[70] *Effigy Mound Culture mortuary practices at the McClaughry Mound Group, Marquette County, Wisconsin*

This paper discusses research from the Late Woodland Period Effigy Mound site, the McClaughry Mound Group, located in Marquette County, Wisconsin excavated by W.C. McKern in 1925. Previous research with Effigy Mounds has focused on the differences between mound groups across the landscape. However, there is no cohesive description of within mound group mortuary variability. Using osteological and statistical methods to examine the various distinctions present at this site; the characteristics of Effigy Mound mortuary practices at this site may be defined helping to inform recent theories on site use and social organization.

Haney, Jennifer [172] *see* Herndon, Richard I.; [172] *see* Cooper, Randall

Hanks, Bryan (University of Pittsburgh) [32] *Discussant*; [184] *see* Johnson, James A.

Hanratty, Colleen (Maya Research Program)

[91] *Collapse and Post-Collapse Processes of Blue Creek*

Nearly two decades of multidisciplinary research at the site of Blue Creek has provided powerful insights into the collapse and post-collapse processes of this unique Maya center. The data reflect the populations' adaptation to and manipulation of their environment as well as their response to marked environmental change. The Blue Creek data array emphasizes the importance of human agency in the collapse and post-collapse processes at the end of the Classic period. This paper will examine how these factors directly contributed to a post-collapse model of political and social organization completely distinct from those previously documented at Blue Creek.

Hansell, Patricia [136] *see* Ranere, Anthony J.

Hansen-Speer, Karla (Indiana State University), Jim Speer (Indiana State University) and Lynn Harrell (Bureau of Land Management, Kemmerer Field Office, Wyoming)

[234] *The Antelope Trap and the Juniper Tree: Using Dendrochronology to Investigate Hunting on the High Plains of Wyoming*

The Bridger Antelope Trap is an early historic site on the National Register of Historic places in southwestern Wyoming that was used by American Indians while hunting antelope. Here, we describe the results of a dendrochronological investigation of the trap that explores the trap's age of construction, its use and maintenance, and its time depth. Over the course of two field seasons, we collected wood samples from living juniper trees, ax-cut stumps, and the trap itself. A master chronology of living trees has been built back to A.D. 1754, and analysis continues on the old trap wood.

Hard, Robert (Univ of Texas at San Antonio), A. C. MacWilliams (University of Calgary), John Roney (Colinas Cultural Resource Consulting), and William Merrill (Smithsonian Institution)

[248] *Uto-Aztec Foragers and Farmers in the Cultural History of the Desert West*

Our research on alternative mechanisms for the dispersal of maize agriculture from Mesoamerica to the U.S. Southwest by 2100 B.C. has led us to reexamine the cultural history of the Uto-Aztec language family. Based on linguistic and paleoecological data, we

have concluded that the Proto-Uto-Aztec speech community was located not in Mesoamerica but rather in the western Great Basin and that the foraging bands that comprised it began moving out of this "homeland" around 5500 B.C. Here we consider the current archaeological record from the Great Basin and the Southwest, as well as additional linguistic and paleoecological data, to evaluate the feasibility of this scenario.

Hard, Robert [74] *see* Munoz, Cynthia M

Hardy, Bruce (Kenyon College)

[157] *You Don't Need a Grapefruit Spoon to Eat a Grapefruit: Stone Tool Use in the Aurignacian and Middle Paleolithic of the Swabian Jura*

While we can document clear changes in both organic and stone tool technology between the Middle Paleolithic and the Aurignacian, we do not know how these typological differences translate into functional differences. Use-wear and residue analyses on a sample of over 200 tools from Hohle Fels, Vogelherd, and Geißenkolstérle reveal similar patterns of tool use within the Aurignacian. Tool types are not specialized but are used for multiple tasks. A similar range of materials are exploited from all three sites. Analysis of Middle Paleolithic tools from Hohle Fels suggests that Neanderthals and modern humans were using tools for similar activities.

Hardy, Meredith (National Park Service)

[117] *It's a Small World? Settlement and Interaction on St. Croix, Virgin Islands*

Recent compositional and sourcing studies of pottery and stone objects from across the Caribbean are revealing patterns of settlement, contact, and interaction between prehistoric island societies. Using GIS spatial analyst to provide a site to site least cost path analysis that incorporates a rank size distribution for known sites across the island of St. Croix, a model for Saladoid settlement and interaction has been developed that corresponds with the results of pottery and stone sourcing studies. This paper, employing social theories of practice and complexity, and models of complex adaptive systems, presents the results of this preliminary study.

Hare, Timothy (IRAPP, Morehead State University) and Marilyn Masson (University at Albany)

[20] *Pottery Assemblage Variation at Mayapán Residences*

We examine the city-wide spatial and statistical patterning of the use of different pottery forms within Mayapán households. Variation is observed in the utilization of ceramic vessels that have overlapping functions (such as jars), but exhibit different styles and sizes. Residences also vary in terms of low frequency vessels of functional distinction (such as ladle censers) or rare, decorated wares. Correlations that might explain assemblage variation are explored, including neighborhood location, status, affluence, and occupational specialization of particular domestic contexts.

[20] *First Chair [20] Second Organizer*

Hare, Timothy [20] *see* Terry, Richard E.

Hargrave, Eve

[146] *Life and Death in the Early Archaic: Information from the Middle Mississippi Valley*

General health and mortuary behavior of the Early Archaic inhabitants of the Middle Mississippi Valley are not well known. This paper presents new data on health and mortuary behavior from Modoc Rockshelter and the nearby Kaskaskia Mine site – two roughly contemporaneous Archaic rockshelter sites located in Randolph County, Illinois. Results from these analyses are placed within a broader regional context through comparisons with Early Archaic and Middle Archaic populations in the Midwest.

Hargrave, Michael (ERDC CERL), Lewis Somers (Geoscan Research (USA)), R. Berle Clay (Cultural Resource Analysts, Inc.) and Rinita Dalan (Minnesota State Moorhead)

[251] *Recent Magnetic Gradient, Susceptibility, and Resistance*

Surveys at Poverty Point

Ongoing geophysical surveys are providing significant new information on the Poverty Point ritual landscape. Focused on the plaza and surrounding first and second ridges, survey coverage now includes 19.5 ha of magnetic gradient and 3.2 ha of resistance data. Results include the discovery of more than 25 circular anomalies interpreted as post circles that range in diameter from 12 to 120 meters. Down-hole magnetic susceptibility tests investigating the nature and depth of ridge and plaza deposits are being used as an aid in the interpretation of the geophysical surveys and to pinpoint excavations.

Hargrave, Michael [251] see Greenlee, Diana M.; [73] see Ernenwein, Eileen G.; [251] see Clay, Rudolf B; [164] see Carlson-Drexler, Carl G.

Harkey, Anna (University of California - Berkeley)

[137] *The Andean Home in a Shifting World: Ceramic and Architectural Perspectives from the Upper Mantaro Valley, Peru*
The Upper Mantaro Valley, in central Peru, was profoundly involved in a series of dramatic transitions for the Andes. It was part of the widespread movement from valley floors to dense hilltop settlements in the Late Intermediate Period. It was site of an Inka provincial capital, and then colonized again as site of the first Spanish capital of Peru. This research explores the cultural outcomes of this series of shifts and colonial encounters, from a local perspective, through a two-pronged study of architecture and ceramics: artifacts sensitive to stylistic variation, and intimately tied to local lived experience and daily life.

Harkins, Kelly (Arizona State University)

[82] *The Bioarchaeology of Disability Identity*
Despite recent interest in identity, difference, and the body, disability identity remains a largely neglected area of research within archaeology. Human remains can provide a crucial line of evidence to examine disability, as both a pathological process and a cultural phenomenon. In this paper, I evaluate the capacity of bioarchaeology to investigate both physical and mental disability in the archaeological past. The value and limitations of such an approach are illustrated using a case study from pre-industrial Europe, an osteobiography of two individuals with a congenital malformation syndrome from the early medieval (c. AD 500-1000) cemetery of Pottenbrunn, Austria.

Harl, Joe (Archaeological Research Center of St. Louis)

[187] *Remains of 19th Century Flats and Tenements at the Cochran Gardens Site, City of St. Louis, Missouri*
Cochran Gardens Site covers a 2 block area within St. Louis City's near north side. In 1950, the 19th century buildings were razed and replaced by public housing apartments, known as the John J. Cochran Gardens Apartments. Despite the fact that six 12 story tall apartment buildings were constructed on these blocks, remains of the original 19th century buildings, privies, cisterns, and wells still existed about 2 – 3 meters below the surface. Artifacts associated with these features provided information on the Irish immigrant population who originally lived in this area.

[2] *Second Chair*; [2] see Zafe, Zarley B

Harlowe, George [139] see McKillop, Heather

Harrell, Lynn [234] see Hansen-Speer, Karla

Harris, Kathryn

[232] *Obsidian Sourcing of Southeastern Idaho Paleoindian Projectile Points*

Previous obsidian sourcing studies have demonstrated that patterns of obsidian movement across a region can indicate landscape use and mobility of prehistoric people. Using this research as a platform, I asked "What is the pattern of obsidian movement across southeastern Idaho in the Paleoindian time period, and to what extent does this indicate the use of the southeastern Idaho landscape?" After geochemically sourcing obsidian Paleoindian projectile points

found throughout Southeastern Idaho, I statistically analyzed data on point typology, region of projectile point provenience, and obsidian source locations. This analysis suggests a persistent and tethered Paleoindian use of Southeastern Idaho.

Harris, Lucille (University of Toronto)

[108] *Reconceptualizing an Expedient Flake Tool Technology from Interior British Columbia*

Variability in winter housepit economic activities in Interior British Columbia is commonly established through proportional differences in tool types using a morpho-functional classification system. In this paper I argue morpho-functional typologies are inappropriate for expedient flake tools because many of the defined types lack behavioral significance, force analysts into functional interpretations often based on arbitrary or unproven rules, and have the potential to significantly skew quantification and interpretation of the assemblages. Classification of individual worked edges according to edge angle and use damage is suggested as a more accurate and potentially interpretation free approach.

Harris, Lucy [39] see Schirack, Maggie

Harris, Susan (University of Tübingen), Corina Knipper (University of Mainz, Germany) and Lynn Fisher (University of Illinois, Springfield)

[184] *Changes in Chert Acquisition Strategies During the Neolithic at the Asch-Borgerhau Quarry, Southwest Germany*

Sub-surface features revealed during excavations at the Neolithic chert quarry site of Asch-Borgerhau near Blaubeuren, Germany produced secure dates showing that the quarry was used during the Early/Middle, Younger, and Final Neolithic. The lithic assemblages belonging to these features provide an opportunity to compare the lithic production technology and way that material was reduced for further transport during these different phases of the Neolithic. This poster will present an analysis of the tools and cores from the dated features of Asch-Borgerhau to compare the way in which the quarry was used during the different phases of the Neolithic.

Harris, Susan [184] see Fisher, Lynn E.

Harrison, David [185] see Quinn, Colin P.

Harrison, James [231] see Wurtz, Michelle D.

Harrison, Karl (Staffordshire University)

[168] *The Application of Archaeological Techniques to the Forensic Fire Scene*

In a UK context, forensic archaeology has remained focused on the search for and excavation of clandestine burials. There are, however, other areas of integration between archaeology and criminalistics that have yet to be exploited. One such area is the forensic fire scene. This presentation aims to provide a brief discussion of the interrelationships between archaeological practice, the scientific understanding of the nature of structural fire dynamics and the current practice of UK fire investigators. By drawing these disciplines together it seeks to suggest means by which archaeology might be adapted to suit the needs of the forensic fire scene.

[69] *Discussant [168] First Chair*

Harro, Douglas [123] see Stevens, Nathan

Harry, Karen (University of Nevada-Las Vegas)

[253] *Exploring the Puebloan Occupation of the Mt. Dellenbaugh Region of the Arizona Strip*

Located on the far northwestern edge of the Colorado Plateaus, the Mt. Dellenbaugh frontier would have been a remote and challenging area to live in. Despite these challenges, research indicates that the area was occupied by farmers associated with the Virgin River Puebloan (VRP) culture. To investigate the nature of this occupation, the University of Nevada Las is conducting a series of ongoing field schools here. This paper explores what we have learned to date

about the nature of the VRP settlement, including issues relating to settlement shifts, seasonality, subsistence, and the nature of the abandonment of the pueblos.

[174] *Discussant* [253] *First Chair*

Hart, Daniel (HDR | e²M)

[165] *The Military Built Environment and Cultural Landscape Assessment in the Hawaiian Islands*

The Hawaii Army National Guard (HIARNG) has armories and facilities in historic coastal defenses, and other facilities spread across the Hawaiian Islands. Many HIARNG facilities were built at sites that hold potential for cultural landscapes associated with native Hawaiian culture and community development, both World Wars, and the Cold War. This poster session will examine the how the landscape was adapted and rebuilt by for military purposes, the range of such landscapes, and their association with buildings and other components of the built environment based on a recent historic buildings survey at HIARNG sites.

Hart, John [4] *see Lovis, William*

Hart, Siobhan (Binghamton University)

[170] *Why Firehouses Matter: The Power and Politics of Heritage Preservation in Deerfield, Massachusetts*

Heritage work is a centuries-old endeavor in Deerfield, Massachusetts. It is a place people visit to experience "heritage," but also a place where people try to make sense of how the past is deployed in their midst. Here, I discuss efforts to engage multiple stakeholders (Native American descendants, heritage institutions, avocational and professional archaeologists, and local residents) in archaeology and preservation activities surrounding a seventeenth-century Native American site. I explore the challenges of sharing and redistributing the power to mobilize the past by reflecting on how the politics surrounding the relocation of a firehouse stymied a long-term preservation plan.

Hartley, Charles and Alan Greene (University of Chicago)

[240] *From Structure to Composition and Back: Digital Radiography and Computed Tomography; Some Cases for Anthropological Contemplation*

Two decades after their debut as tools of archaeological analysis, digital radiographic and computed tomographic techniques have become deft instruments in the acquisition of data relevant to pottery analysis. Innovations in instrument resolution, software development, and filtering techniques now permit an unparalleled level of analytical flexibility, allowing an archaeological analyst to answer specific questions about large ceramic datasets at multiple scales of analysis. In revealing data pertaining to formation techniques and inclusion density and/or variation, these techniques call into question the continued relevance of analytical distinctions between "structural" and "compositional" pottery data.

[240] *First Chair* [240] *Second Organizer*

Hartley, Charles [240] *see Greene, Alan F.*

Hartmann, Gayle (Arizona Archaeological and Historical Society), Brenda Todd (University of Colorado), and William Robinson (Arizona Archaeological and Historical Society)

[40] *Oh, How Things Have Changed!: Kiva Production Over The Years*

This poster traces the dramatic changes in printing technology since 1935, when Kiva began publication. Beginning with typed or even handwritten manuscripts, we trace the route of a manuscript through galleys, cut-and-paste illustrations, and linotype printing. The computer revolution, beginning with "floppy" disks that were actually floppy, completely transformed this process to one that is now entirely electronic.

Haskell, David (Independent Scholar)

[225] *Splitting the Gods: The Significatory Power of Obsidian Idols in the Prehispanic Tarascan Kingdom*

Pieces of obsidian were used as idols of gods, including the patron god of the ruling elite and thus the state as a whole, in the prehispanic Tarascan kingdom of West-central Mexico. Utilizing primarily ethnohistoric (documentary) evidence, I argue that it was the fact that obsidian is easily knapped that allowed pieces of obsidian to simultaneously be direct indexes of kingly power and focal points of historical oratory, ideal metaphors for kingly power, and self-evident agents that allowed conquest and the exercise of power by the elites to be fetishized and mystified as they were recast as divine mandates.

Hastorf, Christine (University of California-Berkeley)

[11] *Sustainability, Decisions and Political Power: What do Long-term, Changing Farming Strategies of the Andes tell us?*

Agriculture developed indigenously and has been practiced throughout the central Andes for at least 6000 years. In any one valley, over time, various political situations have developed and faded. The changing decisions farmers have made over this long time reflect their social and political worlds. While the landscape has remained relatively stable, the perceptions of it and the farmer's interactions have altered, at times radically. I focus on the changing land-use around Jauja Peru and how it reflects changing political situations, farmer's decisions, political decisions and changes on the landscape.

[132] *First Organizer*; [154] *Discussant*; [245] *see Capriles, José M.*

Hatch, Mallorie (Arizona State University) and Kent M. Johnson (Arizona State University, School of Human Evolution and Social Change)

[92] *Assessing the Role of Lineage Competition in the Development of Social Complexity in Ancient Egypt: Biological Affinity in the Predynastic Period at Naqada*

Savage (1997, 2001) has hypothesized that the development of Egyptian social complexity was fueled by descent group competition during the Predynastic period (ca. 3900-3050 BC). This study tests for the presence of distinct biological descent groups at the Predynastic center of Naqada, Egypt. Biological affinity is examined by assessing differences in gene flow and phenotypic variability between three cemeteries at Naqada, Cemetery T, Cemetery B, and the Great Cemetery, using previously published craniometric data (Fawcett and Lee 1902). Results of R matrix and Relethford-Blangero analyses contradict previous analyses by documenting greater endogamy in the Great Cemetery than Cemetery T.

Hauck, Thomas (IPNA, University of Basel) and Dorota Wojtczak (Institute for Prehistory and Archaeological Science, University of Basel)

[58] *Trends and Diversity in the Middle Paleolithic sequence of Hummal (Central Syria)*

The spring of Hummal, El Kowm, is a Paleolithic reference site for the interior Levant because of its archaeological sequence including Lower to Upper Paleolithic deposits. The Middle Paleolithic consists of numerous levels with Hummalian and Mousterian assemblages. Initial investigation in the Eighties showed that the Hummalian is characterized by a non-Levallois blade production alongside blanks obtained by the Levallois method. The latter proffers an association with the overlying Mousterian sequence, which shows a gradual increase in Levallois point production. This paper presents the techno-typological trends between both cultures through their quantitative and qualitative attributes.

Hauser, Neil (ATSAA), Robert Wunderlich (RMC Consultants, Inc) and Wayne Wilson (ATSAA)

[147] *Web-Based Lithic Source Database*

An operational prototype, web-based lithic source database has been developed to allow archaeologists doing work in the general Colorado region to compare lithic materials from their sites with high quality, color photographs of material samples from lithic quarries around Colorado. The interface allows a user to query by Smithsonian site number, Munsell rock color code, and general location. The database includes points of contact for comparative collections that contain

samples from the quarry of interest. To protect sources, the source locations are only given in grids of 100 km x 100 km squares. The Smithsonian site numbers for the quarries enable archaeologists to easily obtain exact locations by contacting Colorado State Historic Preservation Office. The archaeological community is being solicited for suggestion on other information that should be added. Possibilities, as available, include reflective spectra, laser breakdown spectroscopy (LIBS) spectral profiles, thin section photographs, and reports on the source. Issues associated with populating this database will also be discussed.

Hawkins, Meredith (Archaeological Research Center of St. Louis, Inc.)

[2] *A Hearth and Sickles: An Examination of Feature 22 at the Squire Site (11MS2244) Granite City, Illinois*

Feature 22 of the Squire site (11MS2244) is the remnant of possibly a deep kitchen or smokehouse. There is no evidence, thus far, that this style of building has been found in the American Bottom. Through the theoretical framework of landscape archaeology, this paper will investigate whether Amos Squire's early life in Maryland and his few years amongst the French in Cahokia, Illinois might have led him to erect this unusual building. Additionally, it will try to determine how this homestead was organized and might have reflected the influence of the Squire family in the Six Mile Prairie community.

Hawkins, Nancy (Louisiana Div of Arch) and Reca Jones (University of Louisiana, Monroe)

[38] *Louisiana Avocationalists*

Louisiana has a tradition of avocational archaeologists making significant contributions in North American archaeology. Dr. Clarence H. Webb's contributions include the Poverty Point culture, the Caddo culture, and the San Patrice culture. He received the Crabtree Award in 1985. Avocational archaeologist Bill Baker recorded over 100 sites in Central Louisiana and contributed to the preservation of significant sites, including Cowpen Slough, Troyville and Caney Mounds. Reca Jones has been an avocational archaeologist since 1960. She has recorded and promoted the preservation of mounds in Northeast Louisiana, particularly in the Ouachita River Valley. She was the first to publish information on Watson Brake, a Middle Archaic mound complex, and has actively protected the site since 1981. Reca served as president of the Louisiana Archaeology and in recognition of her work received the Crabtree Award in 1998.

Haws, Jonathan (University of Louisville)

[16] *Human-environment interaction during the Upper Paleolithic in central Portugal*

Throughout the Pleistocene climatic shifts repeatedly impacted the Mediterranean region. In response to these perturbations, the Mediterranean bioclimatic zones evolved as some of the most diverse, dynamic and resilient in the world. The appearance of modern humans in western Iberia after 30,000 BP co-occurred with important environmental changes, especially regarding animal communities. This paper combines data from zooarchaeological, paleontological and paleovegetation records to identify patterns in human-environment interaction at different spatial and temporal scales. Evidence suggests that modern humans transformed their environment creating long-term dynamic and resilient socio-natural systems during the Upper Paleolithic.

Haws, Jonathan [177] see Bicho, Nuno

Hayashida, Frances [138] see Strahacker, Colleen A.

Hayes, Joanna (Kenyon College) and Edward Schortman (Kenyon College)

[258] *The Organization of Early Ceramic Manufacturing along the Rio Chamelecon*

In 2008, a simple open or shallow pit firing area was discovered at the site of Las Canoas in the Middle Chamelecon-Cacaulapa area. The area, found under a complex sequence of Late and Terminal Classic

construction, appears to be eccentrically located, away from probable storage and manufacturing areas. The earliest known firing facility at La Sierra in the Naco Valley to the north has both a different configuration and a different location with respect to workshop remains. This presentation addresses those contrasts.

Hayes, Katherine (University of Minnesota, Twin Cities)

[175] *Mineralogical Routes to Social Interactions: Investigating Locally-made Earthenwares at the Sylvester Manor Site*
Shantok ceramic wares are an archaeological type defined by stylistic elements and distribution in southern coastal New England in the early colonial period. Generally thought to be of Native American manufacture, a large quantity of this ware-type was recovered at Sylvester Manor, documented to have been a plantation employing enslaved African labor. Stylistic and functional analyses yielded no new insight to the role of the ceramic in the plantation setting, but application of chemical and mineralogical analyses demonstrated a drastic technological shift. This information opens new avenues of interpretation which relate to poorly-documented interactions between enslaved Africans and Native Americans.

Haynes, Gary (University of Nevada-Reno)

[22] *Puzzling Over The Bumbusi Spoor Engravings In Zimbabwe*
Twelve of Zimbabwe's 14 sites with engravings of animal foot-prints are in or near Hwange National Park. Eight rockshelters close to the Bumbusi Late Iron Age Site contain pecked, incised, ground, and drawn/painted forms. Engraved animal spoor recognizable to species dominates. Zebra spoor is most abundant. Excavations in two rockshelters produced an enormous amount of Wilton lithics and organics, suggesting the engravings were made by Later Stone Age foragers. Most deposition in the rockshelters occurred 2-4,000 years ago, but a thin overlying deposit contains Late Iron Age materials. Some of the engravings may have been created by agropastoralists.

Haynes, Gary [53] see Wriston, Teresa A.

Haynes, Jr, C. Vance [21] see Ballenger, Jesse

Hays, Christopher, James Stoltman (University of Wisconsin-Madison), Richard Weinstein (Coastal Environments, Inc.) and Robert Tykot (University of South Florida)

[251] *Investigating the Exchange of Poverty Point Objects and Pottery in the Poverty Point Culture Using X-Ray Fluorescence and Petrographic Thin Sectioning*

The Poverty Point culture is justly famous for its far-flung exchange network that extended throughout the eastern United States. In this paper we report on our use of a non-destructive Bruker X-ray fluorescence spectrometer and petrographic thin sectioning to investigate the movement of St. Johns pottery and Poverty Point objects between a variety of areas including eastern Florida, the Gulf Coast, and the Lower Mississippi Valley. We examined over 40 artifacts from major archaeological sites such as Tick Island in Florida, Claiborne and Jaketown in Mississippi, and Poverty Point in Louisiana.

Hays, Christopher [251] First Organizer; [251] First Chair

Hays, Justin [27] see Proue, Molly

Hays-Gilpin, Kelley (Northern Arizona Univ), Elizabeth Ann Morris (American Museum of Natural History), and Sally J. Cole

[51] *Ann Axtell Morris: Art and Archaeology in the Southwest and Mesoamerica*

In the 1920s, archaeology was not a common career choice for women. Art was not a common topic for archaeologists to study. Ann Axtell Morris boldly researched rock art, mural painting and textiles, and wrote for the public as well as for scholars. Her popular books, "Digging in the Southwest" and "Digging in Yucatan," inspired generations of men and women to explore archaeology. Her rock art, murals, and textile research has not yet reached a wide audience. In

this presentation, we will bring to light the important roles Ann Axtell Morris played in the history of American archaeology.
[242] Discussant [174] Discussant

Hayward, Michele (Panamerican Consultants), Frank Schieppati (Panamerican Consultants) and Michael Cinquino (Panamerican Consultants)

[22] *Late Ceramic Religious and Political Organization in Puerto Rico: Caguana, PO29 and Vivi*

The location of rock art sites and the relative ordering of the figures at sites are critical to the interpretation of both the function and specific meaning of rock art assemblages. Past analyses of these components at Caguana in the central highlands of Puerto Rico indicate that the ball court anthropomorphs and zoomorphs reflected an increasing sophistication in the use of religious imagery and rituals by the political elite to further their influence. Rock art from the ball court site of PO29 in the south and those of Vivi also in the central highlands offer opportunities to further explore the intersection between religious and political organization in the Late Ceramic period.

He, Kunyu [155] see Flad, Rowan K.

He, Yuling [155] see Campbell, Roderick B.

Healan, Dan (Tulane University)

[221] *Obsidian Bifaces Seen from Both Sides*

In Mesoamerica two different biface industries involving obsidian can be distinguished, one of which involves conventional bifacial thinning and pressure flaking of a nodule or blank, producing symmetrical, thin, and aesthetically pleasing implements. The other features the use of high-angle "edging" confined to the margin that largely shapes rather than thins, whose products exhibit a casual and often seemingly mediocre workmanship although their abundance indicates they were adequate for their purposes. This paper considers contextual and other information that may shed light upon different technological, social, ideological, and other cultural milieu in which the two industries may have operated.

Healy, Paul [54] see Powis, Terry G.

Hearne, Carol [234] see Cannon, Kenneth P.

Heath, Margaret (Bureau of Land Management)

[223] *Past Strides and Future Steps: Heritage Discovery, Science, Education, and Outreach on the Bureau of Land Management's National Landscape Conservation System*

In the ten years since the creation of the National Landscape Conservation System (NLCS), the Bureau of Land Management (BLM) and its research partners have created a body of work that has made strides in the science of archaeology and the understanding of heritage resources. BLM has been a leader in Native American involvement in planning, research, and outreach and broadened the field of heritage education. These have created a solid foundation for future steps toward a deeper understanding of the heritage of the treasured landscapes of NLCS.

[75] First Organizer, [223] First Organizer

Heaton, Ashley (Tulane University) and Stacy Dunn (Tulane University)

[98] *New Research on Local Elite Control in the Huaura Valley, North-Central Coast of Peru*

This paper addresses community-level political and economic organization during the Middle Horizon (A.D. 600-1100) and Late Intermediate Period (A.D. 1100-1435) in the Huaura Valley, north-central coast of Peru. Previous interpretations, based on minimal systematic investigation, assume valley occupation consisted of small populations subjugated under successive Wari, Chimú, and Inca empires. This idea is challenged by recent excavations, architectural studies, and artifact analyses at three sites--Caldera, El Carmen, and Quipico--undertaken to clarify the functions of adobe compounds

suspected to be elite residences and administrative structures, providing a preliminary description of local control within communities throughout these dynamic periods.

Hedman, Kristin (ITARP-UIUC)

[214] *Mississippian Diet—Stable Isotope Evidence for Dietary Variation in the American Bottom*

Recent stable isotopic analysis of bone collagen and apatite provide insight into Mississippian subsistence at Cahokia and surrounding sites. Previous stable isotope research has identified temporal, regional, status- and sex- based differences in the diets of Mississippian populations in the American Bottom. New data will be presented and comparisons drawn exploring temporal changes in diet, as well as sex- and status-related variability.

Hegberg, Erin (University of New Mexico)

[240] *X-Ray Fluoroscopy in your own Backyard: A Method for Analyzing Ceramic Formation Techniques*

Ceramic formation techniques such as coiling, slab building, or using molds are directly related to learning lineages and muscle memory. As a result, the study of the structure and formation of ceramics may provide important information regarding identity and production groups. This paper will discuss how x-ray fluoroscopy can be a cheap, non-destructive and readily available technique for researchers to study ceramic structure, which can be combined with other analyses to answer questions regarding technological style and identity. The characterization of 18th and 19th century New Mexican Hispanic and Pueblo ceramics will be presented as a case study.

Hegmon, Michelle (Arizona State University)

[14] *From the Inside Looking Out: What is the Influence of Southwest Archaeology Beyond the Southwest?*

What is the Influence of Southwest Archaeology Beyond the Southwest? Southwest archaeology made important contributions to the development of method and theory in the era of the New Archaeology. This paper asks whether, how, and in what subject areas, the importance of Southwest to general archaeological method and theory continues today. Research is based on analyses of articles published and cited in major journals. It considers which theoretical and methodological subjects are being emphasized by Southwest specialists, and whether the influence of those contributions is reaching beyond the Southwest. This in turn suggests trends and advice for what we should be doing.

Heilen, Michael (Statistical Research, Inc.) and Jeffrey Altschul (Statistical Research, Inc.)

[164] *Analyzing Archaeological Data Quality: Recent Results from Military Installations in the United States*

In a pilot study aimed at establishing key data quality indicators for archaeological data, Statistical Research, Inc. explored three issues of concern to DoD military installations: survey reliability, site location, and site boundaries. The application of key data quality indicators was illustrated with survey data from four DoD installations. The study recommended that: (1) archaeological data and metadata on survey methods, recording techniques, and instrumentation should be maintained and archived regularly; (2) standard data quality metrics should be used at other installations; and (3) some problems with data quality stem from problems with the site concept.

Heinsch, MF (University of Chicago)

[240] *Wheel-Finished versus Wheel-Formed: Inferences and Implications from Radiographic Evidence of Ceramic Forming Techniques at Velikent*

The adoption of wheel-forming techniques in potting communities is typically accompanied by a host of changes in social networks of production. Finding locally produced wheel-turned pottery therefore, holds many implications for site interpretation. While the use of a wheel is often inferred from ceramic characteristics observed in the field, radiographic analysis in the laboratory produces finer distinctions in the application of wheel techniques in pottery production sequences. In the case of Velikent Fine Wares, pottery once identified in the field as wheel-formed was later revealed

through radiographic analysis to be wheel-finished, thereby revising expectations for patterns of local craft production.

Heitman, Carrie (University of Virginia)

[128] *Learning the Vocabularies of Vernacular Architecture, Chaco Canyon, NM, A.D. 850-1180*

The nuanced vernacular of prehistoric architecture has much to tell us about how structures are layered with differential meaning from the moment of construction to the time of abandonment. While traces of these processes often leave complex archaeological signatures, tenth through twelfth century occupations of Chaco Canyon offer an intriguing and discernible case study. This paper evaluates the contexts and content of deposits demonstrating acts of ritual dedication and closure from twelve Chacoan sites and evaluates these deposits at three levels: their distribution across site types, their utility for assessing social inequality, and their meaning as informed by ethnographic analogy.

Helmke, Christophe [148] see Brady, James E.

Hemmings, C. (Mercyhurst College), Jon Lohse (Texas State University) and Michael Collins (Texas State University)

[210] *The Hogeye Cache, Bastrop County, Texas: A Snapshot of Clovis Technology*

Over the course of several years a group of 25 diagnostic Clovis bifaces, made of Edwards Plateau chert, was recovered from a two meter wide strip in a sand pit near the Colorado River, approximately 30 miles southeast of Austin, Texas. Most Clovis caches contain a broad range of bifaces, preforms, and points, representing multiple loci on an attritional reduction sequence. The Hogeye cache is composed of a narrow segment of this reduction sequence with near equal numbers of well developed point preforms and unfinished Clovis points, lacking only basal grinding. This rare 'snapshot' is discussed within broader Clovis contexts.

Hemmings, C. Andrew [90] see Illingworth, Jeff; [210] see Lohse, Jon C.

Henck, Amanda [155] see Lu, Hongliang

Henderson, A. Gwynn [105] see Pollack, David

Henderson, Lucia (The University of Texas At Austin)

[99] *A Journey to Fire-Mountain: Lake Amatitlán in Teotihuacano Belief*

Analysis of the material and iconographic records of Lake Amatitlán and Escuintla, Guatemala, indicate that ritual may have played a key role in bringing Teotihuacanos to this area during the Early Classic. The physical properties of the Lake Amatitlán region would have resonated strongly in Teotihuacano belief, recalling the three hearthstones of creation and the Flower Mountain paradise. This paper considers the impact Maya ideology may have had on Teotihuacano ritual by investigating Lake Amatitlán as a point of multicultural interaction, incorporating pilgrimage, procession, and the reverence accorded particularly sacred landscapes into discussions of Teotihuacán presence in the Guatemalan highlands.

Hendon, Julia (Gettysburg College)

[260] *Social Contexts of Textile Production in Formative Maya Lowlands*

Textile production in Prehispanic Mesoamerica must be studied indirectly as the fabrics themselves are only rarely preserved. If textiles are fugitive, at least some of the tools used to produce them are more durable. This paper considers the evidence for spinning, weaving, and other fiber arts, such as paper making, in the archaeological record of the Maya Lowlands during the Formative period in order to understand the social context of production. This social context includes the relations and identities that textiles mediate as well as the processes of embodiment that develop from the merger of technology and materials.

[65] *Discussant*

Henecke, Jennifer (Stony Brook University), Jennifer Everhart (Stony Brook University) and Kathryn Twiss (Stony Brook University)

[74] *Long Bone Cross-Sectional Geometry As a Method for Investigating Ancient Herd Mobility*

Recent trends in the study of ancient animal husbandry have introduced new methodologies for examining management practices. Our project uses long bone cross-sectional geometry (CSG) to investigate ancient herd mobility. Studies performed on various species have demonstrated that mobility-induced stress alters cortical bone distribution in long bones. Differential distributions, measured using CSG, reflect differential locomotor behaviors. However, musculoskeletal design differs greatly between taxa, and relevant data for caprines are limited. We present CSG data on modern American and British sheep with known life histories as a pilot study for exploring the extent of variation in relation to mobility patterning.

Henning, Joachim (Goethe University Frankfurt am Main, Germany)

[243] *A Small Town Experiences the Fall of the Roman Empire: (1) New Archaeological Strategies and Answers for an Old Question*

An integrated strategy was developed to explore the archaeology of Tarquimpol with an eye to the great debate about Rome's fall: remote prospection (geomagnetic and GPR), palaeoenvironmental investigation, GIS, exploratory trenches. The results of three campaigns have changed dramatically our picture of the end of empire in eastern Gaul (France). Although the Roman small town and road station of Decempagi was destroyed by fire in the third century and completely leveled, it surged back to life in the later fourth century as a fortified place still situated at the Roman road. It survived essentially as long as the Roman state was able to protect the old order. Its demise sheds important new light on the archaeology and history of communications systems of the late Roman and post-Roman period.

Henrikson, Lael (Bureau of Land Management)

[223] *Going with the Flow: The Impact of Holocene Fissure Eruptions on Obsidian Source Use in Southeastern Idaho*

A chemical analysis of diagnostic projectile points from the Craters of the Moon National Monument and Preserve in southern Idaho suggests that direct procurement of raw material from local obsidian sources was a long-term pattern in the region. However, significant trends in the frequency of specific sources associated with particular projectile point types were noted in this study. Statistical tests suggest that these trends are linked with atlatl versus bow and arrow technology. Although changes in mobility or population movements could have influenced this pattern of distribution, a more reasonable explanation for fluctuations in the frequency of particular sources suggests that they may be due to barriers created by Holocene lava flows that coincidentally prevented access during specific time periods.

Henry, Amanda (The George Washington University), Alison Brooks (The George Washington University), Dolores Piperno (The Smithsonian Institution) and Timothy Rose (The Smithsonian Institution)

[151] *Assessing Dental Calculus as a Source of Archeological Plant Microfossils Using ESEM/EDS*

Plant microfossils recovered from dental calculus have been used to recover diet. However, calculus may be affected by diagenetic processes, and material adhering to the surface of teeth may not be calculus. We examined modern, recent historic and the Shanidar III Neandertal teeth with an ESEM/EDS to identify the molecular components of enamel, calculus, root and surface particles. Calculus was predominantly calcium phosphate, confirming its biological origins, and unlike the root it showed little chemical alteration. Surface particles were clearly distinguishable from calculus. No microfossils were visible on the surface, confirming that recovered microfossils were from the calculus matrix.

Henry, Edward (University of Mississippi)

[36] *The Archaeology of the LeBus Circle and Some Comments on the Implications of Large Early Woodland Circular Earthen Enclosures in the Ohio Valley.*

Circular earthen enclosures constructed throughout the Ohio Valley during the Late-Early and Middle Woodland periods have long been poorly understood. Archaeological research conducted at the LeBus Circle in Bourbon County, Kentucky focused on assessing site integrity through geophysical prospection and excavations. Carbon samples from three contexts across the site were submitted for chronometric dating. Data from the radiocarbon dates and artifact analysis suggest that the LeBus Circle is an Early Woodland earthwork with a Late Fort Ancient occupation. The data from this research is used in a subsequent discussion highlighting the evidence for Early Woodland ritualism in the Ohio Valley.

Hensley, Kyle (Illinois State University)

[125] *An Archaeological Investigation and Comparison of the Daily Lives of the Military during the British Occupation of Fort Michilimackinac*

This study utilizes archaeological evidence such as faunal remains, ceramics, clothing remains, and lead shot to determine differences in the standard of living between officers and enlisted soldiers during the British occupation of Fort Michilimackinac from 1761 to 1781. The archaeological data utilized in this study is from Houses A-B, C, and D of the Southeast Row House and House One of the South Southeast Row House. This study looks at the daily lives of the inhabitants of Fort Michilimackinac, providing insight into how the soldiers and officers functioned and how they may have influenced the activities at other sites.

Hensley, Scott [160] *see Blom, Ronald G.*

Hepp, Guy (University of Colorado) and Ivy Hepp (Florida State University)

[260] *Continuity and Change in Dress and Ornamentation in Oaxaca: Late Formative and Beyond*

Perishable remnants of ancient dress are frequently lost in Mesoamerican archaeological assemblages. This paper will explore evidence for bodily adornment in various regions of Oaxaca, Mexico, beginning in the Late Formative period. Ceramic figurine collections, stelae, and other public art will serve as iconographic bases for this discussion. Archaeological evidence of jewelry, weaving practices, colonial period historical documents, and modern ethnographic information will serve as additional lines of evidence to explore bodily adornment as related to sociality. These considerations will all be interpreted in light of wider spheres of interaction and influence resulting in continuity and change in Oaxacan dress.

Hepp, Ivy [260] *see Hepp, Guy D.*

Herhahn, Cynthia (Bureau of Land Management) and Ronald Towner (Laboratory of Tree-Ring Research)

[223] *Successful Collaboration in the El Malpais National Conservation Area, New Mexico*

For the past four years, the New Mexico BLM (Rio Puerco FO), Laboratory of Tree-Ring Research (University of Arizona), and Manzanares Research, Inc. have collaborated on projects in the El Malpais NCA in western New Mexico. Goals of the collaboration have included site documentation, research, and student training. New technologies and approaches have improved site documentation for preservation purposes, while research has identified early 20th century Navajo use of the area and delineated additional aspects of a later Anglo-American occupation. International and US students and professionals have been trained in the collection, analysis, and interpretation of archaeological tree-ring samples.

Hermance, John [123] *see Urban, Thomas M.*

Hernandez, Christine [178] *see Vail, Gabrielle*

Hernandez, Hector (Universidad Autonoma de Yucatan)

[17] *Gendered Labor and Daily Life Economy in Classic Maya Households from Siho, Yucatan, Mexico*

The excavation and archaeological analysis of two elite maya households at Siho Yucatan, have provided evidence about men's and women's daily labor organization during Late and Terminal Classic period (800/850-900/950 AD) in western Yucatan. Gender, as an analytical category, has promoted a reevaluation of the different roles that individuals played in complex past societies. At Siho's maya households we can find a variety of labors ranging from the so called subsistence activities through a craft production that could relate individuals who occupied the inside as well as the outside household with the entire community. Thus, the purpose of this paper is to discuss the implications of a gender division of labor, the organization of production, and subsistence activities of domestic groups in the daily life economy of the ancient maya community of Siho, Yucatan.

Hernández Arana, Jonathan [254] *see Donner, Natalia R.*

Hernandez Espinoza, Patricia (Escuela Nacional De Antropología E Historia, INAH) and Lourdes Márquez Morfín (Escuela Nacional de Antropología e Historia, INAH)

[241] *Mayan Paleodemography: Results and Methodological Limitations*

This paper addresses some of the sampling problems in paleodemography and life table mortality schedules and fertility in the context of stable population theory. We review our results on Mayan paleodemography and methodological issues we have developed to solve problems like size of skeletal samples and its representativeness. The skeletal series selected for this purpose come from different mayan prehispanic sites and chronologies: from Late Classic, Palenque, Chiapas and Jaina, Campeche; from Postclassic period we analyzed Xcaret and Chac Mool, Quintana Roo.

Hernando, Almudena (Universidad Complutense, Madrid, Spain.)

[143] *'Dependent' versus 'Independent' Individuality: An Analysis of Men and Women's Modes of Constructing Individuality in the Western World*

Women and men's identities have followed different historical trajectories. While men have developed individuality gradually, women did not develop individuality until Late Modernity. This fact explains the existence of important differences in both kinds of individual identities. I will refer to them as "dependent individuality" (for men) and "independent individuality" (for women), and I will try to explain their main structural features, points of fragility and contradiction. My aim is to reveal the patriarchal bias that also exists in studies about identity, as when "individuality" is addressed, it usually refers to the kind of "dependent individuality" developed by men.

Herndon, Richard (Cultural Resource Analysts, Inc.), Brian DelCastello (Cultural Resource Analysts, Inc.) and Jennifer Haney (Cultural Resource Analysts, Inc.)

[172] *Overview of Prehistoric Pottery: Early Woodland through Late Woodland*

Prehistoric ceramic material was recovered from 21 sites during CRA investigations. Components identified at these sites included Early Woodland Black Sand and Middle Woodland Havana-Hopewell and Late Woodland Weaver and South Branch. All ceramic analysis was recorded using a hybrid system that incorporated both typological and attribute-based techniques. This paper provides an overview of the results of the ceramic analysis that includes, among other things, the first large-scale excavations of well dated Havana-Hopewell and South Branch phase ceramic assemblages in northeastern Missouri. With the addition of Black Sand, these data will then be used to refine regional systematics.

Herndon, Richard [150] *see Bundy, Paul D.*

Herndon, Richard L. [172] *see Cooper, Randall*

Herold, Hajnalka (VIAS, University of Vienna, Austria)

[243] *Fortified Centres of the 9th-10th c. AD in Central Europe*
In Central Europe in the late phase of the Early Middle Ages, in the 9th – 10th centuries AD, the formation of archaeologically well detectable social differences can be observed. This is first of all marked by the appearance of fortified settlements. A similar social differentiation cannot archaeologically be shown for the 8th century in this region. In the presented paper the development, the structure and the possible function(s) of these settlements are discussed, based mainly on current research on the site of Gars-Thunau in Lower Austria.

Herr, Sarah (Desert Archaeology, Inc.) and David Wilcox (Museum of Northern Arizona)

[40] *Worth Reading: The Enduring Traditions of Southwestern Archaeology Journals*

In its 75th year, *Kiva: The Journal of Southwest Anthropology and History* purports to be the premier regional publication for Southwest archaeologists and ethnographers. This poster examines the historical trajectory of this product of a Tucson-based non-profit, the Arizona Archaeological and Historical Society. We look at authors, institutions, and the content of this journal, and compare it to the regional journals published by institutions such as the Museum of Northern Arizona, the Museum of New Mexico, the University of New Mexico and the Southwest Center to consider trends in the publication of Southwest anthropology today.

[40] *First Organizer*; [40] *First Chair*

Herrera, Anayensy [191] see *Solis, Felipe*

Herrmann, Edward

[29] *A Geoarchaeological Approach to Paleoindian and Early Archaic Period Settlement and Subsistence in South-Central Indiana*

This poster presents the preliminary results of an analysis of Paleoindian and Early Archaic site locations in six counties in central and south-central Indiana. The region is characterized by diverse physiographic zone with heavily dissected uplands and late Pleistocene drainages. Analysis of site taphonomy is often complicated by a high frequency of multicomponent sites found in eroded uplands. However, most reported sites in the study area are found along the two forks of the White River Valley, and this alluvial setting presents an intriguing landscape for chronologic controls and paleoenvironmental reconstruction.

Herrmann, Nicholas [22] see *Sherwood, Sarah C.*; [24] see *Yerka, Stephen J*

Hicks, Brent (Historical Research Associates) and Kevin Lyons (Kalispel Tribe of Indians)

[207] *Archaeological Testing Results and the Latest Prehistoric Period in the Lower Pend Oreille Valley, Northeastern Washington*

It is axiomatic that regional archaeology has certain consistencies and known and/or anticipated exceptions. For the Columbia Plateau region in latest prehistory, the material record of the Pend Oreille is one such exception. In an otherwise xeric region this watershed has consistently been mesic and lacked anadromous fish due to barriers. Given this, the Pend Oreille's history of human use and occupancy should differ from the balance of the region in archaeologically measurable ways. Recent archaeological investigations are presented that contribute to proxy datasets allowing construction of a more cogent statement about the human experience in the lower Pend Oreille valley.

Hicks, Pat [211] see *Slaughter, Mark C.*

Higelin, Ricardo (Zona Arqueologica de Monte Alban, INAH)

[103] *Que nos Dice la Muerte: los Restos Esqueléticos de Atzompa, Oaxaca*

Durante las tres temporadas de campo del Proyecto Arqueológico del Conjunto Monumental de Atzompa (2007 – 2009) se han exhumado

más de diez restos esqueléticos adultos e infantiles. A través de su análisis antropológico y bajo su contexto arqueológico en este trabajo se mostrará parte de la calidad de vida que tuvieron estos habitantes durante el Clásico por medio de los estudios de salud y nutrición. Con estos resultados se podrá comparar con la población de la antigua ciudad de Monte Albán que habitó en el Clásico y así saber si hubo no diferenciación alimenticia entre ambas poblaciones.

[103] *Second Organizer*

Higgins, Jim [185] see *Goodale, Nathan B.*

Higgins, Sean [5] see *Rosenswig, Robert M.*

Higgs, Samantha (Australian National University)

[22] *Past and Present: Art of the Canning Stock Route*

The Canning Stock Route is a 1781km track through the deserts of Western Australia. Originally created for drovers it is now popular with off road drivers. Rock art adorning boulders and caves tell stories of the Dreamtime. A new Indigenous art movement tells the same stories through acrylic on canvas art produced for sale. How does this new art tradition relate to the old? By comparing the rock art with the contemporary art, using ethnography and formal archaeological methods to study the evolution in motif and story, a greater understanding of the rock art and its meaning may be reached.

Higueras, Alvaro (American University Rome)

[94] *Tiwanaku Times in the Valleys: Interaction and Dealings in Andean Prehistory*

In this paper I will attempt an ecological and political assessment of the Middle Horizon in Cochabamba in light of the research made in the last decade. Research in the valleys of Cochabamba is a complex affair. The mini-valleys that compose it differ much in its resources and attractions. Thus, in prehistory societies have settled differentially in each part producing hence a varied archaeological record. The models or hypothesis proposed seem to be fine tuned for those variations rather than fit a single form of prehistoric settlement, as is the case for the ramifications of Tiwanaku society in the region.

[94] *First Organizer*; [94] *First Chair*

Hil, J. Brett [192] see *Huntley, Deborah L.*

Hildebrand, Elisabeth (Stony Brook University), John Shea (Stony Brook University), Katherine Grillo (Washington University in St. Louis) and Veronica Waweru (University of Connecticut)

[53] *Social complexity among prehistoric African herders: Test excavations at four pillar sites in West Turkana, Kenya*

The prehistoric emergence of social complexity has been studied in numerous places throughout the world, but agrarian societies have received more attention than prehistoric hunter-gatherers and herders without domestic plants. Around Lake Turkana, "pillar sites" with megaliths and platforms, attributed to early herders, present an opportunity to examine social complexity prior to plant food production. 2008-2009 excavations in West Turkana enable comparison of dates, material culture, and depositional sequences among four pillar sites. We use this information to probe the social and economic contexts of their construction and use, suggest different possible functions, and propose strategies for future research.

[53] *First Chair*

Hildebrandt, William [154] see *Ruby, Allika*

Hildebrandt Iffert, Emily (Minnesota State University)

[105] *Archaeologists as Generators: The Secondary Context at the Bartron Site (21GD02)*

Archaeologists have periodically excavated at the Bartron Site, an Oneota village situated on the shores of the upper Mississippi River beginning in 1948. In 2008, archaeologists excavated both primary (Oneota, Late Woodland) and secondary (archaeologist-generated) contexts. A marked difference in the recovered and retained artifact

assemblages from 1968 and 2008 is demonstrated by preliminary artifact analysis of the secondary context. Viewed through a garbology perspective, these artifact recovery rate differences potentially illuminate the disjunctures between actual and reported on-site behaviors. This work places archaeological behavior in the context of formation processes, and has practical implications for site interpretations.

Hilditch, Jill (University of Toronto)

[101] *Deconstructing Minoanization: Ceramic Technology and Social Practice in the later Middle Bronze Age Cyclades*
'Minoanization', or the perceived increase in Minoan influence outside Crete, is once again a popular theme within Aegean archaeology. However, rather than document static changes in material culture, recent studies have sought to understand the dynamics responsible for community engagement with, or rejection of, Cretan ways of 'doing things'. This paper examines the ceramic evidence from Akrotiri (Thera) and offers a better understanding of the choices this community was making in the lead up to 'Minoanization', so these material phenomena can be approached from a more localised, site-based perspective rather than a traditional Creto-centric viewpoint.

Hill, Christopher [259] see Blackwell, Bonnie A. B.

Hill, David [87] see Boggess, Douglas H M

Hill, David V. [161] see Woods, Julie A.

Hill, Mark (Ball State University), Diana Greenlee (Poverty Point Station Archaeology Program), and Hector Neff (California State University, Long Beach)

[251] *Sourcing Poverty Point Copper: Testing the Lake Superior Hypothesis using LA-ICPMS Analysis*
It has long been assumed that copper in Archaic and Woodland contexts in eastern North America chiefly originates in the geological sources around Lake Superior. Recent research using LA-ICPMS techniques has now characterized the chemical composition of several of these Lake Superior sources as well as others in Appalachians and Canadian Maritimes. In this study, a sample of copper artifacts from the Poverty Point site was submitted for LA-ICPMS analysis and the results compared with the compositional profiles of these known sources. While additional source data is needed, these results provide important insight into the sources of Poverty Point copper.

Hill, Matthew (University of Iowa), Cerisa R. Reynolds (University of Iowa) and James M. Mayer (Southern Methodist University)
[234] *Reevaluation of the Site Formational History of the Finley Bison Bonebeds*

The Finley site in southwestern Wyoming consists of at least two Cody age bison bonebeds. Prior interpretations suggest the site consists of a large multi-animal bison kill and an associated carcass-processing locality. The current project involves a taphonomic analysis of the bison remains from both components at the site and a geoarchaeological investigation of site stratigraphy. This work is being undertaken in order to 1) improve our understanding of the natural and cultural formational histories of the deposits, 2) evaluate prior interpretations concerning site function and season of occupation, and 3) evaluate how the Finley site improves our understanding of regional Paleoindian chronostratigraphy and paleoenvironments.

Hill, Matthew (Iowa State University), David W. May (University of Northern Iowa) and Thomas J. Loebel (University of Illinois-Chicago)

[210] *The Carlisle Clovis Cache from Central Iowa*
Most Clovis caches are from the Far West and Great Plains. The Carlisle cache, from along the Des Moines River in central Iowa, extends this interesting aspect of Clovis behavior to the eastern Plains. The character, composition, and location of the cache suggests it was established to supply a lithic-poor landscape with tool

preforms made from a high quality, nonlocal raw material that could be quickly converted into projectile points and unifacial tools. It offers new knowledge on Clovis mobility, land use, subsistence, and technology in the Midcontinent.

Hill, Sara [118] see Yoder, David T.

Hill, Jr., Matthew E. [234] see Baine, Keelin E.

Hilton, Michael (Black Hills National Forest)

[123] *Petrographic Thin Section Analysis of Plaster Floor Construction and Pyrotechnology from the Site of Ashkelon, Israel*
This study utilizes thin-section petrography to examine a series of sediment samples containing undisturbed Late Bronze and Early Iron Age plaster floors. Soil micromorphology is an analytical technique well suited to illuminate a variety of architectural characteristics such as mineralogical composition, thermal alterations, and construction techniques. The disparate temporal contexts permit a comparative analysis of changes in pyrotechnological practices and fabrication methods over time. The data obtained from this study are compared and contrasted with a growing body of literature from similar studies in the Eastern Mediterranean region that shed light on the use of lime plaster in archaeological contexts.

Hirshman, Amy (West Virginia University)

[169] *Appraising the Data: Resolving Multiple Inquires into the Nature of the Tarascan Ceramic Pastes*

Initial visual and low-power binocular inspection of ceramic pastes from archaeological contexts in the Lake Pátzcuaro Basin, Michoacán, Mexico, indicated greater paste diversity than expected. Chemical compositional, petrographic, and refining analyses have separately evaluated this complexity, with somewhat differing results. This paper provides a synthesis of the current results and assesses the implications of paste composition on our understanding of the organization of ceramic production and distribution in the cultural tradition leading up to and including the Late Postclassic Tarascan state.

[169] *First Chair*

Hirst, K. Kris (Archaeology at About.com)

[180] *God's Truth and Public Archaeology: Would You Like Syrup with that Waffle?*

In communicating archaeology to the public, a universally held truth is that you should leave the waffle out, that waffle words like "suggest" and "possible" and "maybe" should be omitted from public resources describing science. The argument is perfectly valid in some media: it makes a far less complicated book if you can get off the fence. After more than a decade of presenting public archaeology on the Internet, and interacting directly with members of the public in numerous ways, I have come to the conclusion that the waffle is where it's at. Science has a card against creationists that we seldom play--that of creativity, possibilities and open-ended questions, and that, I believe, is an effective tool for stimulating both children and adults, and introducing archaeological concepts and the scientific method.

Hitchcock, Robert (Michigan State University)

[56] *From California to the Kalahari: Adaptive Variability and Environmental Management among Mobile and Sedentary Foragers*
Drawing on lessons from the work of Michael Glassow and his students on the archaeology and history of coastal and island foragers in the Santa Barbara region of California, this paper examines adaptations of mobile and sedentary San foragers in the Kalahari Desert of southern Africa. Like the Chumash, the San peoples of the have had to cope with local and regional environmental variability, sedentism, contacts with non-indigenous populations, and competition for resources. Archaeological, ethnohistoric, and ethnographic data indicate that San foragers employed a variety of environmental management strategies in the face of complex processes of ecological and socioeconomic change.

Hively, Ray [36] see Horn, Robert L

Hoak, Megan (University of Tennessee)

[247] *Analysis of the Lithic Materials from Late Prehistoric Through Pre-Clovis Strata at the Topper Site, Allendale County, South Carolina*

Analysis of the lithic materials from late prehistoric through pre-Clovis strata at the Topper Site, Allendale County, South Carolina was conducted to identify those attributes which distinguish culturally produced material, or artifacts, from those objects produced by natural processes. A comparison of materials found throughout the stratigraphic column is used to evaluate the stratigraphic integrity of the site, and specifically the extent of vertical movement or artifacts in the deposits. Dense Paleoindian through later Holocene age artifacts occur stratigraphically above a much sparser, presumed pre-Clovis artifact assemblage, mixed amid naturally produced lithic debris.

Hoard, Shanta (Illinois State University)

[125] *The First Black Church In The Midwest: The Wayman African Methodist Episcopal Church*

The Wayman African Methodist Episcopal (A.M.E.) Church is located in Bloomington, Illinois, and is believed to be the oldest African American church still in existence in Illinois. The church was excavated in the summer of 1992 by archaeologists of Illinois State University. The primary questions that I am going to address in this paper are the kind of activities that were carried out at the church; the average economic position of the congregation based on the materials they purchased as a group; and the roles the Wayman A.M.E. Church played in the African American community between 1850 and 1930.

Hockett, Bryan (Bureau of Land Management)

[16] *Nutritional Consequences of Middle Paleolithic Diets on Pregnant Neanderthal Women*

Across most of Europe Neanderthals evolved socially and physiologically to hunt large terrestrial vertebrates. This interpretation fits early Neanderthal populations throughout Europe, and many later populations as well. Traditional evolutionary ecology models, particularly those relying on cost-benefit analysis that track energy or calories as the prime driving force behind demographic success, would suggest that these Neanderthals should represent the pinnacle of human health and vigor. This paper models the nutritional and physiological consequences of this subsistence strategy, particularly on pregnant Neanderthal women, in order to shed light on why Neanderthals did not survive competition with in-coming populations of AMHS.

[224] see Goebel, Ted

Hocquenghem, Anne

[67] *El Spondylus princeps en el Extremo Norte del Perú a Partir del Período Intermedio Tardío*

Se presentaran los resultados de las investigaciones llevadas a cabo, desde unas dos décadas, en torno a las fuentes, modalidades de intercambio, técnicas de talla y usos de las conchas de *Spondylus princeps* a partir del inicio del Período Intermedio Tardío. Esto en base a evidencias arqueológicas provenientes de los sitios extremo norte del Perú, departamentos de Tumbes y Piura, así como a informaciones etnohistóricas contenidas en los documentos coloniales.

Hodell, David [153] see Brenner, Mark

Hoekman-Sites, Hanneke (Florida State University)

[55] *How did Animal Product Use Change through time on the Great Hungarian Plain during the Neolithic and Copper Age Periods?*

The answer to the title question will be explored by examining residues taken from 10 archaeological sites across the GHP. These sites date from the Early Neolithic (when domesticated animal use became visible regionally) to the Late Copper Age, a span of approximately 3000 years. This paper summarizes my dissertation work, showing how animal product use has changed through time, with a specific focus on dairy residues. I will examine dairy use as

part of the larger economic intensification pattern. I suggest that domestication and secondary product use (specifically dairy products) impacted how communities worked economically and socially.

[55] *First Organizer*; [4] *First Chair*

Hoffman, Amy (University of North Texas), Kristin Kuckelman (Crow Canyon Archaeological Center), Lisa Nagaoka (University of North Texas) and Steve Wolverton (University of North Texas)
[235] *Dietary Use of Animal Resources Prior to the Pueblo III Depopulation of the Mesa Verde Region*

In villages such as Sand Canyon Pueblo in the central Mesa Verde region, higher proportions of wild animal remains were deposited in abandonment versus non-abandonment contexts at the end of the Pueblo III period. Domestic resources, such as turkey, appear to have declined just before the region was depopulated. These data, along with other lines of evidence, suggest that dietary stress might have played an important role in regional depopulation. To determine whether such stress occurred in other settlements, we examine the faunal assemblage from Goodman Point Pueblo, which is similar in chronology, size, and location to Sand Canyon Pueblo.

Hoffman, Brian [79] see Funk, Caroline

Hoffman, Curtiss [38] see Crowley, Suanna Selby

Hofman, Corinne (Faculty of Archaeology) and Menno L.P. Hoogland (Leiden University)

[116] *Rituals for the Dead: Socializing with the Ancestors in the Precolonial Caribbean*

Burial assemblages from the Lesser Antilles yield unique data on complex and varied mortuary practices performed by Caribbean Amerindians between AD 1000 and 1492. Together, the burial assemblages from the sites of Lavoutte, St. Lucia, Anse à la Gourde, Guadeloupe and Kelbey's Ridge, Saba comprise more than 150 burials. Detailed taphonomical analysis of these assemblages in the field has led to distinguish different steps in the burial ritual and revealed particular mortuary practices reflecting the creation and expression of social identities of the buried populations. The physical remains can be considered as holding material agency emphasizing the role of the deceased community members amongst the living, congruent with themes in Caribbean mythology.

Hofman, Jack [259] see Mandel, Rolfe D.; [72] see Williams, Emily G.

Hofman, Jack L. [72] see Adair, Mary J.

Hofreiter, Michael [157] see Muenzel, Susanne C.

Hoil Gutierrez, Julio (Centro de Investigaciones y Estudios Superiores en)

[212] *Cenotes: Biocultural Patrimony of the Maya at the Crossroads between Abandonment and Tourist Sites*

The Cenotes of what is today the state of Yucatán have played an important role in the formation of settlements and as a source of water for ritual and quotidian purposes since pre-Hispanic times and through the colonial period. During the distribution of collectively-held land grants after the Mexican Revolution of 1910, cenotes played a crucial role in determining the foundation of new settlements. Taking a longer historical perspective on the social importance of cenotes, this paper will document some of the particular strategies that have been employed by Maya communities to preserve this element of their biocultural heritage.

Hoil Gutiérrez, Julio Cesar [212] see Lizama Aranda, Lilia Lucia

Hokanson, Jeffrey (e2M, Inc.)

[33] *Social Networking in Mimbres Society*

Jesse Walter Fewkes initially defined the Mimbres Cultural Area based on ceramics found near Deming, New Mexico. Subsequent researchers including Brody, Hauray, LaBlanc, and Hegmon have

presented their own culture area boundaries based on the distribution of ceramics, architectural styles and the environment. However, the utility of the "culture area" concept has not been seriously questioned. This paper presents relationship mapping as an alternative to the cultural area concept. In place of an enclosed culture area, relationship mapping produces a spider web of associations in which sites are linked and Mimbres society examined as a social network.

[33] *First Organizer*; [33] *First Chair*

Holdaway, Simon [119] see *Wandsnider, LuAnn*; [73] see *Douglass, Matthew J.*

Holeman, Abigail (University of Virginia)

[64] *The Parrots of Paquimé: A New Look at the Role of Aviculture in 13th Century Northern Mexico*

At Paquimé, a 13th century village in northern Chihuahua, Mexico, strong evidence exists for long distance exchange in and husbandry of macaws (*Ara militaris* and *Ara macao*). While interpretations of the ritual importance of these brightly-hued birds are undisputed, the archaeological evidence of their husbandry at Paquimé provides a unique opportunity to place these animals into a specific belief system. In this paper I demonstrate how these birds are closely tied with the symbolic system at Paquimé through a contextual analysis of the bird burials. This symbolic system is where difference and hierarchy are created and maintained, and thus key to understanding any form of prehistoric social organization.

Holen, Kathleen and Steven Holen (Denver Museum of Nature & Science)

[190] *Experimental Elephant Limb Bone Breakage as an Analogy for Mammoth Bone Breakage Patterns: Implications for the Early Peopling of North America*

Two separate experiments are reported in which elephant femurs were broken and flaked to replicate mammoth bone breakage patterns observed at several Last Glacial Maximum mammoth sites in the Central Great Plains. Video and still photography documents that adult elephant limb bone is difficult to break with hammer stones and that the use of an anvil facilitates the process. This research suggests that observed mammoth bone breakage patterns are indications of human technology, because no natural taphonomic process can break fresh cortical mammoth limb bone in these patterns. Mammoth sites with these breakage patterns are therefore diagnostic of human presence.

Holen, Steven [210] see *Muniz, Mark P.*; [190] see *Holen, Kathleen A.*; [259] see *Mandel, Rolfe D.*

Hollenback, Kacy (University of Arizona), Christopher Roos (University of South Florida) and Maria Nieves Zedeno (University of Arizona)

[198] *Climate Change, Applied Historical Ecology, and Traditional Ecological Knowledge: The Ethical Issues Surrounding Collaborative Research and Co-Management*

An important nexus exists between indigenous concerns, collaborative archaeology, and management issues connected to global climate change. Indigenous people are often disproportionately affected by climate change related environmental degradation and indigenous voices are necessary to appropriately conceptualize problems for research. The rich contributions of archaeologists to applied historical ecology are made richer by incorporating indigenous perspectives in the development of research and appropriate methodologies. Ethical issues arise, however, in the recording and presentation of often sensitive data related to traditional ecological knowledge and indigenous management strategies. We explore these issues using examples from the American Southwest and Northern Great Plains.

[198] *First Chair*

Hollenback, Kacy [7] see *Cutright-Smith, Elisabeth*

Hollenback, Kacy L. [228] see *Murray, Wendi F.*

Holliday, Vance (University of Arizona), David Meltzer (Southern Methodist University) and Todd Surovell (University of Wyoming)

[224] *Did a Younger Dryas Extraterrestrial Impact Affect Paleoindians (or Even Happen)?*

An extraterrestrial impact at the onset of the YD (~12.9ka) was hypothesized to explain the end of the Clovis occupation, as evidenced by the lack of post-Clovis-age components at Clovis sites. Yet most later Paleoindian localities also lack immediately succeeding occupations. Where multiple components do occur, stratigraphic hiatuses between them are due to geomorphic processes. Calibrated radiocarbon ages demonstrate continuous occupation across the span of the purported "YD event." A YD impact is an unnecessary 'solution' for an archaeological problem that does not exist. More problematic, purported physical and chemical impact signatures were not reproduced in independent tests.

Holliday, Vance [224] see *Meltzer, David J.*; [21] see *Sanchez Miranda, Guadalupe*

Holliday, Vance T [21] see *Ballenger, Jesse*; [235] see *Arroyo-Cabral, Joaquin*

Hollinger, R. Eric

[171] *Conflict and Culture Change on the Plains: The Oneota Example*

The Oneota tradition was one of the most successful cultural patterns to emerge onto the Great Plains due in large part to war. After first appearing on the prairies and woodland borderlands of the Midwest the Oneota people and cultural practices spread rapidly by various means, including conquest, to dominate the region from central Kansas and Nebraska to central Indiana and from Canada to southern Missouri by AD 1300. Then by AD 1400, Oneota territories retracted to consolidated village complexes strategically positioned along the major rivers and lakes enabling complete control of trade and territory for the next 225 years. European contact dramatically altered the balance of power through the introduction of guns, new diseases, and new political alliances.

Holly, Donald (Eastern Illinois University), Christopher Wolff (Arctic Studies Center, Smithsonian Institution) and John Erwin (Provincial Archaeology Office, Government of Newfoundland and Labrador)

[60] *Interactions and Encounters with the Beothuk in Southeastern Newfoundland*

Some of the earliest encounters between Europeans and the Beothuk Indians took place in Southeastern Newfoundland. These early encounters, most famously documented by John Guy in the early seventeenth century, suggest that relations between the Beothuk and Europeans were initially amicable, and that the prospects for further trade were good. However, such relations soon soured, and the Beothuk eventually retreated from this area to points north and west. This paper examines this process as it is evident in the archaeological record of the region, and discusses preliminary results from our excavations at a late prehistoric/early Beothuk site in Trinity Bay.

Holmberg, Karen (Brown University)

[237] *A Heritage of Loss and Imagination*

In 1859, the discovery of thousands of graves containing gold artifacts prompted a gold rush in the Chiriquí Province of Panamá and excited a flurry of popular attention. Ceramics taken from the graves during the looting formed the basis of important museum collections throughout Europe and the US. Despite this clear material richness, however, the Chiriquí area was archaeologically interpreted to be materially poor through much 20th century academic literature. This paper addresses the shifting and conflicting values placed upon objects and landscapes by pre-Columbian peoples, looters, collectors, archaeologists, and a burgeoning ecotourism market.

Holmes, Charles [27] *see* Potter, Ben A.

Holstad, Emily (Washington State University) and John Jones (Washington State University)

[84] *Cooking With Limestone: Does it Enhance Maize Nutrition?*

It has long been known that processing maize with lime enhances the availability of nutrients such as lysine in human diets. Basketmaker II groups on Cedar Mesa were heavily dependent on maize, and did not have beans as a complementary protein source. Their habitation site middens typically have numerous chunks of limestone. It is hypothesized that in the absence of pottery, Basketmaker II groups used limestone in stone-boiling maize-based meals, and that this enhanced the nutritive value of the maize. This paper reports the results of experiments that investigate this hypothesis by stone-boiling maize with limestone versus other stone types as heating elements.

Holt, Julie (Southern Illinois University Edwardsville), Ashley Cisneros (Southern Illinois University Edwardsville), Jessica Robart (Southern Illinois University Edwardsville), Katie Leslie (Southern Illinois University Edwardsville) and Lori Belknap (Southern Illinois University Edwardsville)

[36] *SIUE Field School Investigations at the Gehring Site (11MS99) in the American Bottom*

Despite deep plowing and severe erosion, Middle Woodland features remain intact at the Gehring site. Existing models suggest the American Bottom was a "shatter zone" during this period, lying between the Havana and Crab Orchard traditions. Analysis of cherts and ceramics from Gehring shed light on Middle Woodland trade and migration patterns between these regions. Sediment analysis indicates that older components could exist deeply buried at the site.

[36] *First Chair*

Holt, Julie [162] *see* Lorenzini, Michele

Hoogland, Menno [97] *see* Laffoon, Jason E.; [116] *see* Hofman, Corinne

Hopkins, Maren (Northland Research, Inc.), Douglas Craig (Northland Research, Inc.)

[33] *Uncovering the Prehistory of Southeastern Arizona: A Comparative Look at Upper San Pedro Village*

As part of cultural resources mitigation efforts for the construction of a pedestrian fence along the U.S.-Mexico border, archaeological investigations were conducted by Northland Research at Upper San Pedro Village, a large prehistoric settlement in southeastern Arizona. Analysis of material remains from the site reveals a population that was both physically and culturally diverse. Indeed, the site appears to be located at the convergence of a number of Southwestern cultural traditions, including Hohokam, Dragoon, San Simon, Trincheras, Mogollon, and Mimbres. This paper provides a comparative framework for understanding prehistoric adaptive strategies in this poorly known part of the borderlands region.

Hoppa, Kristin (University of California, Santa Barbara) and Jennifer Perry (Pomona College)

[56] *Middle Holocene Variability on Santa Cruz Island: Implications for Coastal Foraging*

Decades of research conducted by Dr. Mike Glassow and his students have resulted in a growing body of data regarding the trans-Holocene occupation of Santa Cruz Island, the largest and most environmentally diverse of the California Channel Islands. In particular, evidence of Middle Holocene (6500-3500 BP) settlement and subsistence is widely dispersed, with significant variability between coastal and interior locales as well as the island's western and eastern coastlines. In this paper, I discuss examples of this patterning, how these data relate to Middle Holocene trends elsewhere on the Channel Islands, and general observations about coastal foraging.

Horlings, Rachel (Syracuse University)

[53] *A Great Conflagration on the Sea Discovered by Micro-Sampling and a Portable XRF*

Perhaps, as those who champion micro-histories and micro-sampling contend, we do miss a great deal of the "macro" when we overlook the "micro." Surface and excavation investigations of a shipwreck in Ghana gave no indication of what must have been an intense fire aboard the vessel, but evidence in the form of melted metals and other materials recovered in sediment cores (through micro-sampling) tell another story. Use of a portable XRF analyzer verified the elemental components of the burned artifacts, confirming the blaze. These techniques and theoretical frameworks have proven powerful tools and invaluable complements to maritime archaeological research.

Horn, Robert (Earlham College) and Ray Hively (Earlham College)

[36] *Hopewell Astronomy at Newark and Chillicothe*

Analysis of available evidence shows that the geometry of the Middle Woodland earthwork complex at Newark, Ohio, and its relation to features of the surrounding terrain can be understood in terms of horizon alignments to periodic 'standstills' of the Sun and Moon. The number and unprecedented accuracy of the Newark alignments together with Monte Carlo studies showing low likelihood of chance producing such results requires comparative study of other Hopewell geometric sites. Results at Newark are compared with recent findings at sites near Chillicothe, Ohio.

Horn, Robert [176] *see* Greber, N'omi B.

Horn, Sherman (Tulane University), Grant McCall (Tulane University), Jonathan Thomas (University of Iowa), Kurtis Kettler (University of Iowa) and Merritt Sanders (Tulane University)

[35] *An Analysis of the Middle Stone Age Artifacts from Erb Tanks, Namib Desert, Namibia*

This paper presents a preliminary analysis of the Middle Stone Age artifacts recovered from the site of Erb Tanks, located in the central Namib Desert, Namibia. Excavations of The Namib Archaeological Project in 2009 focused on the rockshelter of Erb Tanks, where materials of the Middle Stone Age (and other periods) were observed on the ground surface. The Middle Stone Age represents an important, yet understudied portion of the human past in this area of southwestern Africa, and it is hoped that this analysis will contribute to our understanding of human technological and social development in this important area.

Horn, Sherman [35] *see* Kettler, Kurtis H.; [35] *see* McCall, Grant S.

Horne, Stephen (Basin and Range Heritage Consultants)

[81] *Rethinking Lithic Technology of the Inland Chumash and their Antecedents*

Prehistoric archaeological sites in interior San Luis Obispo, Santa Barbara, and Ventura Counties often are comprised entirely or largely of flaked stone tools and debitage. Analysis of such sites has focused on their associations with the natural environment and with other sites or on morphological typologies of formed artifacts. A few analyses in the interior area conducted during the 1990's focused on lithic procurement systems and technological lithic analysis but the results have never been published. A re-analysis of debitage from sample of these sites focuses on reduction technology, site activities and technological change through time.

Horowitz, Rachel (Tulane University)

[120] *Bifacial Reduction and Curation Indices: A Comparison*

Seen from the standpoint of reduction, manufacture and retouch form parts of a continuum, yet in practice they are analyzed separately using different indices with diverse scales. As such, indices used to measure both reduction and curation have diverse scales and are sensitive to different parts of the reduction and curation continuums. In this study six measures of biface reduction and curation were applied to archaeological assemblages to determine their

effectiveness as measures of biface production and use. Of these measures, four are useful measures of biface reduction and curation, although each has its limitations.

Horsley, Timothy [155] *see* *Flad, Rowan K.*

Horton, Elizabeth (Washington University in St. Louis)

[222] *The Ties That Bind: Fabric Production and Fiber Use in the Ozark Plateau.*

This paper presents recent findings regarding fabric production and fiber use in the Ozark Plateau between 3000 BP and 500 BP. Fiber analysis of perishable artifacts from University of Arkansas Museum's Ozark Bluffshelter Collection yielded 300 samples identifiable to genus. In addition, 17 radiocarbon dates were obtained from a variety of fabric types. These data provide insight into both long-term utilization of fiber plants and shifts in fiber preference. This paper highlights the critical economic role of non-subsistence plant resources in the Southeastern United States, specifically the intensive and selective use of *Eryngium* sp. (Rattlesnake master) and *Arundinaria* sp. (Rivercane).

Hosoya, Leo (Research Institute for Humanity and Nature)

[151] *Processed Food in Neolithic: Experiments and Ethnography on Wild Food Plant Processing for reconstruction of Prehistoric Subsistence Strategies in East Asia*

By recent archaeobotanical research, it has been pointed out that wild food plants, such as nuts and fruits, took important parts of subsistence not only for hunter-gatherers but also for early farmers. Some of commonly excavated wild food plants from East Asian Neolithic sites require complex processing procedures for making them edible, and thus well-organized working systems for them must have existed. In this paper, experimental and ethnographic research on the processing procedures is presented to reconstruct the Japanese and Chinese Neolithic working systems with wild food plants and how they coped with newly-introduced crop farming routines.

[132] *Discussant*

Hostenske, Mary (University of Pittsburgh)

[258] *The Role of Storage and Food Preparation Structures in Elite Residential Contexts at El Cafetal, NW Honduras*

The elite residents of Los Naranjitos, a residential site associated with El Cafetal a Late Classic center in NW Honduras, employed two distinct U-shaped structures as storage facilities. This paper will examine the roles that these structures played in ritual and feasting events at the elite residential site. Comparisons will also be made to structures that may have served similar purposes at the El Cafetal, the main site.

Hotujec, Cynthia (University of Georgia)

[200] *Mineralogical and Compositional Analysis of Geologic Sources for Cultural Turquoise in New Mexico*

The inherent mineralogical variation in cultural turquoise has prevented its chemical characterization by bulk analytic methods. Trace elements will vary with mineral variability and therefore may differ widely within an individual source. An approach that identifies mineralogy and focuses chemical analysis on the most homogenous turquoise areas provides a unique set of information about the chemical composition of each geologic occurrence. This study compares samples from prehistoric turquoise mines in New Mexico to cultural turquoise artifacts using petrography, X-ray diffraction, and electron microprobe analysis to assess the ability of this approach for identifying the geologic source of cultural turquoise.

Houk, Brett (Texas Tech University) and Gregory Zaro (University of Maine)

[112] *Architectural Change and Stasis at an Ancient Maya Center: Evaluating Construction History at La Milpa, Belize*

Recent excavations at La Milpa, Belize targeted the fifth largest pyramid at the site, an enigmatic building previously characterized as being "abandoned unfinished." Although not previously investigated,

Structure 21 figured prominently in interpretations of La Milpa's architectural evolution and ninth century abandonment. Our 2008 excavations encountered an older, buried building beneath the final phase of construction, suggesting a much more complicated architectural history than previously believed. Ultimately, the results of Structure 21 excavations and a contextual consideration of our findings call into question our understanding of the evolution, completion, and abandonment of ancient constructions.

[112] *First Chair*

Hovers, Erella (The Hebrew University of Jerusalem), Anna Belfer-Cohen and Nigel Goring-Morris

[186] *Like Chaff in the Wind: Comments on Groundstone Tool Systematics*

The quantities of groundstone tools and installations (GST) increase markedly during the course of the Epipalaeolithic and Early Neolithic (PPN) in the Near East. The approach used to create classification systems for these items often resembles that applied to chipped stone tool typologies. Yet, the guidelines for GST classifications are more diverse than those applied within the framework of lithic studies. GST represent long-term investment in production and are heavily curated. Given ethnographic analogues to prehistoric items, definition of the latter pertains mostly to their assumed functions. Here we consider alternative frameworks for studying GST.

Howard, Jerry (UC Berkeley) [66] *Discussant*

Howe, Mark (Sequoia National Forest), Karen Miller (Sequoia National Forest) and Tim Kelly (Sequoia National Forest)

[59] *The Civilian Conservation Corps in California: Uncovering Our History*

The Civilian Conservation Corps in California was instrumental in helping construct infrastructure and buildings for many National Parks, National Forests and other public lands around California in the 1930's. The camps were instrumental in economic recovery from the Great Depression and, though not intended as such, helped prepare men for the demands of World War II. This paper will address the outcome of many of these projects, people involved, costs, camp life, oral history and some of those surviving structures constructed on the Sequoia National Forest by the original CCC in the 1930's.

Howell, Todd

[158] *Legitimizing Power at Hawikku*

At the ancestral Zuni settlement of Hawikku, the dead were buried in spatially-discrete cemeteries. Dental data have been used to show that each cemetery was used by a kin group, such as a clan. Village leaders, identified by a high diversity of grave goods, and special body or grave preparations, were produced by two of the kin groups. In this paper I examine the Hawikku burial data for evidence of mortuary ritual performances that might reflect kin groups' attempts to enhance and justify their ability to produce leaders through connections to the supernatural.

Howey, Meghan (University of New Hampshire) [225] *First Chair*
[225] *Second Organizer*

Howey, Meghan [163] *see* *Frederick, Kathryn M.*

Hranicky, William

[247] *The Sandy Hill Adena Cache of Dorchester County, Maryland*

This illustrated paper is a report of the author's work to move the Sandy Hill Cache from a private collector to the Maryland Historic Trust. The cache was found in 1927 in Dorchester County, Maryland. It has 178 artifacts, many of which are outstanding examples of the Adena culture which include tube pipes, gorgets, copper, large bifaces, and a variety of miscellaneous items. Numerous artifacts have engraving. It is called by Dennis Stanford (Smithsonian) and the author – a "U.S. National Treasure."

Hruby, Zachary (Humboldt State University)

[221] *The Multivalent Symbolic Elements of the Production and Use*

of Obsidian Goods in Classic Maya Society

Obsidian, like most materials used by the Classic Maya, was used to convey multiple meanings in ritual settings. Since the social context of the production of these meanings is key, this paper will elucidate meanings that may have been core to Maya belief systems, at least in elite contexts. Associations with the setting sun, darkness, the underworld, lightening, and bloodletting will all be explored via an iconographic and technological analysis of obsidian goods from the Southern Lowlands with special reference to Central Mexico as an external influence on religious belief and the role of obsidian in Classic Maya religion.

Hu, Di (University of California, Berkeley)

[137] *A Study of Chinchu Commerce through their Scale Weights*
The ancient Chinchu of Peru (Late Intermediate Period) were renowned as merchants. They were one of the few Andean pre-Columbian peoples who probably had a market system as well as sea-faring traders who sometimes reached as far as Ecuador. However, other than a few studies on the value of metals of the Chinchu, their system of weights and scales have not been studied. This project is a preliminary study of the excavated and curated pebbles, used as weights, that are housed in the Phoebe A. Hearst museum. Was there a standardized scale weight system or several?

Hu, Yaowu [214] see Dong, Yu

Huang, Jennifer [100] see Simon, Arleyn; [72] see Lincoln, Thomas R.

Hubbell, Zachariah (University of California, Santa Barbara), and Michele R. Buzon (Purdue University)

[122] *Humeral Asymmetry in the Tombos Sample: An Investigation of Work Activities*

Three-dimensional imaging was used to examine length, torsion, and retroversion asymmetry in paired humeri from the New Kingdom cemetery of Tombos (1400-1040 BC), located in northern Sudan. The Tombos cemetery site was used during the Egyptian occupation of Nubia and although originally thought to be a colony of Egyptian immigrants, has been shown using craniometrics and isotope analysis to be composed of both Nubians and Egyptians. Using these features of the humeri, the goal of this study is to provide information regarding the patterns of possible work activities of individuals as well as the function of this multi-ethnic community.

Huckell, Bruce (Maxwell Museum of Anthropology) and David Kilby (Eastern New Mexico University)

[210] *But How Do We Know It's Clovis? Perspectives from North Dakota on the Attribution of Caches*

In recent years a handful of new caches has been discovered and attributed to Clovis, and not always for obvious reasons. As the range of cache artifact variability expands, it is important to assess how caches can be assigned to Clovis, particularly in the absence of Clovis fluted points. This is also true in an age where skilled knappers can "replicate" Clovis artifacts and "package" them as caches. Based on our experience analyzing the Beach (North Dakota) and other caches, we offer suggestions for technological signatures on artifacts that should permit more objective assessment of how to attribute caches to Clovis.

Huckell, Bruce B. [210] *First Organizer*; [21] see O'Brien, Matthew J.

Huckleberry, Gary (Geoarchaeological Consultant)

[44] *Early Prehistoric Canals Identified along Rillito Creek and the Santa Cruz River, Tucson, Arizona*

The Pima County Plant Interconnect Project provided an unprecedented 8+ km stratigraphic slice of the Santa Cruz River floodplain resulting in the identification of three prehistoric canals. One canal originates on the Santa Cruz River and two on Rillito Creek. Based on a preliminary 14C date of 3470±40 14C yr BP (1890-1690 BC) on charcoal located within the fill of one of the Rillito

Creek canals, an aggressive dating program for defining the ages of the canals was conducted that combines 14C and optically stimulated luminescence methods. I will describe these canals and present the results of the chronological analysis.

[44] see Lindeman, Michael W.

Hudson, Paul [123] see Woods, William

Hull, Sharon (University of Manitoba), Joan Mathien (Maxwell Museum), and Mostafa Fayek (Maxwell Museum/University of Manitoba)

[123] *Fingerprinting Turquoise Deposits in the American Southwest*
To successfully identify provenance regions of turquoise artifacts, all known turquoise sources need to be geochemically fingerprinted. We developed a database containing the hydrogen and copper isotopic compositions for many of these regions. Overall our technique is robust. However, there is some overlap between some source signatures which are further separated by unique trace element concentrations. Turquoise artifacts are analyzed by our relatively non-destructive technique and their isotopic composition is compared with the database. This information can then be used to develop models of turquoise exchange and procurement and the artifacts returned to their original collections.

Hulse, Eva (University at Buffalo)

[117] *Jill of All Trades and Master of None?: The Challenges of Doing Soil Chemistry Analysis as an Archaeologist*

This paper examines applications of, and problems with, spatial analysis of soil chemistry data at archaeological sites dating to Finland's Neolithic. The practical issues of interpreting soil composition are unique to each site. To identify subtle patterns, I use multivariate statistical methods which do not have an explicitly spatial component to them. I identify spatial patterning using GIS layers. At the core of this research is a struggle between the need to acquire extremely specific, non-anthropological knowledge in order to understand a dataset, and the need to produce an anthropological narrative about the past.

[117] see Zubrow, Ezra B.

Humphries, Amy

[190] *When a Rock Pile Ceases to Be a Rock Pile: A Test of the 1985 Sullivan and Rozen Study Utilizing Experimentally Created Assemblages*

Sullivan and Rozen (1985) proposed a method for making a distinction between activities associated with core reduction and tool manufacture utilizing an "interpretation-free" system of debitage classification. Debate over the use of this method centered on whether or not it could be used to describe prehistoric human behavior and if experimental archaeology could be used to validate the findings. In this paper I present a test of the Sullivan and Rozen model utilizing data taken from experimentally produced assemblages and compare the findings with those of Sullivan and Rozen in order to determine whether or not their findings are replicable.

Hung, Ling-yu (Washington University) and Jianfeng Cui (Peking University)

[175] *Investigating Majiayao Painted Pottery Production with LA-ICP-AES*

Painted pottery vessels represent a dominant type of craft specialization among the Majiayao communities living in the upper Yellow River region, ca. 5,300-4,000 BP. However, with regard to the social and economic dimension of pottery production, we know almost nothing more than that Majiayao painted pottery was made by specialized craftspeople. A critical issue still left to us to investigate is how the increasing demand for vessel quantity was fulfilled in terms of production. Based on visual observation and chemical analysis, this paper provides new evidence to discuss changes in the production of Majiayao painted pottery in late Neolithic northwestern China.

[95] *Discussant*

Hung, Ling-yu [189] *see* Liu, Haiwang

Hunt, Terry (University of Hawai'i)

[206] *Late and Rapid Colonization of East Polynesia*

Archaeological and palaeoenvironmental field research in the far-flung islands of East Polynesia has confirmed a late chronology of colonization over a nearly simultaneous time-frame. The late and rapid settlement of East Polynesia denotes high population growth rates, great mobility, and opportunistic subsistence strategies. Shorter chronologies raise implications for direct and indirect ecological impacts, human competition, demographic transitions, and other evolutionary dynamics.

[206] *First Chair*

Hunt, Timothy (SASA) and Carl Lipo (California State University Long Beach)

[251] *Technological and Formal Analyses of Stone Plummets from Poverty Point, Louisiana*

Carefully shaped and polished plummets constructed of magnetite and hematite are commonly found artifacts of the late Archaic in Louisiana. While often assigned functions as weights for fishnets or as thrown objects used to catch waterfowl, little in the way of empirical evidence has been generated to explain their form and features relative to performance in prehistoric behavior. Here, we provide an analysis of the variability in shape and surface finishing of plummets as a means for studying the technology of their manufacture and performance constraints inherent to their use.

Huntley, Deborah (Center for Desert Archaeology), J. Brett Hill (Hendrix College), Jeffery Clark (Center for Desert Archaeology), Katherine Dungan (Center for Desert Archaeology) and Robert Jones (Center for Desert Archaeology)

[192] *If You Flake It, They Will Come: Obsidian Circulation and Postclassic Occupations in the Upper Gila Region*

Current research by the Center for Desert Archaeology focuses on late Postclassic community formation and dissolution in the Upper Gila region of New Mexico, including the Mimbres Valley. In this paper we examine regional demography and local settlement histories after AD 1130. We use data from our test excavations at several sites along Mule Creek, a well-known obsidian source, to track the scale and timing of Kayenta and Salado migrations and explore the size and cultural affiliation(s) of Postclassic occupations. We also employ a large obsidian source database to explore connections within and among Salado and contemporaneous groups.

Huntley, Deborah L. [113] *see* Mills, Barbara J.; [200] *see* Trowbridge, Meaghan A.

Hurcombe, Linda

[256] *Recognising and Valuing Skill in Perishable Material Culture*

Though our world is full of organic material culture, the skills of manufacture in prehistoric artefacts of these materials may not be apparent to a modern audience. This is partly due to biases in evaluating craft items and partly due to a lack of familiarity with the exploitation patterns and production techniques necessary to make the object. Ethnographic and experimental evidence will be used to elucidate some of the ways in which skill-level could be read and archaeological case studies will be used to show how cultural values can be realigned to factor in sophistication in perishable material culture items.

Hurley, Andrew [187] *see* Baumann, Timothy E.

Hurst, Stance (Museum of Texas Tech University) and Eileen Johnson (Museum of Texas Tech University)

[21] *Gearing up at Adair-Steadman: A Look at Folsom Stone Tool Production on the Southern Plains, U.S.A.*

Adair-Steadman was an important stopping point for Folsom hunter-gatherers to replenish their stone tool kit. From the local gravels along the Clear Fork of the Brazos River in Texas, Folsom flintknappers spent considerable time and effort in making projectile points, bifaces,

and unifaces attested by numerous failed preforms, bifaces, and debitage. Curtis Tunnell's analysis of lithic material from Adair-Steadman helped to discover the Folsom projectile point production sequence. Currently, Folsom manufacturing strategies for gearing up have been examined. The results presented provide an important glimpse into Folsom technological organization in relationship to Paleoindian landscape use on the Southern Plains.

Hurst, Winston

[160] *The Spider Woman's Matrix: Ancient Puebloan "Roads" in Utah as Integrative Monumental Features*

Constructed linear swales ["roads"] have been widely identified in association with ancient Puebloan sites on the Colorado Plateau, including the Utah portion of the northern San Juan region. Although the study of Utah's ancient roads is in its early stages, extant data are sufficient to suggest that the roads and associated features were important elements of an integrated cultural landscape of natural and monumentally constructed features. These man-made lines in the land physically linked places of importance to the local Pueblo communities, simultaneously expressing and reinforcing culturally important ties among communities and significant features of the natural landscape.

[84] *Discussant*; [160] *see* Tilton, James C.

Hurt, Brandy [165] *see* Stone, Suzanne

Huster, Angela (Arizona State University)

[13] *Changes in Cloth Production at Calixtlahuaca as a Result of Aztec Conquest*

Maguey and cotton spinning artifacts at the Postclassic Central Mexican site of Calixtlahuaca show distinctly different spatial and temporal patterning. Maguey fiber production occurred extensively across the site throughout its occupation. In contrast, evidence for the production of cotton cloth occurs only during the later portion of the site's occupation. I relate the appearance of cotton production technologies to the imposition of tribute demands after the site's conquest by the Triple Alliance.

Hutchinson, Robert (University at Albany, SUNY)

[20] *The Sociopolitical Structure of Mayapán: An Analysis of the City's Burial Patterns*

During the Late Postclassic Period Mayapán was the preeminent economic and political power within northern Yucatán, Mexico. Ethnohistoric sources indicate that this city was governed by a coalition of lineages that unequally shared power (a *multepal*), and that these kin-based identity groups maintained a presence within Mayapán's wall. Alternately, scholars have proposed a more centralized governmental structure supported by a politically unifying elite cult that crosscut corporate group membership. By comparative analyses of burial patterns within and without Mayapán's Ceremonial Center this paper addresses each of these models. These analyses suggest that a segmentary sociopolitical structure is indicated.

Hutira, Johna (Northland Research, Inc)

[50] *Monica and Bill! Ross and Rachel! OJ and Nicole! Daniel Jackson and Lara Croft? What the 90s Knew About Archaeologists* Gen Y, the Clinton years, and ethnic cleansing. The decade of the 90s was a roller coaster of emotion. How did world and national events affect the portrayal of archaeologists in the media. This presentation explores the various incarnations of our favorite profession.

[86] *see* Craig, Douglas B.; [180] *Discussant*

Hutson, Jarod

[129] *Hunting or Scavenging at Open-Air Sites during the Middle Stone Age in Southern Africa?*

A reevaluation of the open-air faunal accumulation at Kalkbank (Limpopo Province, South Africa) reveals that carnivores, not humans, were the primary agent of accumulation. Although the Kalkbank site offers little value for interpreting hunting behavior during the MSA, other open-air MSA sites in southern Africa reveal a similar

pattern of carnivore activity and scant evidence for systematic hunting interpreted from coastal cave sites. Possible explanations for this inconsistency involve poor preservation, lack of open-air surveys, or actual behavioral differences reflected in subsistence practices of those populations living within the interior and along the coast of southern Africa during the MSA.

Hutson, Scott and Miguel Covarrubias (Proyecto Ah Kin Chel)

[109] *Causeways in Context: Settlement Dynamics of the Ucí-Cansahcab Sacbe, Yucatan*

Northern Yucatan contains several intersite causeway systems. These causeways—also called sacbes—represent close relations among the sites they connect. However, systematic surveys along the lengths of these sacbes are rare. An 18 km long causeway connects the sites of Ucí and Cansahcab. The Ucí-Cansahcab Sacbe Archaeology Project has mapped Ucí, surveyed an 8 km by 0.5 km transect following the causeway, and documented newly discovered archaeological sites not connected by the causeway. These data help understand the political, social, economic, and ritual transformations that both resulted in and resulted from the construction of the causeway.

[109] *First Chair*

Hutson, Scott [178] *see Magnoni, Aline*

Hutt, Sherry (National Park Service) [86] *Discussant*

Hyland, David (Mercyhurst College)

[190] *What Is Cordage? Terminological Obscurity in the Field of Fiber Artifact Studies*

Although as archaeologists we tacitly acknowledge that every classification system carries with it a theoretical stance, we rarely, if ever, question the terms we use to describe and label our finds, which inform our classification methods. We do not wonder whether the terms we use are imbued with theory or even mean something we do not intend them to mean. Within the realm of perishables studies cordage analyses reveal consistent conceptual problems. In an example drawn from the nautical arts, a close re-reading of the concept of cordage informed by an analysis of myth reveals hidden levels of cultural meaning.

[190] *First Chair*

Hylkema, Mark [81] *see McKenzie, Dustin K.*

Iannone, Gyles (Trent University) and Jaime Awe (Institute of Archaeology, Belize)

[153] *Socio-Environmental Dynamics in the Southern Maya Lowlands: A Case Study from the North Vaca Plateau, Belize*

In recent years, a variety of data sets have emerged which, for the first time, allow for a multi-faceted perspective on the development and denouement of ancient Maya communities in the North Vaca Plateau of west central Belize. These include archaeological data from twelve years of detailed research in association with the Minanha epicentral court complex, surrounding settlement zones, and associated terrace system, environmental and climatic proxies from the Macal Chasm and Reflection Caves, and an analysis of changing ritual practices at Chechem Ha Cave. This paper synthesizes the preliminary results of this transdisciplinary research.

Iannone, Gyles [54] *see Longstaffe, Matthew S.*; [54] *see Powis, Terry G.*

Ibarra, Eugenia (Eugenia Ibarra Universidad de Costa Rica)

[191] *An Ethnohistorical Interpretation of the Mesoamerican Impact on the Rio San Juan and Western Central Valley of Costa Rica Surroundings in the 16th Century*

History and archaeology have focused mainly on the Mesoamerican presence in Pacific Central America. This is understandable when the ethnohistorical sources and the archaeological records offer more and clearer descriptions of that area. However, recent research on warfare and prisoner capturing in Lower Central America undertaken

by the author posits new interpretations on the expanding activities of the Mesoamerican descendent people in the 16th century.

Ikehara, Hugo (University of Pittsburgh)

[114] *Intrusiveness and Constructed Landscapes in the Andean Formative: A Case Study from Nepeña*

This paper examines the plurality of intrusiveness and its archaeological significance as viewed through Formative Period sites located in the Nepeña Valley, north-central coast of Peru. I explore patterns of abandonment, reuse, and intrusion at monumental centers focusing on their place within local landscapes. Different types of sites, originally built and occupied during the first millennium BC, appear to have been imbued with a multitude of meanings which played an active role in guiding local practices of intrusiveness. I attempt to identify and define the material signatures of intrusiveness in order to gain a dynamic understanding of the complexity of constructed landscapes in the Andes.

[138] *see Chicoine, David*

Illingworth, Jeff (Mercyhurst Archaeological Institute), C. Andrew Hemmings and James Adovasio (Mercyhurst Archaeological Institute)

[90] *Geoarchaeological Explorations on the Inner-Continental Shelf of the Florida Gulf of Mexico*

Geoarchaeological exploration of the inner-continental shelf in the northeastern Gulf of Mexico has documented two lengthy paleo river systems and identified numerous infilled karst features. The research has specifically delineated the relict Suwannee River channel in nine separate areas extending 150 km into the Gulf of Mexico southeast of the Florida Middle Grounds. During the 2009 field season, scuba divers working adjacent to the channel recovered bedrock limestone samples from several locations, three of which contained desilicifying chert and thus would have attracted prehistoric human use. The results of current analyses are detailed and plans for future exploration are articulated.

Inanez, Javier (Smithsonian Institution), Jeremy Bellucci (University of Maryland), Richard Ash (University of Maryland), Robert J. Speakman (Smithsonian Institution)

[161] *Pb Isotope Characterization of Majolica Pottery from Spain and the Americas*

Majolica is a glazed ware largely found in many American archaeological sites related to the Spanish colonial period. Majolica glazing technology required of high concentrations of lead and silica in order to achieve its characteristic glaze coating, along with SnO₂ for opacification. This study focuses on the characterization of the different Pb isotope ratios from lead glazed majolica from different established production centers from Spain, Mexico, Panama, and Guatemala. Discrimination between productions according to the lead fingerprint of their glazes, and the use of Pb isotope characterization for revealing ambiguous provenances, are discussed.

[161] *First Organizer*; [123] *Second Organizer*

Ingram, Scott (Arizona State University)

[100] *Regional Influences on Central Arizona Population Dynamics*

Settlement on Perry Mesa is investigated in the context of regional-scale demographic, climatic, and environmental conditions in the late 13th and early 14th centuries. Results establish the attractiveness of Perry Mesa and central Arizona for people leaving the northern Southwest in the late 1200s, identify conditions that encouraged and sustained population growth throughout the region, and propose a basis for the formation of settlement clusters and unoccupied zones that does not engage rising hostilities. Results strongly suggest that the settlement patterns of Perry Mesa and central Arizona were part of much larger phenomena than currently conceptualized.

Innes, Phillip J. [55] *see Malainey, Mary*

Inomata, Takeshi (University of Arizona)

[110] *Burned structures at the Classic Maya sites of Aguateca and Ceibal, Guatemala*

Excavations at Aguateca and Ceibal revealed evidence of burning at the time of abandonment. At Aguateca, elite structures were burned along with numerous objects left behind at the end of the Late Classic period. At Ceibal, the royal palace of the Terminal Classic period was emptied and then burned. Excavations results from these sites provide important information on the Maya practice of burning and its relation to political change and abandonment.

Iovita, Radu (Roman-Germanic Museum Mainz, Germany) and Shannon McPherron (Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany)

[58] *The Handaxe Reloaded: A Morphometric Reassessment of Acheulian and Middle Paleolithic Handaxes*

Handaxes have always been considered one of the most important index fossils of the Paleolithic. First associated with the Acheulian, they were subsequently found in Middle Paleolithic contexts, leading to speculations of filiation or convergence. In this paper, we explore the relationship between Acheulian and Mousterian handaxes by first examining their historical research context and then tackling the differences from a morphometric point of view. We demonstrate that there is a discontinuity in the presence of handaxes from the LP to the late MP, and that the two kinds of handaxes are subject to different treatments during use and discard.

Isbell, William (SUNY – Binghamton) and Hartmut Tschaunert (Binghamton University)

[145] *Conchopata: Domestic and Political Economy in the Huari Heartland*

Analysis of the spatial distribution of artifact classes from architectural spaces at Conchopata reveals important new insights into domestic and political economies at this small Huari heartland city. Understanding Middle Horizon interactions based solely on evidence from peripheries will always be incomplete, requiring balance from core perspectives. At this time, Conchopata provides the best available heartland data for a more inclusive view. Our analyses draw on a relational spatial database of the Conchopata Archaeological Project that will soon be available on line.

Iseminger, Bill (Cahokia Mounds) and Mary Vermilion (St. Louis University)

[140] *Pursuing Cahokia's Central Palisade*

Since the mid-1960s, a number of institutions and organizations have revealed various segments of the Palisade around the eastern, southern and western portions of central Cahokia. Recent projects have extended our knowledge of one of the walls forming a north wall heading behind Monks Mound, and probably the fourth of four constructions of the wall. The Palisade is a reflection of other socio-political changes characterizing the Moorehead Moment at Cahokia.

Ishihara, Reiko (Dumbarton Oaks) and Pakal Balam (Museo Kumatzim Jay)

[212] *From Relic to Educational Tool: Developing Educational Modules and Building a Local Museum in Tecpan, Chimaltenango, Guatemala*

In public primary education in Guatemala, although multicultural education is highlighted in the newly developed curriculum in line with the Peace Accords, the current status of formalized teaching of local history and cultural identity issues in the classrooms remains minimal. The objectives of the Kumatzim Jay project in Tecpan, Guatemala, consist of building an interactive museum and educational center along with developing educational modules that help make local history and culture relevant to students. To date, the first phase has been implemented, which include artifact analysis and documentation as well as initial development of the modules.

Ishihara, Reiko [196] *Second Organizer*; [212] *First Organizer*

Iwaniszewski, Stanislaw (National School of Anthropology and History, Mexico)

[242] *Where the Rain is Mobilized: Mountain Sanctuaries from Central Mexico*

Among the Aztecs, the mountain cult was closely connected to the cult of meteorological phenomena, water and the earth, and both the ritual tools and the entities and events perceived in the sky or in the surrounding landscape were regarded as objects of agency and carriers of tonalli. The ritual places themselves were charged with agency, because their design was made to provide an appropriate scheme for making these ceremonies effective. This, in turn, required the detailed knowledge of the physical world, interpreted in terms of relationships between gods, destinies and ritual acts. The paper discusses the symbolic as well spatial relationship between the sites and the landscape, and gives a special attention to the visibility and inter-relationship between the ritual sites and specific landforms.

[242] First Chair [242] Second Organizer

Izuho, Masami [177] *see Nakazawa, Yuichi*

Jackson, Edwin (U Southern Mississippi)

[64] *Animals as Symbols, Animals as Resources: Relating the Faunal Record to Ritual and Hegemony in the Mississippian World*

In the Mississippian world, the political economy fueled intensive ceremonial efforts such as mound-building, supported ritual and provided elite with items rarely afforded low status people. Meat and other animal products were a part of the flow of commodities that supported the elite and their activities. Zooarchaeological studies of Mississippian assemblages from sites in the Mid-South demonstrate that no single animal resource distinguishes elite from non-elite diets or meals. Rather, unique combinations of resources and rare items, often imbued with inferred symbolic significance, offer clues as to how animal resources articulated with the complex social setting of Mississippian culture.

Jackson, Sarah (University of Cincinnati) and Lindsay Argo (University of Cincinnati)

[54] *Second Thoughts about Secondary Centers: A Classic Maya Case Study from Say Kah, Belize*

Investigations in Group B of the Classic Maya site of Say Kah, Belize, a small center near La Milpa, raise questions about our understanding of regional site hierarchies and the interrelationships between neighboring residential groups of varying complexity. An ostensibly secondary center, Say Kah displays architectural, ceramic, and mortuary trappings of substantial elite resources, suggesting a need to examine assumptions about status and influence based on settlement hierarchies. The ceramic record provides a useful way to compare sites in the region and assess the meaning of variability in ceramic assemblages in relationship to site function and identity of its occupants.

Jacobson, Lou (Bureau of Land Management)

[75] *Protecting Cultural Landscapes and Managing Multiple Use*

Canyons of the Ancients is a component in the Bureau of Land Management's National Landscape Conservation System, emphasizing the protection of cultural and natural landscapes rather than fragmented ecosystems and individual cultural resource sites. In addition, the Monument was established with the intent of continuing multiple use. Management requires balancing conflicts between valid existing rights for fluid mineral development, protecting a landscape with over 100 sites per square mile, and honoring Native American Tribal affiliation with Monument cultural and natural resources. This presentation will review conflicting management mandates and the process for resolution of these conflicts.

Jacobson, Michael (Public Archaeology Facility Binghamton University)

[167] *The Conflicts of Place: The Application of Military Terrain Analysis on the Landscapes of the Colorado Coalfield War*

The Colorado Coalfield War has been defined as a conflict over labor relations and community in Colorado's coal camps. Such research is helpful in understanding the enduring tensions inherent in class relations. However, this conflict was more than just a strike. Participants identified it as a war and its climax as a massacre. This paper builds on previous landscape analysis of the Ludlow strikers'

colony by applying military terrain analysis to show that participants viewed the strike zone in terms of a violent conflict. Such an analysis is applicable beyond traditional battlefields and enhances an interpretive approach to landscape studies.

Jacobson, Michael [180] *see* Versaggi, Nina M.

Jacomet, Stefanie (IPNA Basel University Switzerland)
[132] *Discussant*

Jahnke, Lori (The College of Physicians of Philadelphia)
[24] *Changing Scholarly Communication: the Implications of Granting Copyright for Born Digital Objects*
Changing modes of scholarly communication that incorporate digital methodologies prompt the question of whether or not born digital objects should receive copyright under the Library of Congress system. This change in procedure could have a profound impact on the preservation of digital data, the development of standards, and the distribution of databases as born digital objects. Although copyright ostensibly protects the intellectual creator, it can facilitate information monopolies that stifle scholarly communication. This paper provides a critical review of the legal, social, and academic implications of copyright for born digital objects versus pursuing open access models of publication.

Jaillet, Angela (Indiana University of Pennsylvania)
[88] *Dealing with Dirt and Doubt: Archaeology Outreach in Agricultural Education*
With increasing efforts to educate the public on the importance of preserving archaeological resources abounding, different avenues of education and public outreach continue to arise. Efforts at reaching students in the education system create an atmosphere of awareness in a broader audience. In the same vein, efforts made by the U.S. Department of Agriculture's Natural Resources Conservation Service targeted education efforts at those dealing directly with the nation's land. Fusing these two concepts, public outreach by archaeologists can be aimed at agricultural classes and organizations in the education system and dispel some animosity amongst the agricultural and archaeological communities.

Jaime-Riveron, Olaf (University Of Kentucky), Dolores Tenorio (Instituto Nacional de Investigaciones Nucleares, Mexico), Oscar Neill Cruz (Unidad de Arqueología, Instituto Hondureño de Antropología e Historia, Honduras), Ranferi Juárez (Unidad de Arqueología, Instituto Hondureño de Antropología e Historia, Honduras) and Thomas Calligaro (Centre de Recherche et de Restauration des Musées, Musée du Louvre-CNRS, France)
[147] *Jade quarries of Mesoamerica used by the Olmecs*
In this paper, we provide results of the use of serpentinite mélange (including rocks such as jadedite, eclogite, omphacite, serpentinite, albite) obtained and used by the Olmecs during the Formative Period of Mesoamerica. We use multiple geochemical techniques, samples obtained from the quarries and samples from artifacts excavated from primary contexts. We use GIS for reconstruction of Ancient trade routes.

Jaime-Riveron, Olaf [229] *see* Tenorio, Dolores; [229] *see* Andrieu, Chloé

Jakes, Kathryn [255] *see* Levine, Mary Ann

Jalbert, Catherine (Memorial University of Newfoundland)
[25] *Quarries and Craft-learning: Identifying the Novice*
The prehistoric site of Davidson Cove is located in the Minas Basin of Nova Scotia, Canada. Dated to the Late Woodland period, this is the only known lithic/quarry workshop site in the region. Due to the abundance of material, a quarry can provide an optimal teaching environment for the novice craft-learner; utilizing a 'limitless' resource. Formally known as a reductive act, it can be argued that novices would invariably create more debitage than experts in lithic

production. Considering this, quarry assemblages are often largely ignored due to the amount of waste created, losing the researcher and essentially, losing the novice.

James, Steven (California State University at Fullerton), Patricia C. Martz (California State University, Los Angeles), René L. Vellanoweth (California State University, Los Angeles) and Steven J. Schwartz (Range Sustainability Office, Naval Air Warfare Center, Weapons Division, Point Mugu, CA)
[31] *Archaeological Investigations on San Nicolas Island: Overview of Research by California Universities*
Archaeologists from anthropology departments in the University of California and California State University (CSU) system have been conducting archaeological research, training future archaeologists, and assisting the U.S. Navy in managing, evaluating, and protecting prehistoric and historic cultural resources on San Nicolas Island for over half a century. The contributions of these investigations for understanding over 7000 years of human occupation on this small southern Channel Island and the unique educational opportunities that have been provided for college students are discussed. Results of recent research at several sites are examined in light of our current understanding of marine resource exploitation and settlement patterns on the most isolated of the Channel Islands.
[31] *First Chair*

James, Steven [31] *First Organizer*; [31] *see* Jones, Gary A.

James, William D. [161] *see* Eckert, Suzanne L.

Janetski, Joel (Brigham Young University) and Joan Coltrain (University of Utah)
[248] *New Dietary and Temporal Data on Basketmaker II Human Remains from Southeast Utah*
Bone collagen stable carbon and nitrogen isotope values paired with radiometric data from a significant collection of Basketmaker human remains from southeastern Utah provide new insights into the onset of farming in the region. Over ninety samples from Grand Gulch, Cave 7, and other southeastern Utah sites document heavy reliance on maize by several centuries before Christ. This temporal pattern is similar to that found in a comparable study of Basketmaker remains from northeastern Arizona suggesting the rapid northward spread of *zea mays*.
[223] *Discussant*

Janetski, Joel [118] *see* Yoder, David T.

Jansen, Susan (CAIRN (Cave Archaeology Inv. & Research Network)), Carol Diaz-Granados (Washington University), Craig Williams (CAIRN (Cave Archaeology Investigation & Research Network))
[22] *Glimpses into the Past: The Petroglyphs of Lon Odell Memorial Cave*
Lon Odell Memorial Cave, Dade Co, Mo. serves as a veritable time capsule, sealing up in prehistory and opening back up as a sinkhole in 1985, capturing and preserving prehistoric footprints and torch activity. However, recent visits have yielded further evidence of previously overlooked prehistoric activity. Cave Archaeology Investigation & Research Network (CAIRN) has made several visits to the cave and identified two petroglyphs in dark zones of the cave. he images were identified as an Underwater Spirit and a Rayed Circle motifs. We will examine how these images deepen our previous knowledge of rock art in Missouri and the Midwest as well as their context within caves. We will also discuss the rock art recording techniques applied and how these images may represent a special use of the cave in comparison to similar caves.
[62] *Second Chair* [62] *Second Organizer*; [62] *see* Campbell, Peter B.

Janusek, John (Vanderbilt University)
[18] *Animistic Ecology and the Creation of Ritual Centers in the Formative South-Central Andes*

Recent research into the Formative Lake Titicaca Basin demonstrates that at any time, there were numerous co-existing centers that anchored far-reaching interaction networks. All known centers served as sites of ritual practice, and as such anchored the overlapping religious ideologies and social identities of extensive communities. Focusing on Khonkho Waknane, I argue that the constructed environments of some centers concentrated power by way of spatial, material, and semiotic references to powerful landscape features and the various living and immanent beings considered to inhabit them. Through potent ceremonial events, these centers sought to create persons with specific ritual attitudes.

[222] see Ohnstad, Arik

Janzen, Anneke (UC Santa Cruz) and Naomi Cleghorn (University of Texas at Arlington)

[234] *Hyena Bone Choice and Destruction of Large Fauna*

Previous controlled experiments of carnivore ravaging to skeletal elements has focused on small to medium sized ungulates. Here we report on experimentally controlled captive spotted hyena processing of large ungulates, a common size class in early hominid archaeofaunas. This study used Marean and Spencer's methods to provide a baseline for bone choice and destruction. Hyenas displayed strong patterns of selection and destruction of axial versus appendicular elements and of epiphyseal versus diaphyseal segments. This experimental data set thus provides useful quantifiable data relevant to analysis of assemblages containing larger hoofed animals which may have undergone significant carnivore ravaging.

Jarman, Nicholas (The University of New Mexico), Ariane O. Pinson (University of New Mexico, Maxwell Museum of Anthropology, & Central New Mexico Community College, Albuquerque)

[41] *High Altitude Land Use in the Valles Caldera National Preserve: Recent Findings*

The roles that high altitude (>8000' asl) landscapes played in the subsistence strategies of prehistoric Southwestern foragers and farmers are poorly understood. UNM's Mountain Archaeology and Paleogeography project has conducted landscape scale surveys and test excavations at rock shelters in the Valles Caldera National Preserve which are helping refine the chronology of land use and subsistence in this high altitude region of the Jemez Mountains. Preliminary findings suggest peaks in occupation during the Late Archaic and Protohistoric Periods. In both periods, rock shelters appear to be favored residential locations with open air sites the focus of more logistical use.

Jaúregui, Olga [55] see Lamuela-Raventos, Rosa M.

Jeffares, Ben (Victoria University of Wellington, New Zealand)

[194] *Models and Explanations: From General Models to Specific Accounts*

The sciences actively use, and deploy models to understand and explain phenomena. In recent years archaeologists too have started deploying models to make sense of their observations. But how does a general, abstract representation of a process—a model—become an explanation of a unique cultural phenomena? Taking a lead from some philosophical work in geomorphology and biology, I suggest ways in which general models can become localized accounts of contingent cultural phenomenon, and suggest limits on this process.

Jeffra, Caroline (University of Exeter)

[256] *Clumsy, Crude, Well-Made, Fine? Skill and the Learning Process In Light of the Pottery Wheel*

Studies involving Minoan Crete have repeatedly expressed assumptions regarding the relationship between skillfulness and material culture, particularly in ceramics. The earliest use of the pottery wheel focuses this attention, exemplified by the classification of some ceramics as "crude wares". This classification obscures the pottery wheel as a key marker of skills renegotiation. Reevaluating the wheel highlights the changing skills of potters, in terms of

individuals and communities of practice. The application of experimental archaeology and the chaîne opératoire approach can disentangle the resulting questions of skill, production speed and the learning process without imposing hierarchical values on types of pottery.

Jelinek, Lauren (University of Arizona)

[144] *Revisiting San Cayetano de Calabazas*

While the Pimería Alta is dotted with a variety of Spanish colonial installations, smaller sites are often overlooked by researchers and the general public. One such example is San Cayetano de Calabazas, a former Spanish visita that is part of the Tumacácori National Historical Park. A reanalysis of historical and archaeological data from this site has demonstrated that, although it is not as architecturally stunning as other Spanish missions in the region, it possesses a richer history. It was occupied intermittently from the protohistoric period to the early twentieth century and can be seen as a microcosm of Arizona history.

Jenkins, Austin [30] see Ladwig, Jammie

Jenkins, Cliff (NRCS)

[249] *Examining Freshwater Shell Midden Rings with Aerial Imagery in the Yazoo Basin, Mississippi*

NRCS is involved in a number of earth moving activities in the Yazoo Basin of northwestern Mississippi. The quantity of projects and often short turnaround time necessitates quick and accurate determinations of the potential presence of archaeological sites within proposed conservation practice areas. Detection of archaeological features from aerial imagery provides one method for efficiently evaluating project areas. One type of archaeological feature, the freshwater shell midden ring, is especially observable in aerial photos. Aerial imagery has proven useful, not only for detecting new shell ring sites, but tools available in GIS have also made it possible to conduct quantitative analysis of site structure.

Jenkins, Dennis

[62] *Distribution, Stratigraphic Association, and Chronology of Late Pleistocene Artifacts, Coprolites, and Paleontological Specimens in the Paisley Caves of South-Central Oregon*

Ancient human DNA has been recovered from coprolites pre-dating the Clovis culture by 1000 years at the Paisley Caves in the Pleistocene Lake Chewaucan basin of south-central Oregon (Northern Great Basin region). Excavations conducted in 2009 recovered unusual numbers of artifacts, coprolites, and paleontological specimens for this site from Late Pleistocene deposits. The spatial, stratigraphic, and chronologic associations of these remains are central to understanding the Paisley culture.

[62] see Stafford, Thomas W.

Jenkins, John (Independent researcher)

[89] *Astronomy and the Long Count*

This presentation examines Long Count dates at several Classic Period Maya sites, associated inscriptions, and astronomical alignments occurring on the associated dates. Patterns involving specific astronomical features will be identified and compared with astronomical configurations present on the so-called "zero" date of the 13-Baktun cycle (in 3114 BC) as well as on the 13-Baktun cycle ending (in 2012 AD). Specific texts from Copan, Tikal, and Tortuguero suggest a coherent rationale as to why such configurations were meaningful to the Maya. Archaeoastronomy from two sites involved in the formulation of the Long Count, Izapa and Takalik Abaj, will be examined.

Jenks, Kelly (University of Arizona, Tucson)

[193] *Vecinos en la Frontera: New Mexican Identity in the Pecos River Settlements*

In attempting a vecino archaeology, one is forced to define the term in a practical sense. While the word captures the importance of community in Hispanic identity, Nuevomexicanos long have recognized significant cultural differences among various villages.

Authorities in Santa Fe, for example, tended to view the inhabitants of frontier settlements as degraded owing to their close relations with indigenous neighbors. This paper explores what it means to be vecino in the Pecos River settlements, where daily life was shaped more by interactions with outsiders—whether captive or cousin—than by any relations with the Santa Fe elite.

Jennings, Justin (Royal Ontario Museum)

[145] *Reevaluating the Middle Horizon in Arequipa*

The Middle Horizon (600-1000 AD) was a tumultuous period in Peru. This paper summarizes recent Middle Horizon research in Arequipa and demonstrates how this new research has transformed our understanding of what happened in the region during this period. Instead of being incorporated into the Wari Empire via established Wari centers like Cerro Baul and Pikillacta, Arequipa seems to have been first incorporated into the Wari sphere via the region's long-standing connections to the Nasca region. Wari influence, and with it increased social change and interregional interaction, reached the highlands of Arequipa only in the second half of the period.

[145] *First Organizer*; [188] see Yepetz, Willey

Jennings, Michael [33] see Church, Michael K.

Jennings, Thomas (Texas A&M University) and Charlotte Pevny (Center for the Study of the First Americans, Texas A&M University)

[21] *Foragers or Collectors? A Comparison of Clovis and Folsom Lithic Technological Organization on the Plains and Plains Periphery*
The high-tech forager model (Kelly and Todd 1988) was proposed to generally explain the technological, subsistence, and settlement strategies of Early Paleoindian (Clovis and Folsom) hunter-gatherers. The subsequent 20 years of archaeological research has illustrated the complexities of these Early Paleoindian lithic technologies. In this paper we directly compare Clovis and Folsom technological organization on the Plains and Plains periphery to assess the relative position of each along the collector-forager continuum.

Jensen, Anne (UIC Science LLC)

[79] *Before Birnirk/Thule: Ipiutak and Others in the Barrow Area*

The Barrow area is well-known for the Birnirk and later winter villages and settlements found there, many of which are quite important in the history of Arctic archaeology. Far less attention has been paid to other types of sites, including those which predate the Birnirk/Thule period. The recent startling discovery of an Ipiutak occupation at Nuvuk, Point Barrow, makes it timely to compile and review the current information on such occupations, much of which is scattered in grey literature, with a view toward guiding future research on this earlier period.

[79] *First Chair*

Jensen, Deborah [24] see Cannon, Mike

Jensen, Eva (National Park Service) and Mark Slaughter (Bureau of Reclamation)

[200] *Back to the Old Salt Mines*

Three prehistoric salt mines in southern Nevada along the lower Virgin River were excavated by M.R. Harrington in the 1920s and hundreds of artifacts collected. The sites were inundated by Lake Mead in 1938. Artifacts and records were dispersed in repositories across the country. In 2003, declining lake levels brought a reemergence of sites and interest. An interdisciplinary team from National Park Service, Bureau of Reclamation, USGS, and UNLV are mining the archives, excavating ethnographic records, surveying site areas, analyzing artifacts, and dating collections for a modern look at this unique "lost" resource.

Jensen, Ryan [160] see Balzotti, Chris

Jerrems, William (Independent)

[120] *Horse Hunting at the End of the Pleistocene: Bridging the Gap Between the New and Old Worlds*

Horse procurement reflects a very long tradition in Eurasia, 450,000 years in Germany, France and England, a tradition that is suspected to have played an important part in the early settlement of the New World. This paper will attempt to compare some horse procurement and butchering strategies of Eurasia with those of America, particularly what is referred to as 'butchered horse teeth.' New evidence suggests that a search of old collections, particularly the collections of several Great Basin locations held by Universities and Museums compared to collections at the British Museum and Museum of Natural History, London, will prove enlightening.

Jeske, Robert (University of Wisconsin Milwaukee) and John Richards (University of Wisconsin Milwaukee)

[70] *A New and Improved Wisconsin Woodland Chronology: Dates from Organic Residues on Ceramics Vessels*

Because many important Wisconsin sites were dug in the early 20th century, few chronometric dates have been available to provide an accurate chronology of the Woodland period. Most syntheses of Wisconsin prehistory rely heavily on cross-dating or analogy with nearby regions for placing local ceramic technologies into a chronological framework. We present more than 120 AMS dates from organic residues adhering to ceramics from Wisconsin sites—many from well-known ceramic types or from prominent archaeological sites—to provide a preliminary chronology for the Woodland period in the region, and provide suggestions for more detailed theoretical and methodological inquiries in the future.

Jia, Peter (University of Sydney), Alison Betts (University of Sydney), Qianjia Chen (Jilin University), Trudy Doelman (University of Sydney) and Xinhua Wu (Institute of Archaeology, Chinese Academy of Social Science)

[155] *East meets West – Late Prehistoric Archaeology in Zhungerer, Xinjiang, China*

Excavation at Luanzanggang (1300-900 BC) has achieved promising results. First, the material culture has been clearly identified and scientifically dated. Second, the analysis of charred seeds recovered through flotation indicates early farming during the Bronze Age on the northern Tianshan slope. We also report the results of starch residue analysis that record the processing of a variety of plants other than staple grains. The obsidian study in northeast China at the first time has used PXRF to test about 500 artifacts and scientifically grouping the different sources in different regions.

Jiang, Ming [151] see D'Alpoim Guedes, Jade

Jiao, Tianlong (Bishop Museum) and Chunming Wu (Xiamen University, China)

[155] *Exploring the Cultural and Economic Trends in Neolithic Southeast China*

Newly excavated archaeological materials from Southeast China by an international team demonstrate that the Neolithic cultures in this region underwent tremendous changes over time. Using multidisciplinary approaches, this ongoing collaborative project has found a great amount of materials for studying the transformation of the economy and material cultures in Neolithic Southeast China. Maritime adaptation became increasingly intensified. Seafaring allowed people move and interact with each other in a much broader space. These changes not only provide evidence for studying the social transformations in this region, they also carry significant implications for understanding the origin and early expansions of the proto-Austronesians.

[95] *Discussant*

Jimenez, Mila [18] see Makowski, Krzysztof

Jimenez Cano, Nadia [161] see Speakman, Robert J.

Jing, Zhichun (The University of British Columbia) and Jigen Tang (Institute of Archaeology, Chinese Academy of Social Sciences)

[155] *Excavations of the Palaces at the Walled Huanbei City in*

Anyang

Palaces were the royal residences as well as the seats of political and religious activities. Excavations at Huanbei, a walled urban center dating to the 13th century B.C., has revealed the largest palace/temple compound ever discovered in Bronze Age China, offering an opportunity to examine the nature of palaces and temples in early complex societies. This paper describes orthogonal physical layouts, the spaces with public or restricted access, architectural elements of the palace buildings. The palace/temple compound is discussed in the contexts of evolving cultural tradition and political ideology to understand how palaces served to embody and legitimize the power of ruling elites in the functioning of the Shang state.

Jing, Zhichun [155] see *Stoltman, James B.*

Joaquin, Joseph [164] see *Rankin, Adrienne G.*

Jodry, Pegi [72] see *Sellet, Frederic*

Joe, Tony [235] see *Marek-Martinez, Ora V.*

Johannesson, Erik (UNC Chapel Hill) and Michelle Machicek (University of Sheffield)

[189] *Examining Identity from Mortuary Contexts: An Assessment of Nomadic Pastoralist Communities from the Central Asian Steppes*
A comprehensive understanding of human identity is essential when attempting to make meaningful reconstructions of past societies. Using mortuary data to reconstruct identities at both an individual and group level presents a particular set of problems given the often static nature of funerary contexts, which may conceal important changes which occur over time. Here we present archaeological evidence from mortuary contexts in Central Asia to critically discuss how identities manifest materially in different ways. The emphasis is on how multiple identities are discernable simultaneously and how identity in the past is intrinsically linked to identities and categories in the present.

Johanson, Erik (The University of Tennessee), David Anderson (The University of Tennessee), Shane Miller (The University of Tennessee), Stephen Yerka, Derek Anderson (University of Arizona), and Christopher Gillam (South Carolina Institute of Archaeology and Anthropology)

[24] *PIDBA: Challenges Related to the Curation and Dissemination of Paleoindian Data at a Hemispheric Scale*

The Paleoindian Database of the Americas (PIDBA), available on-line at <http://pidba.utk.edu>, represents a repository of nearly 30,000 projectile points, attribute data on over 15,000 artifacts, and image data on over 8,000 points from across the Americas. While PIDBA's point data continues to proliferate thanks to the collection and compilation of primary data from dedicated archaeologists, new content has also been added and curated. This includes radiometric and bibliographic databases, and artifact distribution maps. PIDBA's new content fosters more research opportunities, but also presents a challenge for accessibility. New web content and design has addressed issues related to public access.

Johanson, Erik N. [90] see *Miller, D. Shane*

Johnson, Adam (Western Michigan University)

[163] *Collections Management at Western Michigan University: Problems, Plans, and Solutions*

Western Michigan University has amassed a large collection of archaeological artifacts from excavations starting since the 1960s. Over the years, many artifacts have lost their accession numbers, have been misplaced, and have changed storage locations. Consequently, it is not uncommon to uncover an unmarked Jesuit ring in a drawer, a rim sherd in a file cabinet, or a stone tool in a random box. As times have changed, curatorial standards have also evolved. As a result, WMU, like many other institutions, is in a curation crisis. As stewards of the past, our goal is to preserve these artifacts in perpetuity. It is vital that we insure the best care is taken to preserve archaeological context. The goal of my research is to develop a holistic inventory system and bring WMU's archaeological

collections up to modern curatorial standards. This poster will outline the difficulties of collections management, the methodology to be employed at WMU, and proposed outcomes/results from the project.

Johnson, Amber (Truman State University)

[119] *Pursuing the Past: Building Theory with Environmental and Ethnographic Frames of Reference*

By 1991 when my graduate career at SMU began, Lewis Binford was actively developing the environmental and ethnographic data sets that were the foundation for his 2001 publication *Constructing Frames of Reference*. As his research assistant from 1994-1997, I participated in the development of the program to calculate environmental variables and the research using them for controlled exploration of variation among hunter-gatherers. Since that time, I have used the knowledge and strategies gained through this research both to develop a theoretical framework to guide global scale comparative archaeological analysis and to teach students to integrate ethnographic and archaeological analysis.

Johnson, Angel [22] see *Johnson, Angela K.*

Johnson, Angela (SHUMLA), Benjamin Dwyer (SHUMLA), Carolyn Boyd (SHUMLA/Texas State University) and Charles Koenig (SHUMLA)

[22] *Lower Pecos Rock Art Recording and Preservation Project*
The Lower Pecos Canyonlands of southwest Texas and northern Mexico houses some of the most complex and compositionally intricate prehistoric rock art in the world. Because of the unique nature and the incomparable richness of this cultural legacy, it is imperative to create a permanent archive and to promote preservation of this resource through education. SHUMLA's Lower Pecos Rock Art Recording and Preservation Project is meeting this need through documentation of rock art sites, creation of a digital library to archive rock art data, establishment of a comprehensive research program, formation of a stewards program, and continuation of hands-on education.

Johnson, Donald

[23] *Geophysical Investigations at an Inca Site in Northwestern Ecuador*

A terraced hill in Nanegal parish about 40 kilometers northwest of Quito was tentatively identified by Dr. Ron Lippi in 1984 as an Inca fortress. In 2002, Lippi was able to begin testing at the site. Geophysical investigations consisting of magnetometry and electrical resistance were conducted on the terraces that were large enough for the surveys to be practical. Ground penetrating radar surveys conducted in 2005 ultimately led to the discovery of an Inca structure. This talk will present the results of the geophysical investigations and discuss what went right and what went wrong with the surveys and their interpretation.

Johnson, Eileen [21] see *Hurst, Stance C.*; [72] see *Ehlers, Katherine B*

Johnson, Jack (University of Washington)

[138] *OSL Dating of El Nino Flood Sediments in the Chao Valley, Peru*

The significance of El Nino events for prehistoric coastal Peruvians remains a subject of ongoing investigation and debate. This poster contributes to this debate by presenting a series of optically stimulated luminescence dates derived from a sequence of fine sediment layers in the Chao Valley. These layers represent about 60 individual El Nino floods spanning the Late Holocene. Dates from about 20 layers are presented and evaluated, and interpretation of periods of El Nino flooding based on sediment accumulation is attempted.

Johnson, James (University of Pittsburgh) and Bryan Hanks (University of Pittsburgh)

[184] *Urbanism and Community in the Middle Bronze Age "Country of Towns": Preliminary Field Results*

Although urbanism in small-scale societies has been well documented, we suggest that 1) issues of scale have often been over-looked and 2) more recent conceptual models such as community may be useful in assessing urbanism in small-scale societies. Based on data collected during pedestrian survey and limited test excavations from the summer of 2009 in the Chelyabinsk Oblast in southern Russia, we suggest that the Middle Bronze Age cultural phenomenon of Sintashta and the related "Country of Towns" can contribute productively to modeling how small-scale societies undergo diachronic processes of social cohesion and breakdown associated with early forms of urbanism.

Johnson, Janet (The State Museum of Pennsylvania)

[59] *Beginnings of Historical Archaeology in Pennsylvania*

The Frontier Forts and Trails Survey conducted under the WPA was a focused effort to merge early historical records and archaeology in documenting colonial and French forts in Pennsylvania. This early effort was instrumental in the preservation of these important sites and the artifacts produced were tangible evidence to which the public could connect. Repositories for these artifacts were often in the communities necessitating current research as to the location and condition of collections, which will permit a concentrated examination and documentation of artifacts which have received minimal attention in the past.

Johnson, Jay [217] see Mehta, Jayur M.

Johnson, John (Santa Barbara Museum of Natural History), G. James West (University of California, Davis) and Nan Deal (Santa Barbara Museum of Natural History)

[56] *La Cueva Escondida: An Unusually Well-Preserved Island Chumash Shell Midden*

A unique shell midden on Santa Cruz Island contains an array of perishable artifacts, as well as floral and faunal remains that are not usually preserved at other sites. The earliest cultural stratum exposed in the eroding bank of the site from Cal AD 1030 to 1230, during the Medieval Climatic Anomaly. Given that the most recent deposits date to the Contact Period, the collections shed light on changing environmental conditions and various aspects of Island Chumash subsistence and over a period of six to eight hundred years prior European contact.

Johnson, John [56] *First Organizer*; [56] see Monroe, Cara ; [81] *First Organizer*; [122] see Lorenz, Joseph G.;

Johnson, Katharine (University of Massachusetts Boston)

[246] *The Relevance of Early Modern Archaeology in Skagafjörður, Iceland*

Recent archaeological excavations in Skagafjörður, Iceland have produced numerous Early Modern (17th-20th century) materials. These materials are often considered commonplace in North American historical archaeology, but are often overlooked in Icelandic archaeology in favor of earlier Viking Age or Medieval deposits. While the artifacts from our excavations have not been fully analyzed yet, their ubiquitous presence indicates that Early Modern deposits need to be recognized as a valuable comparative resource within Icelandic archaeology. Their analysis in conjunction with historical documentation can provide the last chapter in a comprehensive archaeological understanding of Skagafjörður from the Icelandic settlement up through the present.

Johnson, Kent (Arizona State University), Paul Goldstein (University of California San Diego) and Sarah Baitzel (University of California San Diego)

[226] *Multicultural Tiwanaku Enclave Communities in the Moquegua Valley, Peru: A Bioarchaeological Analysis of Odontometric Data* Archaeological data suggest that Tiwanaku enclave communities in the Moquegua Valley of southern Peru were composed of Omo-style and Chen Chen-style Tiwanaku populations. Odontometric data from Omo-style (M70) and Chen Chen-style (M43) sites within the Rio Muerto site complex are subjected to biodistance analysis in order to

investigate the nature and extent of interactions between these contemporaneous Tiwanaku groups. Results are evaluated to assess whether cultural differences between these groups are correlated with phenotypic differences. The present research complements existing literature on Tiwanaku state expansion by applying social identity theory to bioarchaeological data from the Rio Muerto site complex.

Johnson, Kent M. [92] see Hatch, Mallorie A.

Johnson, Phillip (American Samoa Power Authority Archaeology Program)

[147] *Where the Hard Stone is Found: Investigations of Pre-contact Basalt Tool Industries at Tutuila, Amerika Samoa*

Fine-grained basalt artifacts are arguably the most ubiquitous and robust component of the Samoan archaeological record. Yet after eight decades of survey and excavation throughout the archipelago, evidence for sites of basalt procurement and tool manufacture remain limited to the island of Tutuila. Basalt artifacts and sources from Tutuila have featured prominently in Polynesian archaeological research. Technological and elemental analyses have established long-distance inter-island transfer of Tutuila basalt and recent research has focused on intra-island production and distribution. In this paper I discuss the background and current status of research on fine-grained basalt procurement, production, distribution and consumption at Tutuila.

[161] see Bartelink, Eric J.

Johnson, Ryan [258] see Kittel, Michelle

Johnson, Scott (Tulane University) and Grant McCall (Tulane University)

[190] *Fire Hardened Spears: Hardwoods vs. Softwoods, Strength, & Production Studies*

Previous experimentation has suggested that fire-hardening of wooden spears increases the strength of the point and surface hardness of the spear. This paper will build on this experimentation, increasing both the depth and breadth of experimental testing. The previous experiments will be completed with a hardwood to compare to the previous results of a softwood. New tests will be carried out to determine whether or not fire-hardening of wooden spears has any effect on the overall shear-strength of spears. Another test will explore whether or not fire-hardening was a by-product of wooden spear production or an intentional strengthening technique.

Johnson, Tanya [24] see Cannon, Mike

Jolie, Edward (University of New Mexico) and Phil Geib (University of New Mexico)

[118] *Small Seeds, Basketry, and the Broad Spectrum Revolution on the Colorado Plateau*

Understanding of forager subsistence diversification in the millennia preceding plant domestication is hindered by poor chronology and uneven preservation. Using data on human coprolites and basketry we examine the BSR's onset on the Colorado Plateau in the American Southwest. Over 50 new radiocarbon determinations refine the timing of intensive small seed use and clarify the role of basketry technology. Interpreted within the framework of ecological niche construction, these data suggest the co-development of small seed use and innovations in basketry from 10000-9000 BP against a backdrop of increasing experimentation with plant communities in response to climatic and demographic change.

[118] *First Chair* [118] *Second Organizer*

Jolie, Edward [118] see Geib, Phil R.

Jolivet, Stephanie [207] see Taylor, Amanda

Jones, Brian (UMass, Amherst)

[117] *An Exploratory Data Analysis Approach to Artifact Density Correlation*

An aspect of spatial analysis is the assessment of the relationship

between different types or classes of artifacts across a site. Such assessments may, for example, be aimed at correlating the density distribution of different lithic raw materials to provide evidence for the contemporaneity of knapping activity. While complex methods are available for the calculation of three-dimensional spatial correlation, most require specialized statistical or GIS software. This paper proposes a relatively simple exploratory data analysis approach to establishing a measure of three-dimensional spatial correlation between classes of artifacts that can be calculated with any spreadsheet program.

Jones, Catherine (University of Wisconsin-Milwaukee)

[124] *Multiple Internments in the MCIG Human Skeletal Collection*
The MCIG human skeletal collection consists of single internments, multiple internments and burials that have been disturbed by a variety of processes. Consequently a number of provenience units consist of commingled remains. Due to the complex nature of the processes involved in creating these burials, no single analytical model is suited to their collective study. This poster examines these burials in order to construct a case-specific protocol that will facilitate future analysis and determine whether individual remains can be separated and identified within the commingled burials of this collection.

Jones, Daniel [92] see Silverstein, Jay E.

Jones, Douglas (Florida Museum of Natural History), Chester Depratter (South Carolina Institute of Archaeology and Anthropology), and Irvy R. Quitmyer (Florida Museum of Natural History - University of Florida)

[250] *Oxygen Isotope Validation of Annual Macroscopic Shell Growth Increments in Modern and Zooarchaeological Hard Clams (*Mercenaria mercenaria*) from the Litchfield Beach Estuary, South Carolina*

The periodicity of incremental shell growth of hard clams *Mercenaria* spp. has become a powerful tool in estimating the seasonality and anthropogenic impact on zooarchaeological resources. Modern analogues of hard clam seasonal shell formation are well documented throughout its range; however, recent research has shown that changes in the marine environment can significantly and quickly alter the regional pattern of skeletal growth in the organism. This research analyzes the variability of oxygen isotopes in shell carbonate to validate modern and zooarchaeological hard clam seasonal shell growth over a 2200-year period in the Litchfield Beach Estuary, South Carolina.

Jones, Douglas S. [250] see Quitmyer, Irvy

Jones, Emily (Utah State University)

[16] *Contextualizing Rabbit Hunting in Mediterranean Spain: A Comparative Approach*

While in inland France, diets dominated by the wild European rabbit enter the archaeological record around the Pleistocene-Holocene transition, archaeological sites from Mediterranean Spain typically contain rabbit in abundance early in the Upper Paleolithic. In this paper, I compare data from the archaeological site of Cueva de Nerja (Málaga, Spain) with data from several sites in the Dordogne to consider factors (both biogeographic and cultural) that might contribute to rabbit-dominant diets in the Western Mediterranean.

Jones, Eric (Wake Forest University)

[25] *Studying Settlement Abandonment with Event History Analysis: A Case Study of the Haudenosaunee (Iroquois)*

Event history analysis can be used to study the impact of various factors on the probability of events occurring during the lifespan of individuals. These methods can be applied to settlements and important events, such as abandonment. For decades, archaeologists have attempted to determine the primary cause of abandonment at Haudenosaunee villages with no definite conclusions. I use GIS to examine specific environmental, sociopolitical, and demographic characteristics of settlements and event history analysis to evaluate the effect of these factors on settlement duration. The results identify

population size and several environmental causes as significant influences on the probability of abandonment.

Jones, Gary (California State University, Fullerton) and Steven James (California State University, Fullerton)

[31] *Abalone Cove and Other Sites on the Palos Verdes Peninsula: Archaeological Research on the Ninth Channel Island*

Archaeological data from the Channel Islands and coastal sites on the mainland in southern California are providing significant information regarding the peopling of the Americas, intensive marine resource utilization, and the origins of social complexity. Through a partnership with the Palos Verdes Peninsula Land Conservancy, field classes from California State University at Fullerton conducted investigations at Abalone Cove and other sites on the Palos Verdes Peninsula during the past three field seasons. Results of the research are presented, and comparisons with other coastal and island sites are examined in terms of settlement and subsistence patterns.

Jones, George T. [118] see Beck, Charlotte

Jones, James (Indiana Department of Natural Resources) [238]
Discussant

Jones, John (Washington State University), Deborah Pearsall (University of Missouri), Nicholas P. Dunning (University of Cincinnati) and Peter E. Siegel (Montclair State University)

[97] *Human Occupation and Settlement on Trinidad: Pollen Evidence from a Series of Sediment Cores*

Pollen analysis of sediment cores collected near well-dated archaeological sites located throughout Trinidad are beginning to reveal a pattern of human dispersal across the landscape. While some habitats are favored and apparently were occupied for a considerable span, other areas show almost no evidence of past human activities. Reasons for the lack of occupation in what would seem to be a near perfect environment are explored. Factors influencing site selection include resource availability, accessibility to multiple environments and travel limitations. A better understanding of these factors may lead to a predictive model for identifying human settlement in the Caribbean.

Jones, John [84] see Nott, BreAnne M.; [84] see Holstad, Emily; [201] see Benz, Emily J.

Jones, John G. [136] see Drake, Douglas H.

Jones, Recca [38] see Hawkins, Nancy

Jones, Robert [192] see Huntley, Deborah L.

Jones, Sharyn [206] see Quinn, Rhonda L.

Jones, Terry (Cal Poly San Luis Obispo)

[68] *Polynesian Contacts with the New World: A History of Diffusionist Thinking*

To establish background for discussion of recent findings, I will in this paper review the 150-year history of scholarly thinking on the topic of Polynesian contacts with the New World. During the cultural historical era, the possibility of cultural diffusion from Polynesia was considered regularly, but discussion of such contacts disappeared from mainstream scholarly discourse in the second half of the 20th century with the advent of processualism. The empirical evidence for contacts has always been intriguing especially in South America, but it has until recently remained fairly static. Now, compelling new genetic, linguistic, and material evidence is being introduced into a more diverse theoretical milieu.

[31] *Discussant*; [68] *First Organizer*

Jordá, Jesús F. [177] see Aura, J. Emili

Jordan, Alexis (University of Wisconsin Milwaukee)

[184] *A Preliminary Study of Iron Age Glass in Ireland, with Particular Emphasis on the Glass Beads*

This poster will present a preliminary investigation of the glass objects from Irish Iron Age archaeological sites to examine the contexts in which glass appears, the implications of these contexts for our understanding of interactions between Ireland and the rest of Europe, patterns in glass distribution based on site type and geography, and the nature of the organization of glass working in Ireland during this period. The form, style, design, color, and type of these glass pieces will be compared to their site contexts based on examination of curated finds as well as published and unpublished records of find contexts.

Jorgensen, Mia (University at Buffalo)

[169] *The Place Where Men Become Gods: Termination, Dedication or Fill? Exploring Results from the Ceramic Analysis of Plaza One, Teotihuacan*

Cities are alive, pulsating with the breath of their inhabitants. They begin much like we do, empty space. They grow and expand with construction, and someday fall. No city escapes the fate of the life cycle not even "The Place Where Men Become Gods." Perhaps this is why Teotihuacan's beginning and end are as intriguing as mysterious, providing many more questions than it answers. This paper attempts to answer questions related to the city's commencement through an analysis of ceramics from Plaza One, a three temple mound complex that dates to the earliest of the Teotihuacan phases.

Joyce, Arthur (University of Colorado at Boulder), Hal Baillie (University of Colorado at Boulder), Marc Levine (Denver Museum of Nature and Science) and Sarah Barber (University of Central Florida)

[13] *The Acropolis at Río Viejo, Oaxaca, Mexico: Political Implications of its Initial Construction, Use, and Abandonment*

This paper discusses the political significance of the initial construction, use, and abandonment of the acropolis at Río Viejo. Recent excavations provide evidence for construction techniques and the degree of labor mobilization required to build the acropolis; remains of a probable public building were also exposed. The acropolis was constructed as the community's civic-ceremonial core as it grew into an urban center and political seat during the Terminal Formative. The acropolis was burned and abandoned at ca. A.D. 250, however. During the Early Classic, the acropolis was mined for building materials and it was not reoccupied until the Late Classic.

Joyce, Dan [219] see Sasso, Robert F.

Joyce, Rosemary (University California Berkeley)

[260] *Ties that Bind: Cloth, Clothing, and Embodiment in Formative Honduras*

Figurines from northern Honduras dating from 1000 BC to 200 AD represent garments whose details strongly suggest they were woven, twined, or braided textiles. This paper presents results of a detailed study of these microscale icons of garments, based on documentation of four major curated collections in the US and Honduras. Drawing on theorists who have discussed how cloth often serves as a medium to negotiate social relations and thus as an index of social "ties that bind", I explore the active role played by the now irrecoverable textiles of Formative Honduras and their manufacture in early villages and towns.

[65] *see Gomez, Esteban M. [194] Discussant*

Juárez, Ranferi [147] see Jaime-Riveron, Olaf

Junker, Laura (University of Illinois Chicago), Debra Green (University of Illinois Chicago)

[153] *Agricultural Production, Population Dynamics, and Urban Centers in Pre-Colonial Maritime Trading Polities of the Philippines*
Historic sources and archaeological evidence suggest that prehispanic Philippine maritime trading polities were highly "urbanized" (with up to twenty percent of the population in coastal centers), although overall population remained low compared to other regions of complex society development. While mainland Southeast

Asian kingdoms often solved the problem of agricultural support through intensifying wet rice production, island Southeast Asian polities emphasized a strategy of slave-raiding, trade, and labor redistribution within less intensive systems of farming. Recent geoarchaeological research and settlement archaeology in the Tanjay Region documents this connection between economic specialization, forms of labor mobilization, and expanding coastal trade entrepôts.

Kaestle, Frederika (Indiana University–Bloomington), Della Cook (Indiana University, Bloomington) and Jennifer Raff (University of Utah, Salt Lake)

[239] *Migration and the Mississippian Emergence in West-Central Illinois: Ancient DNA Evidence*

The Mississippian Emergence in the Cahokia periphery (~AD1050) has been the focus of research for decades. Questions regarding the relationship between biology and culture, a central theme of anthropological research, arise from scrutiny of this transition. Archaeological analysis suggests that a cultural diffusion from regional centers like Cahokia to peripheral areas took place at the Mississippian Emergence (technology, subsistence strategies, mortuary practice, etc.). We tested the hypothesis that this cultural diffusion was accompanied by migration using standard population genetics and new computer simulation methods to detect signals of gene flow and continuity in Lower Illinois Valley groups spanning this transition.

Kaestle, Frederika [257] see McCormick, Charla; [239] see Millward, Georgia

Kahn, Jennifer (Bishop Museum), André Outecho (New Caledonia), Christophe Sand (New Caledonia), David Baret (New Caledonia) and Jaques Bolé (New Caledonia)

[206] *Coastal Settlement, Interior House Mounds, and Chronological Histories of Gouaro Deva, New Caledonia*

We present data from coastal and inland excavations at Gouaro Deva, west coast of Grande Terre. Our radiocarbon chronology indicates coastal settlement by 1000 B.C. In the interior, initial landscape modification began as early as A.D. 430 and construction of a dense hamlet of house mounds commenced at A.D. 1550. Sub-surface features in the house mounds suggest frequent central post replacement and episodes of mound remodeling and house enlargement. Artifact frequencies and site proximities suggest varying function for these house mounds. We briefly discuss these results in relation to regional wide settlement histories in New Caledonia.

Kahotea, Des (University of Waikato)

[198] *Archaeology and Maori Knowledge*

Archaeology in its current professional and academic state and its advocacy body New Zealand Archaeological Association in Aotearoa/New Zealand has been formed and shaped by Anglo-American processual archaeology. The emphasis of the primacy of science and the archaeological record did not gel with the traditional Maori cultural knowledge, beliefs and values of Dr Kahotea. To reconcile Maori knowledge and beliefs with the field of archaeology in Aotearoa/New Zealand, recent association and links with Native American and American colleagues, has been an essential contribution towards developing research objectives that incorporate Maori knowledge within the archaeological paradigm.

[63] *Discussant*

Kamiya, Masahiro (Texas A&M University)

[71] *Holocene-Aged Fire-Cracked Rock Feature Variability in Texas' Savannah Regions*

Morphology of hot-rock cookeries—earth ovens in particular—varies with methods of cooking, type and amount of food processed, and available oven-building resources. Specific methods of oven cooking also constrain the size of cooking stones. The size of fire-cracked rock (FCR) features, presence of pit, and presence of oxidized sediment are keys to determining hot-rock cooking techniques associated with given features. In this poster, Holocene-aged ovens with rock heating elements from the eastern half of Texas are

examined in terms of their morphology, overall size, and size of cook stones therein.

Kanne, Katherine (Northwestern University)

[149] *Moving Mounts: Specialization and Trade in Horses in the Bronze Age Carpathian Basin*

The trade routes of the Bronze Age Carpathian Basin were established in part by horses, which became newly important in this period as they both transported goods and were exchanged as valuable commodities. This paper presents new zooarchaeological, osteological, GIS, and stable isotope data to demonstrate how horses were harnessed in the emergence of nascent political institutions. The interconnectivity of the settlements is highlighted by specialization of horse production and training at different settlements along prominent trade routes. Horses emerge here as key resources people actively manipulated in attempts to create and consolidate power.

Kansa, Eric (UC Berkeley, School of Information) and Joshua Wells (Indiana University South Bend)

[24] *"Quantity has a Quality all its Own": Archaeological Practice and the Role of Aggregation in Data Sharing*

Archaeological information on the Web is changing in ways that impact archaeological practice. Technical standards, copyright licensing, and Web services all blur boundaries between disciplines and organizations. They also make data aggregation easier. Consequently, the scope of "archaeological data" may grow beyond traditional field, survey, and collections data. Aggregators can also document how data are combined, navigated, and used. In other fields, aggregation services evolve into primary channels for information retrieval. Because aggregators enjoy increasingly privileged positions in new information environments, this paper explores documented benefits and drawbacks of imminent issues affecting archaeological research opportunities, professional expectations, and ethical challenges.

[24] *First Chair* [24] *Second Organizer*

Kansa, Sarah (The Alexandria Archive Institute) and Eric Kansa (UC Berkeley, School of Information)

[216] *Of Glass Houses and Ground Stone: Open Data and Ground Stone Analyses*

Increasing web access and decreasing storage costs allow researchers to share both published syntheses of their work and the raw data on which their analyses are based. Additionally, contributory "Web 2.0" tools are becoming pervasive, allowing data to be incorporated into community discussions and collaborative works. This paper discusses the potential of web-based data-sharing systems for improving access, reuse and transparency of ground stone data. Discussion centers on Open Context, a web-based system serving the diverse needs of the archaeological sub-disciplines. We discuss the implications to ground stone research of data publication, community input and linking to print publications.

Kantner, John (School for Advanced Research) [19] Discussant

Kantner, John [14] see Doelle, William H.

Kantor, Loni [242] see Nelson, Ben A.

Kardulias, Paul (College of Wooster)

[78] *A Holistic Archaeology: Cross-Cultural Research and World-Systems Analysis*

As Binford demonstrated almost fifty years ago, the construction of viable analogies by which to interpret the material record requires judicious use of cross-cultural comparisons. World-systems analysis (WSA) offers a sound framework within which to explore inter-societal connections and to evaluate the validity of drawing on ethnographic data to understand prehistory. Such a structure provides robust interpretations by linking study of the past and present through principles that characterize humanity through time and over space. Using examples from North American and European ethnographies, in this study I emphasize negotiation as the mechanism by which

individuals interact with social structure.

Kasper, Kimberly (University of Massachusetts-Amherst) and Kevin McBride (University of Connecticut-Storrs)

[117] *The Spatial Significance of Plants*

Archaeological plant remains are rarely evaluated within a spatial framework to reconstruct social-cultural dynamics. This paper demonstrates that plants are valuable, in conjunction with other ecological and cultural data, to gain insight into domestic spaces within a community. A GIS analysis of plant remains recovered from thirteen Historic sites (1675-1930), in conjunction with documentary and paleoecological data, at the Mashantucket Pequot Reservation in Connecticut, documents the changes and continuities of plant strategies. This spatial investigation facilitates an understanding of complexities of households and the variability of decision making of Native Americans within the Reservation system.

[117] *First Chair*

Kastl, Richard [180] see Versaggi, Nina M.

Kato, Hirofumi (Hokkaido University) [63] Discussant

Katz, Paul (PRIAM)

[147] *Formal Extraction Sites on the Southern High Plains of North America*

This paper will contribute to the continuing development of an international inventory of prehistoric mines and quarries by summarizing sites in a specific region of the United States. A variety of materials will be considered, although all will have in common some formal extraction methodology. On the Southern High Plains, this is usually limited to the excavation of subsurface pits. Particular attention will be paid to extraction sites in the Oklahoma and Texas Panhandles.

Katz, Steven (Midwest Archaeological Research Services, Inc.) and Rochelle Lurie (Midwest Archaeological Research Services, Inc.)

[102] *Analysis of the Lithic Assemblage from the New Lenox Site*

The excavations at the New Lenox site yielded a substantial lithic assemblage. Over six hundred tools as well as substantial amounts of debitage recovered from plowzone and feature contexts. The material has been classified using recording scheme developed for Upper Mississippian sites in northern Illinois. Tools from feature context show continuity in the lithic assemblage among the site's components and are compared to similar material from other late prehistoric and protohistoric sites in the Midwest.

Kaufmann, Kira

[70] *Sleuthing Soils: Interpreting Cultural Behavior from Geophysical Data of Effigy Mound Construction in Southeast Wisconsin*

Recent geophysical survey and syntheses of previous data from Effigy Mound sites reveals patterns of construction that inform about cultural behavior during the Late Woodland period. Although similar in physical expression on the landscape, different construction techniques of these effigy mounds have been identified. Patterns seen in the surface shapes of Effigy mounds at these sites may express a shared cultural identity through the visual effect created by construction of the landscape. Whereas, internal construction differences may imply greater diversity in the social organization of the groups who built the mounds or that different groups were utilizing the same locations.

[70] *First Organizer*; [70] *First Chair*

Kay, Marvin (University of Arkansas)

[146] *Kimmswick, Missouri: Summary Evaluation of the Clovis-Mastodon Kill*

First investigated by Albert C. Koch in 1839, the Clovis point discoveries with mastodon remains occurred in 1979 and 1980 when excavated by Russell W. Graham, Illinois State Museum. The Clovis bearing Pleistocene deposits are two stratified pond sediments beneath early Holocene strata containing Early Archaic remains.

Clovis points and other chipped stone artifacts are identified to central Mississippi Valley and immediately adjacent sources that seem to be distinct from those of Clovis and/or Gainey sites to the east of the valley. Mastodon is one of several taxa recovered. The focus of Clovis predation at Kimmswick was not exclusively on big game. More likely is a pattern of broad spectrum foraging in which physiologically stressed mastodon was but one target of opportunity about a small pond or possibly a salt spring.

Keeler, Dustin (University at Buffalo)

[79] *Modelling Settlement Patterns based on the results of Regional Survey in Northern Finland*

During the 2008 and 2009 field seasons a large scale regional survey was conducted in the Yli-Ii region of Northern Finland. The goal of the survey was to locate Neolithic sites that were situated on paleoshorelines that resulted from Isostatic land uplift. This paper presents the results of GIS modeling of settlement patterns based on the results of the survey, information on previously known sites, land uplift curves and the results of viewshed analyses.

[117] see Zubrow, Ezra B..

Keene, Deborah (University of Alabama) and C. Fred T. Andrus (University of Alabama)

[250] *An Integrated Approach for Assessing Sedentism in the Georgia Bight*

The authors outline a research plan to test the hypothesis that Mississippian inhabitants of the Georgia Bight were sedentary and relied on horticulture as a significant source of food. To accomplish this we propose an integrated, multi-site strategy. Central to this approach is the development of a "tool kit" of practical ethnobotanical, zooarchaeological, and/or sclerochronological methodologies to determine season of occupation. A cornerstone of the research plan is applying these methods to botanical and shell samples from sites of all sizes and types across the region, which will require collaboration from many archaeologists.

Keene, Joshua (Texas A&M University) and Michael Waters (Texas A&M University, Center for the Study of the First Americans)

[120] *Geoarchaeological Site Formation Processes of a Weakly Developed Vertisol at the Buttermilk Creek Site, TX*

The Buttermilk Creek site (41BL1239) is located in central Texas 200 meters downstream of the Gault site. During the 2006-2009 field seasons, late Quaternary floodplain vertisols at the site yielded a chronologically ordered sequence of artifacts from late prehistoric to Paleoindian (Folsom, Clovis and potential Pre-Clovis). A comparison of debitage and artifact size categories, diagnostic point distribution, calcium carbonate presence, vertic crack maps and OSL dates with depth is used to determine the extent of post-depositional movement of archaeological materials at the site as well as help define the mixing properties of weakly vertic sediments.

Kehoe, Alice (University of Wisconsin-Milwaukee)

[15] *Cahokia in the Early Postclassic American World*

Cahokia, like Chaco, precisely fits the Mesoamerican Postclassic time period, AD 1050-1250. Cahokia --like Mesoamerican cities but unlike Chaco-- is constructed on a rectilinear urban grid with pyramidal mounds around plazas. It most closely resembles its contemporary, Cholula. Cahokia is without precedent and is never replicated in Anglo America, whereas the cities of Mesoamerica offer ample precedents and later examples. Given the time correlation and city form, the most parsimonious historical interpretation is that Cahokians modeled their city on a Mesoamerican ideal ("Tollan") and the collapse of the Early Postclassic Mesoamerican political economy brought down Cahokia, too.

[68] *Discussant*

Keller, Angela (UC Riverside / AECOM Environment) and Christopher Doolittle (AECOM)

[144] *Going to War in America: Examining the Landscape of War at the WWII-era Desert Training Center/California-Arizona Maneuvers*

Area (DTC/C-AMA)

During WWII, some of the largest "battles" ever fought by American troops occurred not in Europe or the Pacific, but in the remote western deserts of the United States. On the unrelenting sands of the DTC/C-AMA, recruits lived on canned rations and limited water while they were relentlessly attacked from land and air. Although the camps of the DTC/C-AMA are amply documented, the actual maneuver areas are little explored. This paper analyses data from a recent survey of one such maneuver area to explore the landscape of war in America.

[144] *First Chair*

Kellner, Corina (Corina M. Kellner) and Katharine A. Compton-Gore (Northern Arizona University)

[122] *Diet, Sociopolitical Complexity, and Empire in Ancient Peru: Tenahaha during the Middle Horizon (AD 500-1000)*

Wari imperial influence, expansion of trade networks, and increasing social interaction among local groups characterized the Middle Horizon in ancient Peru (AD 500-1000). Recent tomb excavations at the site of Tenahaha in the Cotahuasi Valley suggests that the inhabitants participated in the wider social changes occurring during this period, including the development of sociopolitical complexity, without direct Wari influence. Preliminary stable isotope analysis of human bone collagen suggests differential individual access to food resources. Tenahaha provides a unique opportunity to assess the development of local sociopolitical complexity in a relatively autonomous population during a period of tumultuous change.

Kelly, Christina (Gray & Pape, Inc.)

[252] *On the Banks of the Susquehanna River: Sites BRO-212 and BRO-117 in Broome County, New York*

The Susquehanna River meanders for over 400 miles across parts of Pennsylvania, New York, and Maryland before reaching the Chesapeake Bay. Sites BRO-212 and BRO-117, on the east and west banks of the Susquehanna River near the town of Windsor in Broome County, New York, were occupied from the Late Archaic through the Late Woodland time periods. Investigations at these sites provide an opportunity to investigate site distribution, function, material culture, and human adaptations along this major river drainage.

Kelly, John (Washington University), James Brown (Northwestern University) and Mary Beth Trubitt (Arkansas Archaeological Survey)

[140] *The Moorehead Moment: A Brief Overview of a Major Disjuncture in the History of Cahokia*

The terms and concepts we create to characterize various aspects of the past convey a significant amount of information in a very succinct way. The Moorehead Phase, originally defined in 1971, is one example. The participants in this session elaborate on how this construct helps frame a brief episode in the site's history. In laying out what the Moorehead Moment represents, we highlight the essence of Cahokia not in terms of its decline but in terms of its elaboration as part of the larger Mississippian world.

Kelly, John [140] First Organizer; [140] First Chair; [140] see Stahlman, Kathleen F.; [140] see Bailey, Katri S.; [140] see Belknap, Lori

Kelly, Katherine [108] see Vargo, Barbara A.

Kelly, Lucretia (Washington University)

[140] *A Bird's Eye View of Moorehead Phase Ritual at Mound 34, Cahokia*

Large quantities of faunal remains recovered from Cahokia have enabled the delineation of significant patterns of animal use throughout its history. In this paper I present three lines of evidence, zooarchaeological data, archaeological context, and ethnographic and ethnohistoric accounts of American Indians in the mid-continent, to examine what roles several rare bird taxa from Mound 34 may have played in Moorehead Phase ritual activities. These bird remains

contribute to ongoing studies regarding a significant change in symbolism and ideology in the region at the end of the twelfth and beginning of the thirteenth century, referred to as the Moorehead Moment.

Kelly, Robert (University of Wyoming)

[119] *Me and Lew; or, How One Archaeologist Changed the Discipline in Ways he Might Not Know*

Through his students, Binford has influenced the field of archaeology in ways that he might not fully appreciate. Here, I discuss two: the use of wetland resources in the Great Basin and the timing of the colonization of the New World. His approach to archaeology was influential in creating the productive debates that are essential to learning something about the past.

[208] *Discussant*

Kelly, Sophia (Arizona State University)

[17] *Transformations to Gendered Labor Roles with the Rise of a Hohokam Specialized Economy*

Marked increases to the scale and intensity of prehistoric Hohokam pottery production during the Sedentary period imply dramatic shifts to male and female labor roles. This paper uses ethnographic and ceramic sourcing data to model changes to the gendered division of labor in Phoenix Basin pottery production. Foremost, it employs a cross-cultural ethnographic analysis of specialized economies to construct scenarios for a gendered division of labor in craft production. The study then assesses each of these scenarios in the Phoenix Basin with ceramic sourcing data.

[17] *First Chair*, [17] *First Organizer*; [100] *see* Watkins, Christopher N.

Kelly, Tim [59] *see* Howe, Mark L.

Kemp, Brian (Washington State University), Cara Monroe (Washington State University), Phil Geib (University of New Mexico), RG Matson (University of British Columbia) and William Lipe (Washington State University)

[84] *Genetic Analysis of Coprolites from Southeastern Utah*

Here we report our findings on mitochondrial DNA (mtDNA) variation in coprolites found in two nearby rock shelters in Southeast Utah that were occupied asynchronously: Turkey Pen Ruins [a Basketmaker II period population (1600-2100 YBP)] and Old Man Cave [an Archaic period population (6,000-9,000 YBP)]. Combined with previously collected mtDNA from extant populations, these coprolite data allow us to estimate the degree of biological continuity in the northern Southwest over a roughly 9,000 year period. Preliminary results indicate that some lineages present in contemporary Southwestern Native Americans are of great antiquity.

Kemp, Brian [122] *see* Lorenz, Joseph G.; [84] *see* Nott, BreAnne M.; [19] *see* Bocinsky, R. Kyle; [56] *see* Monroe, Cara

Kendall, Bryan (University of Iowa)

[219] *From Woodland Rockshelters to the New Deal: Archaeology of Lost Canyon Wildlife Management Area, Northeast Iowa*

Ongoing archaeological survey has identified an abundance of sites within Lost Canyon Wildlife Management Area in northeastern Iowa. The material record indicates a range of use of the locality from the Archaic to Historic times. Particularly noteworthy are the number of cave and rockshelter deposits, which have been minimally impacted by modern human activities, and a masonry dam constructed by the Civilian Conservation Corps in 1935. The results and outcomes of the project highlight the benefits derived from the collaboration and support of local, state, and federal entities in pursuit of research, conservation, and community outreach.

Kendell, Ashley (California State University, Chico)

[171] *The Crow Creek Massacre: The Role of Gender in Scalping Practices*

The purpose of this presentation is to evaluate the potential for differential treatment between the sexes at the Crow Creek Site. With

over 90% of the Crow Creek villagers falling victim to scalping, the site lends itself to the analysis of observable trends in scalping practices within the archaeological record. The Crow Creek dataset was analyzed using parametric tests, including ANOVA, which verified that there is a statistically significant difference in the mean number of cuts observed on female and male crania, with females displaying a higher mean number of cuts.

Kenmotsu, Nancy (Geo-Marine, Inc.) and Myles Miller (Geo-Marine, Inc.)

[87] *Measuring Diversity in Land Use and Settlement Intensity in the Jornada Mogollon before and after A.D. 1000*

Using macrobotanical data, burned rock technology, and architecture from recent syntheses and excavations in west Texas and southern New Mexico, this paper discusses changes in land use and settlement intensity in the region before and after AD 1000. This robust data set indicates that an intensification of agricultural production in the region began around AD 1000, sharply increasing after AD1150 and, between A.D. 1150 and 1300, was matched by intensive wild plant processing. The underlying factors for these changes—an interplay between climatic, demographic, and social factors—will be explored to suggest their wider implications within the greater Southwest.

Kenmotsu, Nancy A. [33] *see* Griffith, Tabitha L.

Kennedy, James [235] *see* Randklev, Charles

Kennedy, John [228] *see* Cooper, Judith R.

Kennedy, Nedenia (U.S. Army Corps of Engineers, South Pacific Divisi)

[235] *Building Strong in the West: South Pacific Division's Cultural Program*

To comply with the NHPA and related legislation, the Corps has a dynamic cultural and historic preservation program in the Southwest. Its archaeologists and historians undertake and, or, oversee archaeological, historical, and restoration projects to support its navigation, ecosystem restoration, flood damage reduction, military, and emergency projects. These include historic property survey and inventory at sites ranging from Folsom Prison to Early Archaic pit structures, varied ports and harbors, historic acequias, Lower Mississippian mounds post-Katrina, and 1,300 levee miles along the Sacramento River. The Division sustains tribal partnerships and coordination with other interested publics throughout the region.

Kennedy, Ryan (GA Department of Natural Resources) [48] *First Organizer*; [48] *First Chair*

Kennedy, Ryan [48] *see* Pezzarossi, Guido

Kennett, Douglas (University of Oregon) and Brendan Culleton (University of Oregon)

[250] *Testing Behavioral Ecological Models with Isotope Seasonality Studies in Coastal Settings*

In this paper we summarize the use of oxygen isotope analysis of marine and estuarine mollusk shells from prehistoric midden deposits to test models derived from human behavioral ecology, specifically central place foraging theory. Two examples are presented, one from the Pacific tropical lowlands of southwestern Mexico and a second from the Northern Channel Islands of California. We highlight the importance of model formulation and testing and cover several substantive issues related to inferring seasonal shellfish harvesting strategies and settlement use in different environmental and cultural contexts.

[197] *Discussant*

Kennett, Douglas [197] *see* Culleton, Brendan J.;

Kennett, James [224] *see* West, Allen

Kent, Jonathan (Metropolitan State College of Denver) [222]
Discussant

Kersel, Morag (Brown University)

[237] *Objects of Desire: Archaeological Artifacts in the Marketplace*
 At every stage in the trade in antiquities there are actors and agents who stake a claim to the looted objects and who assign value to the artifacts. For each of these interest groups the ascribed meanings may differ entirely and may even be oppositional in stance. This paper will examine the values attributed to looted artifacts by one of these interest groups – the collector (museum, educational institution or individual). Grounded in ethnographic, criminological and legal theory, this paper is a discussion of the values of looted objects and the competing demands for those contested items from the Middle East.

[237] *Second Organizer*

Kerttula De Echave, Anna (National Science Foundation) [141]
Discussant

Kessler, Nicholas (University of Kansas) and Rolfe Mandel (University of Kansas/Kansas Geological Survey)

[259] *Late-Quaternary Landscape Evolution and Environmental Change in the Red Hills of South-Central Kansas: Implications for Archaeological Research*

This paper presents the results of recent geoarchaeological and paleoecological investigations in Driftwood Creek valley, a typical small stream in the Red Hills of south-central Kansas. Soil-stratigraphic and 14C data were used to determine temporal and spatial patterns of erosion, sedimentation, and landscape stability in the study area. These patterns help explain the distribution of recorded archaeological sites in the valley, and are the basis of a predictive model used to search for buried cultural deposits. Also, late-Quaternary environmental changes that would have affected prehistoric human subsistence are inferred from $\delta^{13}C$ values of soil organic matter preserved in buried soils.

Kettler, Kurtis, Grant McCall (Tulane University), Jonathan Thomas (University of Iowa), Merritt Sanders (Tulane University) and Sherman Horn (Tulane University)

[35] *Later Stone Age Lithic Technology from Erb Tanks: Microlithic Technology and Holocene Specialization in the Central Namib*

This paper discusses the Later Stone Age (LSA) lithic technology from Erb Tanks in the central Namib, Western Namibia. The LSA occupation of Erb Tanks begins in the Middle Holocene, after 8ka, and continues into the period of European colonial contact. This time span includes both the adoption of pastoralism and its historic disruption by colonization. This paper examines the organization of lithic technology during the LSA and explores its variation over time resulting from these historical dynamics. The paper also presents a description of knapped bottle glass pieces and the implications of these for historic-period lithic technology.

Kettler, Kurtis [35] *see Horn, Sherman W.*; [35] *see McCall, Grant S.*

Keyser, James (US Forest Service-Retired)

[171] *Weapons of War: Protohistoric Arms and Accoutrements in Bear Gulch Rock Art*

Central Montana's Bear Gulch has the richest known rock art record of Late Prehistoric and Protohistoric period weapons and warrior accoutrements. Continuing research has identified detailed depictions of ten weapons, seven headdresses, medicine bundles, feather bustles, and more than a dozen heraldic shield designs. All these show that both the symbolism and structure of Historic period Plains Indian warfare were well established in pre-contact times.

Khozhanizayov, Ghairadin [32] *see Brite, Elizabeth Baker*

Kiahtipes, Christopher A. [53] *see Safi, Kristin N.*

Kidder, Tristram [61] *Discussant*; [189] *see Liu, Haiwang*; [251] *see Spivey, S. Margaret*

Kieffer, C. L. (University of New Mexico)

[148] *The Bones From Above: Osteological Analysis of Actun Yaxteel Ahau's Upper Level*

Actun Yaxteel Ahau, a large cave in the Roaring Creek Valley of Belize, was explored by the Western Belize Regional Cave Project in 1998 and 1999. A subsequently discovered upper level passage was mapped and surveyed in the spring of 2009 by archaeologists from California State University, Los Angeles. The survey documented 13 contexts containing osteological remains of at least 15 individuals. The depositions were noteworthy for the paucity of long bones and the prevalence of smaller bones such as those of the hands and feet. Differences and similarities with deposits on the lower level are discussed.

[148] *First Chair*; [148] *Second Organizer*

Kiker, Cody [210] *see Bement, Leland*

Kilby, David (Eastern New Mexico University)

[210] *Toward Understanding the Functions of Clovis Caches*

Uncertainty surrounding the function of caches has been a fundamental impediment to incorporating both the phenomenon of caching and data from cache assemblages into a broader understanding of Clovis technology and land use. The research presented here undertakes comparisons between individual Clovis caches and specific expectations for various cache functions derived from ethnographic and archaeological research. Results indicate that all Clovis caches did not serve the same purpose, but can be assigned to four basic functional categories that reflect both ritual and utilitarian uses. Patterns in the geographic distribution of cache functions suggest regional variation in Clovis land use strategies.

[210] *First Chair* [210] *Second Organizer*

Kilby, David [210] *see Huckell, Bruce B.*

Killick, David (University of Arizona) [126] *Second Chair*

Kilmarx, John [162] *see Neusius, Sarah W.*

Kim, Lynn (University of Texas at San Antonio)

[45] *Modes of Interaction: The Tiwanaku Polity and the Inka Empire in the Charazani Region*

The Tiwanaku and Inka polities employed varying modes of interaction to gain political control in Charazani. To identify the modes of interaction, I examined the variation of ceramic types across sites, ecological zones, and time periods. As a result, I found that the Tiwanaku polity formed colonies in strategic locations and established vertical trade and alliances. Additionally, Charazani locals emulated Tiwanaku style and ideology. In comparison, the Inka Empire created vertical trade and alliances, but not colonies. Instead, the Inka constructed various architectural features and granted a privileged status to the locals, which reinforced Inka political control in Charazani.

Kim, Lynn [45] *see Alconini, Sonia*

Kim, Nam (University of Illinois at Chicago)

[189] *Terrain, Interregional Interaction, and Reciprocal Complexity in Metal Age Northern Vietnam and Southern China*

Recent archaeological investigations performed at the fortified, proto-urban site of Co Loa in northern Vietnam have indicated the emergence of a state-like polity sometime during the closing centuries of the first millennium BC. This paper evaluates the role that geographic terrain and interregional interaction between Metal Age communities of northern Vietnam and southern China may have played in a reciprocal process of social evolution. Specifically, it addresses the apparently simultaneous emergence of political complexity in Dongson and Dian Culture societies, exploring the nature and effects of an interregional exchange network.

Kimsey, Christopher (University of Iowa)

[30] *An Analysis of Personal Items Found at the Old Third Street Cemetery*

The Old Third Street Cemetery located in Dubuque, Iowa is one of oldest Euro-American cemeteries in Iowa. It was the official consecrated cemetery for large parts of Dubuque's Catholic community from the late 1830s until the early 1870s. Excavations in 2007-2008 recovered approximately 600 burials, many with associated grave goods. An analysis of the personal items, primarily clothing items and religious icons (rosaries and medallions), found with the interred help elucidate the levels of social and economic differentiation of mid-eighteenth century Dubuque. Specifically, this study considers how the quality and quantity of graves goods vary across age, sex, and socioeconomic status.

Kimura, Birgitta (University of Florida), Connie Mulligan (University of Florida) and Fiona Marshall (Washington University)

[182] *A 2000 Year Old Mule on the Moroccan Coast?*

Ancient DNA can be used to determine the species of fragmented remains from archaeological sites. Here we report our ancient DNA analysis of a tooth from Grotte des Idoles in Morocco that had been tentatively identified as donkey based on morphology. Our analysis of 171 base pairs of mitochondrial DNA identified a maternal signature of horse, suggesting the specimen may be a mule, i.e. the offspring of a female horse and male donkey. We discuss the advantages of a combined morphological and genetic approach for identification of archaeological remains and insight into the history of the horse in North Africa.

Kimura, Jun [189] see *Sasaki, Randall J*

Kindler, Lutz (Römisch-Germanisches Zentralmuseum), Dimitri De Loecker (Leiden University), Jagich Adam (Leiden University), Sabine Gaudzinski-Windheuser (Römisch-Germanisches Zentralmuseum) and Wil Roebroeks (Leiden University)

[184] *Site Formation Processes and Taphonomic Histories at an Eemian pond at Neumark-Nord 2 (Saxony-Anhalt, Germany)*

The poster reports about current research at an 18,000m² basin in an abandoned open cast mine – Neumark-Nord 2. The Pleistocene infillings of the basin reveal an archive of the last Interglacial on the Northern European Plain – the Eemian. High chronological resolution allows for an accurate reconstruction of the terrestrial stratigraphy and environmental development of this interglacial. In a spatially restricted area along the rim of the basin more than 130,000 faunal remains and Middle Palaeolithic artefacts with outstanding preservation were uncovered. Find distribution and sedimentological investigations provide detailed insights into the site's formation processes and taphonomic histories.

King, Adam (SC Institute of Archaeology and Anthropology) and Alexander Corsci (University of South Carolina)

[115] *Etowah's External Connections as Revealed by Style and Iconography*

In this paper, we explore connections between the Etowah site and other regions from AD 1250 to 1400. To do this, we examine artistic style and imagery found on copper, marine shell, and pottery from Etowah's Mound C. Those connections reveal a corridor extending from northern Georgia through the Nashville Basin and to southeastern Arkansas and the Missouri Bootheel. We view the western terminus of this corridor as the successors, both in terms of art and power, of the Great Early Mississippian center of Cahokia, and we explore the implications of its ties to Etowah.

King, Stacie [196] see *Konwest, Elizabeth R.*

King, Eleanor (Howard University) [42] *First Organizer*; [42] *First Chair*; [42] see *Taylor, Christine S.*

King, Jason (University of New Mexico), Jane E. Buikstra (Arizona State University)

[215] *Liturgic Sequences and Variability in Middle Woodland Floodplain Mounds*

Middle Woodland (ca. 50 cal B.C. – cal A.D. 400) Lower Illinois Valley floodplain mound sites have long been the focus archaeological inquiry. However, the structure of these sites, as well as the internal variability of mounds therein, has remained relatively unexamined at a fine scale. Excavations at the Mound House site (11GE7), Greene County, Illinois, have revealed the structure, orientation, and directionality of floodplain mounds can be understood as liturgic sequences anchored in indigenous ritual and cosmological concepts. In addition to these structural regularities, intra- and inter-site variation demonstrates flexibility in construction rules as well as temporal effects.

King, Kenneth (Blair Mtn. battlefield)

[167] *The Blair Mountain Battlefield, Logan County, WV*

I have been working to preserve the Blair Mountain battlefield since 1991, and have initiated, organized and participated in most of the archaeology that has been undertaken at the site. I have lived most of my life near the battlefield and my grandfather fought on the union miners' side. In this presentation I will be talking about mountaintop removal coal mining and it's affects on the site, preserving the site, and efforts to have it placed on the National Register of Historic Places.

King, Maureen L. [211] see *Edwards, Susan R.*

King, Robert (Bureau of Land Management)

[223] *The Iditarod National Historic Trail: A Unique NLCS Unit in Alaska*

Running from Seward to Nome, over 900 miles, the Iditarod National Historic Trail, America's last great gold rush trail, is one of the nine National Landscape Conservation System units in Alaska. It is a system of around 2,400 miles of trails that served Alaska's wintertime commerce needs during the gold rush period of the early 20th century. This paper examines the history of the Iditarod Trail, including archaeological and archival discoveries. It also reports on new work in managing the trail for today's population involving partnerships projects among the BLM, other owners of trail segments, and various interested groups.

King, Stacie (Indiana University) and Danny A. Zborover (University of Calgary)

[228] *Garrisons, Forts, Hideouts, Rancherías, or Shrines?*

Interdisciplinary Research on Zapotec, Mixe, and Chontal sites in the Sierra Sur of Oaxaca, Mexico

The remote mountains of the Sierra Sur of Oaxaca, Mexico hardly seem ideal places for extensive human occupation, yet Zapotecs, Mixes, and Chontales heavily engineered and inhabited these mountain landscapes for over a millennium. The prevalence and striking diversity of mountain sites force us to reconsider the common archaeological interpretation of mountain peaks as resource-poor, undesirable, marginal, and circumscribed. Bringing together archaeology, ethnohistory, and oral history, we argue that both in the past and the present, mountain peaks have been viewed as sacred, traditional homelands and the heavy social investment in these locations responds to a variety of factors.

[196] *Discussant* [174] *Discussant*

King, Timothy [239] see *Striker, Michael*

King, Violet (Howard University)

[42] *Reconstructing Hermosa: Piecing Together the Past Using Historical Archaeology*

There are only two original buildings left in the ghost town of Hermosa, NM, a small mining town established in 1883 and abandoned by 1920. The hotel, still in situ, and a relocated post office are all that remain to give us clues about the layout of the old town. This poster will detail the steps necessary to begin reconstructing

Hermosa, using information from ground-penetrating radar and excavation as well as photographs, newspaper articles, and other accounts. The aim is to demonstrate a good model for archaeological reconstruction and produce an accurate, preliminary account of the town's layout and organization.

Kingsley, Melanie (Brandeis University)

[54] *Laguna Mendoza: Island Settlement in a Shifting Maya Landscape*

Island settlements in the Maya World, such as Lake Peten Itza in Guatemala or Cozumel in Mexico, are most often discussed in regard to their Postclassic occupation. Laguna Mendoza, a small lake with a scattering of island sites in Southwestern Peten, however, has an unusually long chronology for lowland Maya archaeological sites, stretching from the Preclassic to the Historical Periods (300 B.C.-present). This paper will present preliminary findings from the 2009 field season and demonstrate that the changing use of space at Laguna Mendoza, in contrast to other island settlements, reflects the deep shifting political history of the region.

Kintigh, Keith (Arizona State University) [93] Discussant [12] Discussant

Kipnis, Renato [47] see Strauss, André

Kirakosian, Katie (UMass Amherst) [174] First Organizer; [174] First Chair

Kitagawa, Keiko (University of New Mexico)

[74] *Comparing Oxygen Isotope of Modern Bison Teeth*

Stable isotopic analyses demand that researchers understand modern biochemical processes and patterns to interpret isotopic measurements of past faunal and bioarchaeological materials. Using modern bison teeth, this study attempts to quantify variability in oxygen isotope values among cheekteeth from a single mandible, which is expected to differ for the first molar, and furthermore, compare signals from two main substances that form teeth: enamel and dentin. The main purpose of this study is to underscore biological factors that influence the isotopic measurement, which is a key step that allows researchers to use the data to infer and reconstruct past environmental conditions.

Kitchel, Nathaniel (University of Wyoming)

[21] *The Role of Plant Food Resources in the Northeastern Paleoindian Diet before 10,000 B.P.*

The role of plant foods in the Paleoindian diet before 10,000 B.P. remains speculative with little direct evidence of plant food exploitation known from the archaeological record. Carbonized seeds recovered from a Paleoindian age hearth at the Colebrook site (27CO38), located in Colebrook, New Hampshire provide insights into this poorly understood area of prehistory. The recovery of these seeds allows for the creation of a more robust picture of the role of plant foods in the Paleoindian diet and subsistence practices in general.

Kittel, Michelle (CSU Stanislaus), Catalina López (CSU Stanislaus), Roberto Ramirez (IHAIH), Ryan Johnson (CSU Stanislaus) and Santiago Morales (IHAIH)

[258] *Hinterland Households: Rural Settlement in The El Paraíso Valley, Western Honduras*

We draw on recent investigations in two rural household groups and an opportunistic test-pitting program in the modern town of El Paraíso to examine the affiliations of Classic period smallholders in the region. While rural settlements near the larger centers of El Cafetal and El Paraíso exhibit the same broad distinctions in site planning, construction styles, and material culture seen at each (local patterns at El Cafetal and Copan Maya patterns at El Paraíso) they are far less pronounced in the rural settlements, suggesting that engagement with these diacritics was significantly different for rural residents.

Klar, Kathryn

[68] New Linguistic Evidence for Polynesian Contacts

Since identification four years ago of three words in two southern California Native languages that suggest prehistoric contact with Polynesia, additional information has started to accumulate from both North and South America. In this paper I will discuss three new findings: (1) a word for "sewn-plank canoe" from the western Patagonian language, Alakaluf; (2) an intriguing set of words for "harpoon" or "spear point" from around the southern Pacific basin (North and South America, and Polynesia); (3) the Quechua word *walpa* (meaning chicken). The latter is especially important in light of the recent identification of pre-Columbian Polynesian chicken remains in South America.

Klassen, Sarah (Dartmouth College)

[204] *El Antigual: A Test of Surface Collection Methods*

This poster reports on a research project designed to determine the usefulness of survey data in representing the full occupational sequence and the kinds of activities undertaken at El Antigual, Roatán Island, Honduras. Preliminary surface survey suggests that the site dates to the Late Postclassic period (ca. AD 1200-1519). This idea was tested by comparing ceramics from surface survey against those from subsurface deposits at the site. The research also considers how past and future development on the island has acted to obscure the integrity of surface and subsurface deposits and therefore condition our understanding of chronology on the island.

Klehm, Carla (University of Texas at Austin), Borbola Nyiri

[149] *Countering Centralization and Specialization in the Benta Valley: Ceramic Production, Use, and the (In)Visibility of Hierarchy*

During the Bronze Age, the Benta Valley region increasingly participates in long-distance trade, diversifying its subsistence and technological base as the population expands and aggregates. Although emerging fortified centers control specialization in some economic aspects, localized production, use, and exchange of ceramics provide a counter-case. Rather than centralized specialization, multiple ceramic specialists, broadly spread throughout the valley and not controlled by the hierarchical settlements, confront or at least mitigate these social divisions by emphasizing cultural commonality. Interestingly, social inequality remains indirectly indexed through the socioeconomic behaviors and relationships associated with the everyday ceramic use, which will also be explored.

[149] First Organizer; [149] First Chair

Klein, Joel (John Milner Associates Inc) [130] Discussant

Klein, John (Archaeological Research Center of St. Louis)

[2] *Mississippian Beginnings: A Lithic Perspective of the Alexander Jacob Site*

An analysis of lithic artifacts recovered from the Alexander Jacob site (11MS2288) has yielded interesting information about the different material types and stone tools utilized during the habitation. Given the environmental setting and occupational time period of the site, the lithic data exemplifies important characteristics indicative of the commonalities and variability of early Mississippian culture. What can the Alexander Jacob site tell us about this cultural variability? A comparison of contemporaneous sites within the Greater American Bottom attempts to relate the lithic data recovered to site specific conditions, while exploring changing cultural patterns at the beginning of the Mississippian period.

Klimowicz, Arkadiusz (Institute of Prehistory AMU & SUNY at Buffalo)

[186] *Socio-cultural nature of Early Chalcolithic Phenomenon in the Central Anatolia.*

This paper examines the nature of the dynamic socio-cultural transformations in Central Anatolia in the period between the end of the 7th and the first half of the 6th millennium BC which is labeled in Anatolian terminology the Early Chalcolithic (6000-5500 BC). This paper argues that although in a traditional terminology the term Chalcolithic is often homogenous with the Copper Age there are

significant changes which go beyond the introduction of metal. It will be stressed that the essence of transformation in this period is social and economic and also includes visible changes in the settlement pattern. The majority of known Neolithic settlements were abandoned and the new settlements formed new agglomerations with significantly different characters. One of them was located in a vicinity of the older Neolithic occupation while the other was placed in a completely new area. A reason of location of the latter cluster remains unknown and its nature have not yet been investigated. Previously dominant life in larger clustered neighborhood communities had lost their meaning. More autonomous household and the increased competition over resources would have led to a functionally different system and organization of settlement. Hence, the question arises to what extent broken bonds of the Neolithic identity/tradition contributed to cultural, social, economic, and ideological syncretism of early farming communities in the Early Chalcolithic?

Kling, Amber (SUNY at Buffalo), Chad Gifford (Columbia University), Eric Dyrdaahl (The Pennsylvania State University), Matt Schauer (University of Illinois at Chicago) and Oscar Flores [45] *The Pambamarca Archaeological Project Stealth Fortress Study: Creating Classifications for Mountain Forts*

The Pambamarca Fortress Complex is one of the most tightly clustered military installations in the Inca Empire, containing both indigenous and Inca fortifications. Past excavations revealed many interesting cultural aspects about these fortifications, including different construction techniques and layouts, as well as the presence of various artifacts. Recent work focused on gathering data from all fortifications in the area to create site typologies and classification systems for all forts. This will help us better understand all the sites and can aid in identifying different occupation periods or reconstruction phases which could be attributed to culture, or possibly warfare.

Klinge, David (ASC Group, Inc.)

[179] *Rural Industry, Class, and Community in Nineteenth-Century Southwest Ohio: 33CN428, 33CN430, 33CN433, and 33CN460*
During the archaeological investigations for the REX-East pipeline in Southwest Ohio, ASC Group, Inc. identified, evaluated, and conducted data recovery excavations on four historic sites in northern Clinton County. The four farm sites are located in Liberty Township and are clustered around the small village of Port William. Comparing the sites, including evidence of the preservation of outdated construction methodologies and supplemental, non-agricultural cottage industries, brings to light the class structure and community that existed in the region during the second half of the nineteenth century.

Klink, Cynthia J. [162] see Walker, Renee B.

Knappett, Carl (University of Toronto) [113] *First Organizer*; [113] see Rivers, Ray; [145] *Discussant*

Knell, Edward (CSU, Fullerton)

[6] *Organization of Lithic Technology at the C.W. Harris Site, California: Type Site for the Early Holocene San Dieguito Complex*
The C.W. Harris site, the type site of the early Holocene San Dieguito cultural complex in San Diego County, California, is important to the prehistory of southern California and neighboring regions. Originally excavated in the 1930s, the site has been the subject of subsequent research with the data for this analysis excavated in the 1950s and described by Claude Warren and D.L. True. Whereas much of the prior lithic research has focused on typological issues, this analysis describes the organization of lithic technology regarding patterns of lithic procurement, production, use, discard, and transport.

Kneller, Janet (Archaeological Research Center of St. Louis, Inc.) and Sophie Kohn (Archaeological Research Center of St. Louis)

[2] *Utilitarian Pottery at the Alexander Jacob Site (11MS2288) That is*

Better than any Effigy Pot!

[Utilitarian Pottery at the Alexander Jacob Site (11MS2288) That is better than any effigy pot] Pottery from the Alexander Jacob site (11MS2288) is typical of the early Lohman phase in the American Bottom. One of the most common vessel types was shell tempered jars with everted or extruded rims and angles shoulders. Additionally seed jars, Monk's Mound Red bowls, and grog, grit, grit/grog and limestone tempers were also used. This pottery will be compared to other sites in the greater American Bottom area from this time period to ascertain trends in temporal and spatial distribution patterns.

Knipper, Corina [184] see Fisher, Lynn E.; [184] see Harris, Susan K.

Knudson, Ruthann (Knudson Assoc., Calif. Acad. Sciences, Mt. St. U)

[51] *Making the Old Ones Real: Ruthann Knudson's Life as an Anthropologist*

Ruthann Knudson's parents taught her to respect all people, that she could do most anything she wanted to, and that she was just one part of the natural world around her. That basis with solid training in anthropology at the University of Minnesota, and Quaternary Studies at Washington State University, has led to a diverse life. Teacher, scholar, Congressional lobbyist, cultural resource manager, interface manager, archeologist, national park Superintendent, technical illustrator, writer, speaker—all labels that fit from time to time. Throughout it all, she has been driven to help unravel the secrets of Paleoindian women's, men's, and children's lives.

[50] *Discussant*

Kobti, Ziad (University of Windsor) and Denton Cockburn (University of Windsor)

[19] *Village Functional Specialization Framework*

The Pueblo did not all perform the same tasks as not everyone had access to the same productive resources. Some resorted to pottery-making, trading these goods for sustenance goods such as maize or meat. Two of the primary methods of exchange were kin-based and trust based. We explore the concept of agent functional specialization. Agents determine how to allocate their time between necessary tasks, with more than just their family's needs to take into account. We extend the trading system in our current model to allow agents to trade these surplus goods for other goods.

Koenig, Charles [22] see Johnson, Angela K.

Koerner, Shannon (University of Tennessee)

[228] *Mississippian Frontiers in the Highlands of Southern Appalachia*
Excavations in Tuckaleechee Cove, bordering the Great Smoky Mountains National Park in Tennessee, provide evidence of Native American settlement in the Southern Appalachian highlands. Pottery studies from Late Prehistoric assemblages indicate long periods of interaction among culturally-distinct peoples from the eastern Tennessee Valley and the highlands of North Carolina. Although the Cove was used for millennia before ca. AD 1300, its use lessened after this time and evidence of Tennessee Valley material culture disappears. A sustained investment in the Cove by more eastern groups after ca. AD 1300 may stem from cultural differences in the use of highland resources.

Kohler, Tim (WSU/SFI/CCAC)

[14] *Making Use of the Strengths of Southwest Archaeology to Understand Social Construction Processes*

Understanding how and why societies can become larger--what has sometimes been called reaching new levels of integration--remains a key goal of any archaeology that tries to connect with evolutionary theory, where how and why these transitions occur are of paramount concern on all scales from cells to societies. Key transitions that can be observed more clearly here than in most other places include the rise of trans-household corporate kin groups, trans-kin-group communities/pueblos, and trans-community confederacies/polities. Empirically calibrated agent-based modeling and evolutionary social

network-based approaches will provide frameworks to study these processes generally, as they play out more specifically in local southwestern histories.

[14] *First Organizer*, [19] *Discussant*; [19] see Crabtree, Stefani A.; [19] see DeFrank, Laura

Kohn, Luci [215] see Brugam, Richard B.

Kohn, Sophie

[37] *Immigration or Innovation at Paquimé, Chihuahua, Mexico*
Hypotheses regarding the origins of the Medio period fluorescence at Paquimé in Chihuahua, Mexico have looked to Mesoamerica and the US Southwest. Paquimé has alternately been described as a Mesoamerican trade outpost or a purely Southwestern site, with varying amounts of migration. The proposed research asks whether Mesoamerican goods, iconography and ideology were imported and/or emulated by Medio period peoples, or whether migrants took up residence in the Casas Grandes region. Dental measurements are used to test the hypothesis that a large scale migration in to Paquimé was responsible for cultural modifications during the Medio period.
[2] see Kneller, Janet E

Kohut, Betsy (University at Albany, SUNY)

[20] *A Non-Domestic Lithic Workshop in Barrio Itzmal Ch'en, Mayapán*

Occupational specialization was well-developed at Mayapán, but varied across the city in complex ways. This paper reports investigations of an independent lithic workshop facility in a barrio nearly 2 km from the site center. This type of facility, which is spatially separated from domestic residences, has been rarely documented in Mesoamerica. The structure was fully excavated and the lithic debris was studied with mass and individual flake analysis techniques. Craftspersons at this workshop focused on late-stage production of projectile points and bifaces. Comparisons with a domestic workshop in downtown Mayapán reveal significant differences in debris size and raw material quality.

Kolb, Charles (National Endowment for the Humanities) [126] *Discussant*

Kolb, Michael F. [150] see Hambacher, Michael J.

Kolb, Mike (Strata Morph Geoexploration, Inc) and Edwin Hajic (GeoArch Research)

[146] *Pre-Clovis, Paleoindian and Early Archaic Landscapes in the Central Mississippi River Valley Region*

The location, preservation, condition and visibility of potential and known early prehistoric cultural deposits in the Central Mississippi River Valley, St. Louis vicinity, largely are a function of terminal Wisconsin and Early Holocene fluvial environments and processes, and subsequent geomorphic processes. Large volumes of valley fill are too young to host such deposits. However, some key suitable landscapes of appropriate age are preserved. These include former shorelines of backflooded tributary valley lakes; outwash terraces (exposed and buried); and, colluvial slopes and eolian deposits on the aforementioned surfaces. Examples will include contexts of some sites presented in other symposium papers.

Koldehoff, Brad (ITARP University of Illinois) and Steven Ahler (University of Kentucky)

[146] *Kimmswick and Modoc in Context*

Last investigated some 30 years ago, the Kimmswick Clovis-Mastodon killsite and the Modoc Rockshelter continue to hold key positions in our understanding of early lifeways in North America. In this paper, Kimmswick and Modoc are placed within a regional context by briefly summarizing recent investigations at a series of early sites in adjacent sections of the Middle Mississippi Valley and interior uplands. Lithic data from these sites demonstrate that, while Dalton mobility patterns are strikingly different from those of Clovis, they are strikingly similar to those of Early Archaic groups. This observation along with others supports the notion that Dalton culture

marks the emergence of a new more settled lifestyle and is not a continuation of the Paleoindian tradition.

Koldehoff, Brad [146] *First Chair*; [146] *First Organizer*; [146] see Yerkes, Richard W.; [146] see Morgan, Brooke M.

Kolvett, Renee [211] see Slaughter, Mark C.

Komšo, Darko [9] see Tykot, Robert H.

Konwest, Elizabeth (Indiana University, Bloomington) and Stacie King (Indiana University, Bloomington)

[196] *Moving Towards Public Archaeology in the Nejapa Valley of Oaxaca, Mexico*

Starting any new archaeological project comes complete with difficult challenges and gratifying rewards. This is especially true for a project that seeks to incorporate public archaeology from its very inception. The Proyecto Arqueológico Nejapa y Tavela was initiated in 2007 by Stacie M. King in an area of Oaxaca without previous formal archaeological work. This discussion will explore the various methods we have used to incorporate a public component from the beginning of the project until the present. As this is an ongoing project, we also suggest directions that might be worth further exploration.

Koontz, Rex (University of Houston)

[13] *The Role of the Palma in the Construction and Maintenance of Central Veracruz Elites*

This paper proposes that Classic Veracruz palmas manifested elite identities as the inalienable possessions of specific officeholders in a developing courtly system c. A.D. 600-1000. After identifying these objects with political offices surrounding the transfer of rulership, I argue that these possessions were so integral to the offices that changes in form and narrative strategy in the "yoke-hacha-palma" complex may be interpreted as signs of change in elite hierarchies and strategies.

Kornfeld, Marcel (Frison Institute - University of Wyoming) and Mark Miller

[28] *Doing it Wyoming Style: Avocational Archaeologists Out West*
Wyoming and the Rocky Mountain west are natural for outdoor activities where an abundance of artifacts has intrigued the regional population for decades and created an interest in the past. Although some of the earliest archeologists in the area were professionals much archeology over the past century was conducted by avocational archeologists. The formation of the Wyoming Archeological Society in the 1950s organized the avocational community into a state organization with local chapters which conducted the first archeological investigation in the state. Avocationalists have played significant roles, including research, lobbying for legislation, fundraising, and in all aspects of Wyoming Archeological endeavor. This presentation highlights several members of the past and present avocational community.

Kornfeld, Marcel [21] see Larson, Mary Lou; [28] *First Organizer*; [38] *First Organizer*

Korosec, Greg [117] see Zubrow, Ezra B.

Kosiba, Steven (Monmouth University)

[18] *The Sanctity of Home: Social Crisis and Sacred Things within Inka Households*

Examining the social roles of huacas in the Andes requires a consideration of how the sacred is differentially constituted relative to political claims in specific historical contexts. This paper presents recent excavation data from houses in the heartland of the Inka Empire (Cusco, Perú) in order to examine how sacred power was manifested within domestic settings. Diachronic analysis of excavated objects and offerings from Inka households reveals how dramatic ceremonial practices coincided with moments of historical transition and sociopolitical crisis. In these moments of crisis, we see how claims to sacred power are tied to politicized renderings of ontology.

Kotegawa, Hirokazu

[260] *Indumentaria Olmeca: Una Perspectiva a Través de los Monumentos Escultóricos*

Durante el período Preclásico, la indumentaria olmeca manifestó el cambio y la continuación en su representación como consecuencia de las preferencias o normas sociales. Además de estudiar la iconografía de los monumentos escultóricos olmecas procedentes de la costa sur del Golfo de México; en el presente estudio se llevarán a cabo análisis comparativos con otras evidencias arqueológicas, con los cuales se complementarán las interpretaciones para entender cómo la indumentaria jugaba un papel relevante en las actividades sociales. Debido a los datos disponibles, este estudio se enfocará en los significados y funciones de la indumentaria en los grupos de alto rango.

Kovacevich, Brigitte (Southern Methodist University)

[17] *Gender, Craft Production and the State: Problems with "Workshops"*

A certain level of complexity is often assigned to societies where craft production has moved from the household to a secondary location or "workshop" where no domestic activity takes place, emphasizing the male/public vs. female/private dichotomy. The household can be the center of production pre-state, but also after the state emerges, as in Mesoamerica. Household production does not necessarily denote a lower level of sociopolitical or economic development. In state-level societies the household can be the locus of women's and men's work, and provide important information about craft production by all genders and ages.

Kozuch, Laura (University of Illinois), Mike Lewis (University of Illinois) and Stephanie Daniels (University of Illinois)

[217] *The Unknown Cahokia Collections*

Due to decades of neglect and obscurity, Cahokia collections at the University of Illinois dating back to the 1920s made by Warren K. Moorehead and others have gone largely unknown. They include a collection from the Powell Mound destruction in 1930-31 by A.R. Kelly, and 450 boxes from CRM projects between 1959 and 1991, by Charles J. Bareis. Collections are from most areas at the Cahokia site. With funding from the National Endowment for the Humanities, the entire catalog and some photographs are on-line. Descriptions of each excavation project, and descriptions of archived documents are available in Adobe Acrobat files.

Kradin, Nikolay (Russian Academy of Sciences)

[78] *A Macroscopic View*

Anthropological constants bear directly upon the outcome of cross cultural archaeology. Large scale cross-cultural research in anthropology has revealed important constants that archaeologists need to consider. Some of them are: cultures with populations over 400 are mainly sedentary, cultures with writing systems have three or more levels of control, three or more social classes, and non-human powered transportation. The object of this paper is to explore how these constants affect archaeological cross-cultural analysis.

Kramer, Karen (Harvard University)

[119] *Lewis Binford's Interdisciplinary Reach: Deepening the Dialogue between Ethnography, and Human Behavioral and Biological Variability*

Lewis Binford not only fundamentally changed how we think about the archaeological record, but also substantially influenced anthropological approaches to human behavior. In highlighting the importance of ecology to human variation and challenging traditional perspectives on ethnographic analogy, Binford resituated the relevance of forager populations to address new evolutionary questions. In my research among foragers and other traditional populations, this inspired the perspective that humans are interesting because of their breadth of facultative responses not only behaviorally, but also biologically. Rather than focusing on norms of human behavior, biology and demography, Lew taught us how to learn from variation.

Krause, Kari (Natural Resource Group, LLC)

[179] *Introduction to the Archaeology of the Rockies Express Pipeline-East Project*

Extensive Phase I – III archaeological investigations were conducted as part of the Rockies Express Pipeline-East Project (REX-East) project, which extends 639 miles across the central portions of Missouri, Illinois, Indiana, and Ohio. This paper provides an introduction to the REX-East Project and presents an overview of the Section 106 compliance process, including results of the Phase I survey and Phase II testing. This paper also provides a framework for the other papers in this session by reviewing the efforts undertaken by Rockies Express to avoid, minimize and mitigate effects of the project to historic properties identified along the pipeline route.

Krause, Samantha [91] see Reichardt, Stephen C.

Krigbaum, John (Dept of Anth Univ of Florida), Bryan D. Tucker (University of Florida) and Lindsay Lloyd-Smith (University of Cambridge)

[214] *Isotopic inferences of Holocene Diet and Seasonality at Niah Cave (Sarawak, East Malaysia)*

This paper presents light isotope data derived from serially sampled tooth enamel recovered from Niah Cave in northern Borneo. $\delta^{13}C$ and $\delta^{18}O$ values are presented to infer patterns of seasonality and diet. Previous 'bulk' studies using human tooth enamel from this and neighboring sites focused on $\delta^{13}C$ variability as a product of both 'total' diet and the canopy effect, while $\delta^{18}O$ values represented broad scale, climate-related trends. Serially sampling enamel along growth layers offers new perspectives of diet and environmental change and permits key questions to be addressed such as the ecological context associated with new modes of food production.

Krigbaum, John [214] see Price, Gypsy C.; [189] see Valentine, Benjamin

Krochmal, Aaron [88] see Schindler, Bill

Kruchten, Jeffery (ITARP- U. of Illinois) and Joseph Galloy (ITARP- University of Illinois)

[15] *Uncovering the Early Cahokian Residential Zone at East St. Louis*

Although it is sometimes interpreted as part of Cahokia's urban-administrative core, the East St. Louis site was by itself the second largest city in the Mississippian world. Previous investigations have documented monumental features such as mounds, but ITARP's ongoing excavations for a new interstate are yielding novel data about the city's residential neighborhoods. A substantial, previously unrecognized Lohmann-phase occupation reveals that East St. Louis and early Cahokia developed simultaneously, but the rarity of late Mississippian deposits suggests that it collapsed earlier than its mightier neighbor. Other highlights include a female stone figurine and rare evidence for interaction with Plains groups.

Krueger, Bradley (Texas A&M University)

[80] *Anthony Wayne's Last Stand: The Fight for a Mid-19th Century Great Lakes Steamboat*

The Anthony Wayne, a mid-19th century passenger and cargo steamboat, is one of the oldest archaeological examples of a side-wheeler in the Great Lakes. The remains of the steamer were allegedly discovered in the late 1980s by local treasure hunters who wanted to salvage the vessel for personal gain. The resulting court case was the first one heard by the state of Ohio in regard to the stewardship of historic shipwrecks following the passage of federal legislation. After a fierce legal battle, the treasure hunters were denied, and now the Anthony Wayne is the focus of intense archaeological investigation.

Krus, Anthony (Indiana University)

[257] *Mississippian Hoe Use: A Microwear Analysis of Hoes and Hoe Flakes from the Angel Site*

This paper presents the analytical differences in use-wear patterns and polishes on hoes and hoe flakes of Mill Creek and Dover cherts from the Angel Site (12Vg1), a major Mississippian community located near Evansville, Indiana. Multiple hoes and 64 hoe flakes were analyzed from the Angel Site collection at Indiana University's Glenn A. Black Laboratory of Archaeology. The results show differences between the use-wear formation on hoes of each chert type, potentially from the material properties of Mill Creek and Dover chert and/or how the hoes of each chert type were used.

Kruse-Peoples, Melissa (Arizona State University)

[100] *The Prehistoric Food Supply: Evaluating Self-Sufficiency of Perry Mesa Inhabitants*

The subsistence potential of the Perry Mesa landscape has played an important role in explaining regional settlement patterns. Recent survey has documented an extensive and intensified agricultural landscape including terraces, check dams, and rock piles. The soil characteristics, distribution of arable land, and the potential to improve productive potential speaks to the self-sufficiency of Perry Mesa residents during the 13th and 14th centuries. In addition, extensive agave utilization and access to a diversity of wild resources would have buffered inter- and intra-annual agricultural shortfalls. Subsistence limitations and challenges related to soil depletion and spatially variable rainfall are also discussed.

Kruszynski, Robert [56] *see* Monroe, Cara

Kuckelman, Kristin [235] *see* Hoffman, Amy

Kuehn, Steven (ITARP University of Illinois at Urbana-Champaign)

[83] *Faunal Exploitation at Orendorf: A Preliminary Look at the Settlement D and C Assemblages*

An overview of the faunal remains from Settlement D at Orendorf is presented, focusing on the deer, other mammal, fish, and turtle remains with comparisons made between select structures and pit features. The faunal data from Settlement D and Settlement C are also compared. While prior study of some Settlement C fauna has been undertaken, only recently has the entire Orendorf faunal assemblage been subject to a detailed analysis.

Kuhn, Steven (University of Arizona)

[58] *Mode 2.5? Shared Features of Lithic Assemblages from MIS 7* Lithic assemblages from central Europe and southwest Asia dating to MIS 7 do not fit comfortably within conventional definitions of either Lower or Middle Paleolithic. Several shared features cross-cut geographic and taxonomic boundaries, including: heavy reliance on flake tools and comparatively infrequent core tools; relatively simple flake production with little or no "pre-determination"; predominance of local raw materials; and frequent use of heavy retouch and other tactics for extension of artifact use lives. The shared characters are likely to reflect common tendencies in raw material exploitation and provisioning, a foundation from which more complex strategies later evolved.

[58] *First Organizer*; [58] *First Chair*

Kuijt, Ian (University of Notre Dame), Alissa Nauman, and Claire Brown

[185] *Faith on the Water: Documenting the Development Early Christian Island Settlements, Co. Galway, Ireland*

Despite its importance, our understanding of the Early Medieval period (roughly the 5th through 9th century) western Ireland has lagged behind well-established research and scholarly discussions of Christianity's history in continental Europe. Archaeological survey of remote islands along northwestern Connemara in 2008-9 provides a new opportunity to further define the temporal and cultural affiliations of the spread of Christianity through western Ireland. Our survey documented several previously undocumented early Christian settlement sites and cemeteries, offering a tantalizing opportunity to rewrite our understandings of late Iron Age and early Christian period along coastal Ireland.

[185] *First Chair*

Kuijt, Ian [185] *see* Quinn, Colin P.; [185] *see* Tynan, Collins P.; [185] *see* McNeill, Casey M.; [185] *see* Lash, Ryan P.; [185] *see* Goodale, Nathan B.; [185] *see* Moore-Shay, Laura

Kulisheck, Jeremy (Santa Fe National Forest) and J. Michael Bremer (Santa Fe National Forest)

[19] *Pueblo Demographic Change in the Northern Rio Grande after A.D. 1450: Implications for the Village World*

The VEP model (the Village World) contemplates autochthonous demographic change among Pueblo peoples in the Northern Rio Grande. In this area after A.D. 1450, there were three exogenous sources of change not accounted for in the model: the arrival of Athabaskan peoples into the northern Southwest; the entry of Spanish explorers; and the imposition of Spanish colonial rule. Each of these external forces had the potential to divert Pueblo fertility, mortality and identity from their indigenous historical trajectories. This paper explores these diversions by generating expectations as to how they may differ from the trajectories created by the Village World.

Kunz, Michael (Bureau of Land Management - Alaska)

[21] *Clovis Progenitors: Immigrants or Home Grown?*

Recent research has suggested the time range of the Clovis Culture is not quite as ancient as once thought. However even prior to its recent temporal tweaking reliably dated New World complexes that were as old or older than Clovis had been recognized. Two such complexes, Mesa and Nenana are found in Alaska (Eastern Beringia). These two complexes occupy different geographies and are technologically distinct. The Nenana Complex displays some Western Beringian traits while the Mesa is classic High Plains Paleoindian. This paper examines the likelihood that either of these Alaskan Complexes could be a Clovis progenitor.

Kurnick, Sarah (University of Pennsylvania)

[99] *Women in Stone: Understanding the Classic Period Maya Female Ajaws*

The Classic period Maya created a number of monuments depicting politically powerful women. Notably, a handful of these monuments depict not just politically powerful women, but female ajaws, or female divine rulers. This paper will examine the Classic period Maya female ajaws and their representations on monuments – topics that have attracted the attention of only a few archaeologists. In particular, the paper will consider how the female ajaws acquired their authority; how they transferred their authority to their successors; and how they chose to portray themselves on monuments as a means of maintaining their authority during their reigns.

Kurtz, Mark (BioOne) [93] *Discussant*

Kusimba, Chapurukha [121] *see* Oka, Rahul C.

Kuzminsky, Susan (University of California, Santa Barbara), Jon Erlandson (University of Oregon), Phillip Walker (University of California, Santa Barbara), Rebecca Richman (University of California, Santa Barbara), and Sabrina Sholts (University of California, Santa Barbara)

[122] *Biological analysis of the Tuqan Man remains: A 9500-year-old Paleoamerican skeleton from CA-SMI-608, San Miguel Island, California*

We present the results of an osteological analysis of a 9500-year-old male skeleton from San Miguel Island, California. Following careful excavation to document the context and chronology of this rare discovery, skeletal assessments were conducted to establish biological and cultural affiliation with Native American descendents as specified by NAGPRA. Bioarchaeological data were collected from the cranium, dentition, and post-cranial skeleton, and skeletal samples were taken for chemical analyses. Temporal and spatial statistical analyses show that the cranial morphology of this Paleoamerican differs in many respects from modern Native Americans, including prehistoric groups from the northern California

Channel Islands.

Kuzminsky, Susan [122] *see Kuzminsky, Susan C.*

LaBelle, Jason (Colorado State University)

[21] *Hide Scrapers, the Bison Pit, and an Eroding Lithic Scatter: Site Structure of the Lindenmeier Folsom Site, Northern Colorado*
Lindenmeier is the largest known Folsom site in North America, with Paleoindian activity areas spanning 800 m and having yielded abundant points and preforms, end scrapers, graters, and other tools. Recent fieldwork focused on a shallowly buried Folsom component located in the eastern portion of the site. Spatial analysis of the eroding lithic scatter reveals clusters of tools, flakes, and burned bone and lithics. The artifact distribution is argued to represent hide processing and retooling activity areas located adjacent to a small bison kill, adding another important element to the already complex story of the Lindenmeier site.

LaBelle, Jason [256] *see Byerly, Ryan*

Lacombe, Sebastien [184] *see Sterling, Kathleen*

Lacourse, Terri [224] *see Fedje, Daryl W.*

Ladwig, Jammi and Austin Jenkins

[30] *Phytolith Recovery and Analysis from Various Contexts*
In this study, my aim was to recover phytoliths from sediments, ceramic residues, and lithics from North America, specifically from a Midwestern woodland-period site. Using morphometric data collected from the phytolith assemblages present, various taxa were identified and quantified. A thorough analysis of the recovery of phytoliths from the aforementioned contexts and what archaeological knowledge was gained in the process of the study will be presented.

Laffoon, Jason (Leiden University), Menno Hoogland (Leiden University) and Roberto Valcarcel Rojas (Leiden University)

[97] *Exploring Mobility and Origins in Caribbean Contexts: An Isotopic Perspective*

Isotopic analyses of various archaeological material remains permit the direct identification and measurement of past movements of humans, animals, plants, and artifacts. This approach is currently being applied to a number of large prehistoric and historic skeletal assemblages in the circum-Caribbean region to investigate patterns of ancient mobility. Preliminary results from Caribbean contexts indicate the movement of certain animal species and the presence of substantial human migration from diverse geographic regions. We examine these patterns of human mobility in reference to comparative, contextual biological and cultural data.

Lahaye, Christelle [8] *see Guerin, Guillaume*

Lally, Joe (Bureau of Land Management)

[152] *Largo-Gallina Structural Fires*

Structural fires in the Largo-Gallina area are thought to be the result of warfare or other forms of violence. The possibility that some of these fires may be accidental or the result of natural causes is either ignored or summarily dismissed. Gallina sites are often in wooded areas that are prone to lightning strikes. Some Gallina fires may be due to lightning caused wildland fires either during occupation or after abandonment. Fires leave physical evidence of their cause and origin. The application of modern fire protection engineering principles to the archaeological record can assist in determining the cause of ancient fires.

Laluk, Nicholas (White Mountain Apache Tribe - U of A)

[228] *Apache Place-Making in the Chiricahua Mountains of Southeastern Arizona*

Due to the ephemeral nature of historical-period Apache archaeology in the U.S. Southwest much is still to be learned about Apachean lifeways, especially those pertaining to the social processes that underlie various responses to increased Euroamerican interaction.

Material consequences resulting from these interactions are subtle but nonetheless represent a range of social processes, from subsistence to preservation of traditional lifeways. Through the investigation of high altitude Apache sites in Southeastern Arizona utilizing inter-Apache tribal collaborative interpretation of the material record, a better understanding of social investment strategies that underpin decision-making practices and their landscape associations may be highlighted.

LaMotta, Vincent (University of Illinois at Chicago)

[128] *Patterned Cultural Deposition Associated with Postoccupational Histories of Architectural Spaces at Homol'ovi*

Excavations within architectural spaces in the fourteenth-century Homol'ovi villages of northern Arizona have revealed stratigraphically complex and seemingly purposeful cultural deposits in terminal- and post-occupational contexts—on top of the final occupation surface and features of a room, or within its postoccupational fill. Repetitious patterning across contexts and villages indicates common elements to the behaviors involved. This presentation explores variation in the structure, context, and chronology of such deposits at Homol'ovi, and draws on historical sources and general principles of space use to begin building method and theory for discerning the purposes behind, and social units responsible for, their construction.

Lamuela-Raventos, Rosa (UB), Cristina Andres- Lacueva (UB), Olga Jaúregui (SCT-UB), Rosa Guasch

[55] *Chemical Analysis of Old Egyptian Wine Residues*

Ancient Egyptian wine residues were analyzed to verify and characterize the residue inside the amphorae. Owing to special characteristics of these samples, dryness and the small quantity available for analysis, it was necessary to have a very sensitive and highly specific analytical method By LC/MS/MS to detect tartaric acid at trace levels in the residues. Moreover, alkaline fusion was carried out in the deposit residue of dark color to identify syringic acid derived from malvidin as a red wine marker. Malvidin glycoside, the main anthocyanin that gives young wines their red color, polymerizes with aging into more stable pigments.

Landa, Olga (Zona Arqueologica de Monte Alban, INAH)

[103] *Yucundaa, el Proyecto Arqueológico: INvestigaciones Recientes*

En el corazón de la Mixteca Alta Oaxaca, se encuentra el pueblo de San Pedro y San Pablo Teposcolula, cercano se encuentra el asentamiento prehispánico llamado Yucundaa. Brevemente mostraremos avances en las investigaciones recientes llevadas durante la quinta y sexta temporada de campo del Proyecto Arqueológico, la temporada 2008 fue extensa y productiva. La temporada 2009 fue importante para delimitar fechamientos con análisis de materiales, además las excavaciones en los sitios sujetos descubrió la visión del desarrollo cultural de la Mixteca en el periodo Postclásico hasta la Colonia.

Landeros, Juan (CSULA) and Eden Chavez (California State University, Los Angeles)

[148] *Concepts Related to Human Sacrifice in Contemporary Zapotec Ethnography*

The sudden and mysterious death of a young man in Southern California set off a heated discussion within the Zapotec community over the cause of death. The discussion underscored a widely held belief that a "jealous" Earth required a human offering for the successful completion of large scale community construction projects. The victim is "chosen" by the community council and the death accomplished through witchcraft. Caves are frequently said to be involved in the many varieties of this type of sorcery. Our findings shed light on this poorly documented aspect of cave ritual.

Landeros, Juan [148] *see Chavez, Eden*

Landon, Amanda (Washington University in St. Louis)

[235] *A Paleoethnobotanical Study of Three Pueblo Period Sites*
Three Pueblo II period archaeological sites in southwestern Utah,

42WS1191, 42WS3119, and 42WS4145, were excavated during field schools from 1996 to 2006. The purpose of the excavations was to illuminate temporal and spatial relationships between archaeological sites in the region through lithic, ceramic, faunal, paleoethnobotanical, and other analyses. Paleoethnobotanical samples from each of the sites were analyzed in the Paleoethnobotany Lab at Washington University in St. Louis to improve understanding of diet and seasonality within the greater cultural context of the area. This paper presents the results of the macrobotanical analysis and considers the implications of the data.

Landon, David [48] *see* Way, Michael A.

Lange, Frederick (LSA Associates)

[191] *Looking Back, Looking Forward: Forty-Five Years of Archaeology in Greater Nicoya*

This paper draws its themes from the chapter, entitled "Gracias por la Oportunidad", that I was asked to prepare for a volume to be published by the University of Costa Rica. For that chapter I divided the text into Part I: Initiatives and Results (Ecological Orientation, Cultural Resources Management, Guanacaste Archaic, Deepening the Chronology, Geomorphological Studies, Coastal-Inland Relationships, INAA Studies of Ceramics and Jade) and Part II: Projects That Would Grab My Attention If I Were Starting Over Again (Plate Tectonics and Coastal Archaeology, Early Occupation of Off-Shore Islands, Protohistoric Disease Vectors, Broadening Opportunities for Local archaeologists).

[65] *Discussant*

Lange, Richard (Arizona State Museum, University of Arizona)

[40] *KIVA at 75 Years: Couldn't Have Done It Without You!*

The Kiva was established 75 years ago by Rev. Victor L. Stoner, and Kiva has grown up to be the premier journal of Southwestern anthropology, archaeology, and history. Kiva was and is only made possible by the strong and dedicated support of the Arizona Archaeological and Historical Society, an organization dominated by avocationalists with some professionals. This poster looks at how Kiva has served these diverse audiences.

Langenwalter, Paul [81] *see* Bowser, Brenda J.

Lansing, Stephen [153] *Discussant*

Lapham, Heather (Southern Illinois University Carbondale)

[52] *Spanish Subsistence at Fort San Juan*

Deep within the interior of Spanish La Florida, in what is today western North Carolina, Captain Juan Pardo commanded his men to build Fort San Juan adjacent to Joara, one of the largest Native American towns in the upper Catawba River Valley. The fort, which survived for eighteen months, was burned to the ground in 1568. Using zooarchaeological data from recent excavations at the fort and adjacent village, known collectively as the Berry site, this paper investigates Spanish subsistence practices to further explore the intercultural relationships that developed between the soldiers and their native neighbors.

Lapham, Heather A. [26] *see* Forsythe, Lauren A; [217] *see* Malpiedi, Jennifer T.

Lapp, Jennifer (University at Buffalo)

[202] *Proyecto La Flor*

The excavations in La Flor, department of Rivas, Nicaragua, yielded numerous artifacts; these included ceramics, lithics, human remains and shells. The most significant discovery during the excavations, were a dozen shell mounds. These mounds are found along a river that flows to the Pacific Ocean. The location of La Flor aided its pre-Columbian inhabitants in the procurement and dispersal of shells for the potential purpose of trade along the Gran Nicoya Peninsula and possibly farther. This poster discusses the settlement pattern of the site as well as the utilization of the artifacts encountered there.

[202] *First Organizer*; [202] *First Chair*

Larson, Mary (University of Wyoming), Marcel Kornfeld (Frison Institute, University of Wyoming) and Pablo Massineo (CONICET – Argentina and University of Wyoming)

[21] *Early Paleoindian Occupation of a Rockshelter: Two Moon, Bighorn Mountains*

Fluted point use in rockshelters is rare in North America with the integrity of the points discovered in question. That Two Moon Shelter was occupied during the fluted point horizon is unquestionable, however, the nature of that use is unclear. Does the 10+ cm thick component represent one or multiple occupations? What was the nature of that occupation or those occupations? To begin unraveling the Two Moon deposit, fine scale excavation techniques make possible the examination of vertical artifact and eboulis frequencies, backplots, positional data, and thin sectioning of the excavated area to provide preliminary answers to these and other questions.

Lasell, Rebecca [75] *see* Eaton, Marietta

Lash, Ryan (University of Notre Dame), Eric Carlson (University of Montana, Missoula), Ian Kuijt (University of Notre Dame), John O'Neill (University College, Dublin), Michael Gibbons (Westwalk, Clifden, Ireland)

[185] *Sacred and Secular Space: the Early Christian Landscape of Inis Air, Co. Galway, Ireland*

Combining traditional recording techniques with GPS mapping and geophysical survey technology, field-work conducted at Inis Air, Co. Galway, has allowed researchers to partially re-construct the Early Christian landscape of this deserted island. The remains of three and possibly four separate burial grounds, a leacht, several monuments, a mill pound, a monastic cashel and clochan – along with ethnographic evidence for an enduring cult of St. Leo – suggest not only that the Early Christian occupation was more extensive and complex than heretofore recognized, but also that its material remains continued to play a crucial role in island life throughout the following centuries.

Lash, Ryan [235] *see* Reed, Charles A.

Lassen, Robert (University of Tennessee)

[210] *Caches and Their Implications for Clovis in the Southeast*

The lack of Clovis caches in the southeastern United States poses a unique problem for Paleoindian archaeology. Two explanations for caching have been proposed by Collins and Meltzer, and both have implications for the Clovis habitation of the Southeast. From Collins' theory, one can draw the conclusion that the landscape of the Southeast was relatively unknown to people from the Clovis period. On the other hand, Meltzer's theory would imply that people from the Clovis period would have been comparatively more established in the Southeast. Both scenarios are compared to recent models tracing settlement patterns during the Clovis period.

Lattanzi, Gregory (New Jersey State Museum)

[59] *The First Stimulus Package: The WPA and the New Jersey Indian Site Survey*

Between 1936 and 1941 the Indian Site Survey, a Works Projects Administration relief program, identified numerous sites and conducted archaeological investigations throughout the state of New Jersey. These excavations were sponsored by the New Jersey State Museum and directed by Dr. Dorothy Cross. This massive project, not only identified hundreds of amazing sites, but also excavated one of the most significant prehistoric settlements in the Middle Atlantic region - the Abbott Farm National Historic Landmark. This paper looks at the Indian Site Survey program and how it provided a more comprehensive picture of New Jersey's prehistoric past.

Lau, George (Univ Of East Anglia)

[145] *Middle Horizon Interaction in Peru's North Central Highlands: Regional and Diachronic Variability*

This presentation reviews the sequence and variability of interregional interaction in Peru's Ancash Department. Over four centuries, local groups interacted in myriad, often ambivalent, ways with different regional powers. Although there is evidence of Wari contact before

imperial expansion, trade interaction surged during the early Middle Horizon, followed by new exchange patterns and stylistic emulation. Direct Wari control seems unlikely, but Wari keyed in on resources of the Callejón de Huaylas and the adjoining Cordillera Negra, while apparently avoiding east of the Cordillera Blanca. Current data suggest that religion and prestige economies were the principal factors for intensified interaction.

Laumbach, Karl (Human Systems Research, Inc.) and Toni Laumbach (New Mexico Farm and Ranch Heritage Museum)

[192] *Post Mimbres Relationships on the Cañada Alamosa Frontier*
Located west of the Rio Grande in southwestern New Mexico, the Cañada Alamosa is the extreme northeastern corner of Mimbres affiliated pueblos. Research on the Cañada Alamosa has revealed that the post-Mimbres world was a time of integration and assimilation with long time northern pueblo neighbors. Integration was followed by aggregation of small sites into one community, a pattern repeated across west central New Mexico at the beginning of the 13th century. During the 13th century new migrants from the north settle near the aggregated community, possibly creating tension that ultimately encouraged the abandonment of the canyon by Mimbres descendents.

Laumbach, Karl [192] see *Ferguson, Jeffrey R.*

Laumbach, Toni [192] see *Laumbach, Karl Wayne*; [192] see *Ferguson, Jeffrey R.*

Laurence, Andrew (Texas A&M University)

[71] *Microfossil Research Pertaining to Plant Processing Tools from Central Texas*

Thousands of burned-rock middens and earth ovens from the central Texas savannah have been unearthed, only a few of which yielded charred plant remains, particularly geophytes in the Liliaceae family, along with agave and sotol crowns. This poster reports on a search for geophyte microfossils-starch grains, phytoliths, fibers-on groundstone and battered-edge tools from sandy-sediment sites embedded in an otherwise limestone dominated region as direct evidence of prehistoric hunter-gatherer plant utilization. It also illustrates microfossil reference collections from fresh samples of commonly utilized geophyte taxa in central Texas.

Laval, Eric [23] see *Sepulveda, Marcela A.*

Law, Heather [48] see *Pezzarossi, Guido*

Lawler, Andrew (Science Magazine) [141] *Discussant*

Lazcano Arce, J. Carlos [221] see *Serra, Mari C.*

Lazrus, Paula Kay (St. John's University) [227] *First Organizer*; [227] *First Chair*

Le Canh, Nam [153] see *Buckley, Brendan M*

Le Guillou, Yanik [104] see *Clottes, Jean*

Leason, Becket [21] see *Sanchez Miranda, Guadalupe*

LeBeau, Albert

[171] *Fortified Plains Villages: Evidence for Prehistoric Warfare on the Plains?*

Prehistoric Warfare has been a topic of great interest in the recent past. Questions arose if there was evidence of war before European contact, or if in fact the Indigenous tribes were the peaceful, innocent children as thought by the clergy. This paper looks at a specific region along the Missouri River in central South Dakota and south central North Dakota. This area is known as the middle Missouri. Archaeological evidence has shown that there were "earth works" that closely resembled fortification ditches of the old world. This lead archaeologist to question if in fact there was pre-contact warfare on

the Great Plains. This paper addresses environmental factors that may lead to war, it also address social factors that may lead to war. This paper looks at the research on why people go to war and applies to this geographical area. Finally this paper looks archaeological evidence and historical evidence and concludes that in fact there was warfare occurring on the Great Plains prior to contact with the European hoards.

LeBlanc, Steven (Harvard University) and Michele Morgan (Peabody Museum, Harvard University)

[235] *Intraindividual Seasonal Variation in Basketmaker II Diet Revealed by Stable Carbon and Nitrogen Isotope Analyses of Human Hair*

It is now generally agreed that Basketmaker II populations of the northern American Southwest obtained significant calories from corn. To date this interpretation has reflected an average overall assessment of diet. Using the innovative technique of multiple sampling along individual strands of human hair, we provide stable isotope evidence for considerable intraindividual seasonal variation in both eastern and western Basketmaker II diet over the annual procurement cycle. We report hair keratin stable carbon and nitrogen isotope data from 30 individuals from three Basketmaker sites, Kinboko Cave and White Dog Cave in Arizona, and South Cave in Falls Creek, Colorado.

LeBlanc, Steven [37] see *Snow, Meradeth*

Lech, Veronica (Idaho State University), Bruce Finney (Idaho State University), Herbert Maschner (CAMAS, Idaho State University) and Nicole Misarti (CAMAS, Idaho State University)

[27] *Archaeofauna Identification Using Stable Isotopes*

Many zooarchaeologists experience difficulty differentiating between certain skeletal elements of particular species. In Sanak Island assemblages Steller sea lion and walrus were of particular difficulty. As Steller sea lion and walrus feed on very different food sources we conducted analysis of the $\delta^{13}C$ and $\delta^{15}N$ of these questionable elements in order to help in the identification of these species. Not only were we successful but we were also able to determine intra-species feeding habits that differentiated through time. Analysis of carbon and nitrogen values should aid in the taxonomic identification of indeterminate specimens the future.

Leclerc, Mathieu (Université de Montréal) and Adrian Burke

[60] *Chert Distribution among Saint Lawrence Iroquoians sites in southern Quebec: A Glance through X-rays Goggles*

Several potential sources of Appalachian cherts found on archaeological sites throughout Northeastern North America have been identified to date. Unfortunately, these cherts greatly resemble each other, both microscopically and macroscopically, making it unproductive to distinguish them using petrography and necessitating a regional database of geochemical signatures for each chert source. In this presentation, signatures obtained from prehistoric quarries are compared to Saint-Lawrence Iroquoians artefacts, providing a new understanding of late prehistoric raw material procurement, distribution, and exchange patterns in Southern Quebec. Results show that the visual identification routinely executed by archaeologists can often be misleading.

Lee, David (Southern Methodist University) and Stanley Guenter (Southern Methodist University)

[77] *Ballgame Panels from El Perú-Waka' in Regional Perspective*

Carved stone stair blocks unearthed at Waka's main palace depict scenes of the ballgame. While fragmentary, four stones reset in the Terminal Classic recall a Seventh-century Waka'-Calakmul alliance. This panel falls into a subgroup of representations showing the ballgame being played against stairs, or a backdrop of stairs. Examining the incidence of these scenes from other Maya sites, the authors consider the social and political context of these representations. In initial creation and later reuse, these panels served as markers of political power, legitimacy, and alliance; they perhaps also represent ritual interactions with ancestors and the

invocation of supernatural power.

Lee, Gyoung-Ah (University of Oregon) [132] *discussant*

Lee, Jane (MoDOT)

[187] *More than Just Four Walls and a Roof: The Archaeology of Two Turn of the Century Residences from the Hyde Park Neighborhood of St. Louis, Missouri*

During the winter of 2006, the Missouri Department of Transportation carried out an archaeological investigation of two residential lots in the Hyde Park neighborhood of North St. Louis. At the turn of the century, these lots contained two separate dwellings, which exhibited disparate patterns of housing. One lot contained a single-family home that had been consistently occupied by one family, while the other lot contained a tenement building that had been occupied by a variety of families and individuals. The findings from this investigation illuminate the realities of life in urban St. Louis households at the turn of the century.

[187] *Second Chair*

Lee, Jane [187] *see Greenwood, Brianne*

Lee, Lori [26] *see Proebsting, Eric L.*

Lees, William (University of West Florida) [3] *Discussant*

Leftwich, Brent (UC Santa Barbara)

[6] *Working from Home: The Case for Permanent Year-Round Settlements in the Sierra Nevada*

Traditionally, late prehistoric settlement patterns in the north-central Sierra Nevada have been defined by seasonal migration. Recent research along the North Fork of the Mokelumne River indicates permanent year round settlements nestled in river valleys and canyons cut through the high Sierra. Using central place foraging theory I conclude that acorns were processed where they are consumed. Using quantitative methods and GIS to compare mortar depth, elevation, site type, and dominant vegetation, a pattern emerges which indicates that acorn processing is almost exclusively conducted at larger sites which represent year round villages.

Legge, Anthony [9] *see Moore, Andrew M T*

Lekson, Stephen (University of Colorado)

[14] *The End of History and the Last SW Archaeologist*

Science vs history vs heritage preservation in SW archaeology. An aging cohort of SW archaeologists trained as scientists are trying to accommodate more humanist, historical developments in the larger field of archaeology. Heritage preservation in the SW—both Native and non—may trump both. Is rapprochement possible? Is rapprochement desirable? Our teapot-tempests were spun off larger changes in social and philosophical climates. There is, indeed, a world beyond our region: can we use SW data on continental scales and, more importantly, in a global comparative archaeology to address questions perhaps transcending academic and identity politics?

[192] *Discussant*

Lekson, Stephen [192] *see Ferguson, Jeffrey R.;* [40] *see Neuzil, Anna A.*

Leigemann, Achim (Universidad de San Luis Potosi)

[57] *The Tomb of Tezcatlipoca: A Late Classic High Status Burial at La Quemada, Zacatecas*

Archaeological research at the Late Classic site of La Quemada, Zacatecas, uncovered the burial of a young adult male in a pyramid belonging to the architectural compound called The Citadel. Offerings, body treatment, and the orientation of the structure suggest strong analogies to the cult of a deity revered by Postclassic central Mexican Nahuas as Tezcatlipoca. The paper presents the bio-anthropological and artifactual evidence and discusses their implications for religious beliefs and migration dynamics in Classic to

Postclassic Northern Mesoamerica.

[57] *see Nicolau Romero, Armando*

Lelièvre, Michelle (University of Chicago)

[219] *Before, During and After the Mission: Results from The Maligomish Archaeology Project's 2007-08 Field Season*

The Maligomish Archaeology Project is an inter-disciplinary research program developed collaboratively by the author and the Pictou Landing First Nation, a Mi'kmaw community located in northeastern Nova Scotia. Maligomish is a 20 ha island in the Northumberland Strait, which has been a Catholic mission site since the mid-18th century. This research report will summarize the results of a systematic surface survey, an excavation of the shell midden located on Maligomish's south coast, and ethnohistorical research - all of which has allowed for a better understanding of how settlement patterns and resource use have changed on the island during the past 2500 years.

Lemke, Ashley (University of Michigan), Benjamin Wells (Mercyhurst College), Jessi Halligan (Texas A&M University) and Justin Halteman (Harvard University)

[73] *Modeling Submerged Landscapes: Predicting Human Habitation and Archaeological Recovery in the Gulf of Mexico*

GIS predictive modeling is a critical component of our interdisciplinary investigations of the submerged Pleistocene landscape in the Gulf of Mexico. This expedition seeks to locate inundated geographic features and archaeological sites. A GIS predictive model was constructed to establish prime locations for future research among the several hundred targets previously identified during survey. This model integrates submerged geophysical data with known cultural and environmental variables to examine the likelihood of human habitation and archaeological recovery. Given the logistical expense of underwater archaeology, the ability of this model to narrow research areas in an informed manner highlights its methodological significance.

Lemmen, Carsten (GKSS-Forschungszentrum Geesthacht)

[61] *Intercomparison of European and North American Regional Transitions to Farming in a Mathematical Model of Socio-technological Adaptation*

The introduction of agriculture into Europe and Northern America required space provided by cutting forests. The regional trajectories of technology, subsistence base and demography characterizing this cultural and morphological---also climate-relevant---transition are hindcasted with a numerical model for simulating global land use and technology evolution; within this framework, hypotheses about the different timing of the regional transitions to agriculture and intercontinental lags are tested: I assess the explanatory power of bioclimatic factors, such as biogeography and (abrupt) climate changes, as well as of cultural factors, like the influence of nearby founder regions and the importance of migration and trade.

Lengyel, Stacey (Illinois State Museum / Statistical Research, Inc.)

[26] *Recent Archaeomagnetic Research in the US Midcontinent*

Archaeomagnetic dating uses changes in the earth's magnetic field through time to date certain archaeological features. Typically, these features are constructed into clay- and silt-rich soils and are fired to relatively high temperatures. Ongoing research in the US Midcontinent has focused on collecting samples from independently dated archaeological features such as fired mound floors, earth ovens and hearths in order to refine the existing archaeomagnetic dating curve for this region. New samples have been recovered from sites in Illinois and Tennessee and help to strengthen the curve between roughly AD 800 and 1400.

Lenik, Stephan (Syracuse University)

[97] *French Jesuits and Plantation Landscapes in the West Indies*

During the 17th and 18th centuries, French Jesuits in the West Indies owned plantations using enslaved labor, rather than coerced Amerindian labor as was common on missions in North and South

America. This resulted from the lack of a native population to submit to a mission system, as well as the need for economic self-sufficiency. In managing these enterprises missionaries operated within the guides of their spiritual ideals and restrictive laws prohibiting excessive profit-making. This paper explores the spatial organization of French Jesuit West Indian properties, particularly a property at Grand Bay in southern Dominica where the Jesuits operated a church and plantation from 1748 to 1763.

Lensink, Stephen and Joseph A. Tiffany

[72] *Dating the Origins of the Central Plains Tradition*

This paper proposes a new chronology for the Nebraska Phase of the Central Plains Tradition. Recalibration of radiocarbon dates coupled with cross dating of Nebraska phase materials from well-understood sequences elsewhere—Oneota sites; Cahokia; and Steed-Kisker settlements—leads to a proposed revision of the Nebraska phase occupation span of A.D. 1250–1400. The ceramic evidence includes (1) the absence or near absence of Initial variant ceramics in Nebraska phase assemblages and visa versa, (2) complete absence of Stirling phase Ramey vessels in the Nebraska phase, and (3) low numbers of seed jars and bowls post-dating the Stirling phase.

Leon, Xochitl (Universidad Nacional Autónoma de México)

[254] *Costumbreras Funerias y Entierros en Sur de Veracruz Desde el Formativo Hasta el Posclásico*

Se presentará un balance y revisión de los entierros prehispánicos encontrados en sitios arqueológicos del sur de Veracruz, los cuales abarcan desde el periodo Formativo hasta el Posclásico. La información en que se fundamenta la investigación incluye los trabajos de Valenzuela y Drucker entre 1930 y 1940 hasta los registros de entierros mas recientes. El objetivo es recopilar y analizar el universo actual de datos para lograr un primer acercamiento de las costumbres funerarias en sur de Veracruz, lo cual puede aportar información diacrónica y preliminar sobre posibles patrones de enterramiento.

Leon Estrada, Xochitl Del Alba [254] see Limón Boyce, Morrison

Leonardt, Sabrina [22] see Scheinsohn, Vivian G.

Lepofsky, Dana [198] see Welch, John R.; [39] see Smith, Lisa M.

Lepper, Bradley (Ohio Historical Society)

[176] *The Ceremonial Landscape Of The Newark Earthworks*

The Newark Earthworks complex is the largest architectural composition in the Hopewellian world, yet it is located on the far northern periphery of the so-called Hopewell heartland. This site long has been neglected in studies of the Hopewell culture largely because it was presumed to be nearly completely obliterated by the growth of the City of Newark. Ironically, the two major geometric enclosures at Newark are the best surviving examples of this class of earthwork. A combination of archival research and archaeological excavations at surviving elements reveal a surprisingly complete picture of an integrated ceremonial landscape.

Lerner, Harry (Université Laval)

[200] *Raw Material Intra-Type Variability as a Factor in Use-wear Formation: An Example From the Late Archaic of Northwestern New Mexico*

This poster presents some background to and interim results of an experimental use-wear study that focuses specifically on intra-type raw material variability. This study employs both digital image analysis (ClemexVision) and GIS analysis (Ildrisi) to measure differences in use-wear patterns and rates of formation. Archaeological tools from the Late Archaic of northwestern New Mexico exhibit very similar use-wear patterns to those generated experimentally. With a better understanding of how variability between and within individual raw material types affects use-wear formation, it will become possible to infer with greater confidence not only tool function but duration of use as well.

Lerner, Shereen (Mesa College)

[50] *A New Millennium*

Y2K, 9/11, war, the euro, and the election of President Obama are some of the major events that transformed the world since 2000. What has this most recent decade brought to archaeology and how has it been portrayed in the media? Indiana Jones returned to the movies, television offered several archaeology-based series, and the Internet provided more opportunities to learn about archaeology. Archaeology continues to be portrayed as a sexy, exciting profession with mystery and intrigue. Is the media more accurate than in the past? How has the Internet affected the public's ability to learn more about the past? Is misinformation rampant or is the public gaining a greater appreciation of the past through these various outlets?

Leroy, Ines [123] see Woods, William

Leslie, Katie [36] see Holt, Julie Zimmermann

LeTourneau, Philippe (University of New Mexico), Jeffrey Ferguson (Archaeometry Group, University of Missouri Research Reactor) and Virginia McLemore (New Mexico Bureau of Geology & Mineral Resources)

[144] *Alameda Spring, a Newly Characterized Obsidian Source in West-Central New Mexico*

All of the major sources of archaeological tool-quality obsidian in the American Southwest have been located and sampled, yet unassigned artifact samples continue to appear in small numbers. Recent research in western and southern New Mexico has identified at least four chemical signatures without a known geologic source. We have recently identified one of these sources 20 km south of Magdalena, NM that accounts for as much as six percent of the artifact assemblages in sites 45 kilometers south of the source area. Pending additional work in the geologically complex source area, we have tentatively named this source Alameda Spring.

Levi, Laura (The University of Texas at San Antonio)

[54] *Laboring and Pooling: the Relational Bases of Family Life in the Maya Late Classic*

From lineage to household to house, discussions of ancient Maya family life have followed a trajectory that parallels major discourses in the wider discipline. The burgeoning new literature on kinship would suggest that relational perspectives are a logical next step in our efforts to understand the processes animating domestic practices. Relying upon archaeological, ethnohistoric, and ethnographic evidence, this paper will explore the value of emphasizing how social, symbolic and material relations converge in the creation of differences among family groups.

Levin, Maureece (University of Oregon)

[74] *Breadfruit Storage Pits in Pohnpei, Micronesia: Construction and Use*

Breadfruit, an important crop throughout much of the Pacific Islands, is often fermented and stored in pits. On the island of Pohnpei in eastern Micronesia, this practice, which played a key role in the prehistoric and historic prestige economy, has taken place since at least 400 AD. This poster presents the results of the 2008 excavation of a breadfruit storage pit and compares layout and soil profiles to other archaeological breadfruit storage pits on the island. The soil profiles of the pits indicate the way in which the pits were constructed. Differentials in design may point to varying functions, e.g. communal pits vs. small family pits, changes throughout time, and regional variation on the island. This information aids in understanding prehistoric arboriculture systems and food storage on Pohnpei.

Levine, Abigail (University of California, Los Angeles)

[110] *In the Line of Fire: Examining Evidence for Site Burning in the Andean Altiplan*

Recent research at the site of Taraco, an early regional center in the northern Lake Titicaca Basin of Peru, has exposed a sequence of construction periods and land use shifts from at least 1300 BC. Excavations identified three types of burning consistent with three

distinct activity patterns. Of particular significance is a site-wide burning episode that marks the end of Taraco as an economic and political center. These results present the earliest documented evidence for raiding in the northern Titicaca Basin, and suggest important criteria for differentiating among various types of thermal features found in the Andes and elsewhere.

Levine, Abigail [121] see *Brum, Misty CM*

Levine, Marc (Denver Museum of Nature & Science)

[221] *Examining the Symbolic Dimensions of Obsidian Exchange in Postclassic Oaxaca, Mexico*

Current interpretations of obsidian exchange in Mesoamerica tend to focus on political and economic factors, while largely ignoring its social and symbolic dimensions. Few studies include indigenous perspectives of exchange or consider the manner in which decision making regarding trade was socioculturally embedded. Drawing on a case study of obsidian exchange in Postclassic Oaxaca, this paper attempts to redress these issues by examining obsidian's symbolic referents, including its association to prestigious centers, the sacred landscape and venerated deities.

[221] *First Organizer*; [221] *First Chair*

Levine, Marc [13] see *Joyce, Arthur A.*

Levine, Mary Ann (Franklin and Marshall College), Christel Baldia (Archaeological Textile Consulting), John Picard (Franklin and Marshall College), Kathryn Jakes (Ohio State University) and Mary Ann Levine (Franklin and Marshall College)

[255] *The Fabric of Empire in a Native World: An Analysis of Trade Cloth Recovered from 18th Century Otstonwakin*

The residents of Otstonwakin, an 18th century multinational Native American village in Pennsylvania, were involved in extensive trade networks which resulted in the incorporation, modification, and selective adoption of a variety of European-manufactured goods and technologies. Although current excavations (2007-2009) have revealed that the residents of Otstonwakin refashioned European brass objects and manufactured lead artifacts, this paper reports on our analysis of preserved European textile fragments recovered by WPA archaeologists in the 1930s. Through the analysis of the fabric fragments, sewing thread, and metallic lace we explore the material and social negotiation of colonial identity on the Pennsylvania frontier.

Lev-Tov, Justin [154] see *Van Galder, Sarah J.*

Levy, Janet (UNC at Charlotte) [159] *Discussant* [227] *Second Chair* [227] *Second Organizer*

Lewarch, Dennis (Suquamish Tribe), Leonard A. Forsman (Suquamish Tribe) and Stephanie E. Trudel (Suquamish Tribe)

[203] *The Suquamish Tribe Cultural Resources Sensitivity Model of Kitsap County, Washington: A Culturally-Informed Planning Tool*

The Suquamish Tribe developed a GIS-based cultural resources sensitivity model of Kitsap County, in the Central Puget Sound region of Western Washington, using environmental data, estimated transportation cost surfaces, recorded traditional cultural places, oral history information, and analysis of previously recorded archaeological sites in the Puget Sound region. Cultural data, such as accounts of Tribal "pullers" on contemporary canoe journeys, augmented environmental datasets. Tribal staff worked with federal, state, and local agencies to create an array of documents and GIS layers for regional and local planners making land use and permitting decisions, and agency staff conducting Tribal consultation.

Lewis, Brandon

[23] *The Challenges of Incorporating Archaeometry into Archaeological Field Programs*

The integration of archaeometry within the field of archaeology has produced a truly interdisciplinary profession. While advances in the physical and biological sciences have generated numerous interpretive benefits within archaeology, a comprehensive integration

of these varying techniques has proved challenging. These difficulties are compounded when offering archaeological field programs. Although challenging, it is incumbent upon the instructor to provide broad-based and holistic instruction for students pursuing careers in archaeology. This presentation examines the organizational, institutional, and logistical challenges of offering comprehensive student field training at institutions of higher education.

Lewis, Brandon [112] see *Sinclair, Chloe*

Lewis, Mike [217] see *Kozuch, Laura*

Lewis, Quentin (University of Massachusetts, Amherst)

[117] *Unequal Variables: GIS and Spatialities of Inequality*

In this paper, I explore the possibilities of using GIS to study spatialities of inequality. Much GIS usage in archaeology typically focuses on modeling environmental variables and presuming equal access to strategic resources, but the ethnographic and historical records are filled with fragmented and bifurcated spatialities, and archaeological sites resulting from these cultural processes may not conform to expected variables. Using examples from 18th and 19th century New England, I outline some potential variables and processes to suggest further research into spatialities of inequality, and advocate for more socially conscious Geographic Information Systems.

Li, Feng (Columbia University) and Zhonghe Liang (Institute of Archaeology, Chinese Academy of Social Sciences)

[155] *The Guicheng Project and Its Preliminary Results 2007-2009*

The Guicheng Project is the collaboration between Columbia University and the Institute of Archaeology, CASS, and Shandong Provincial Institute of Archaeology. In three years, we have systematically surveyed the 7.5 square km Bronze-Age city in eastern Shandong. The fieldwork was divided into three parts: intensive coring, systematic surface sampling, and test excavation. However, this paper will focus on discussing works in the last two parts.

Li, Min (UCLA), Hui Fang (Shandong University) and Tongxiu Zheng (Shandong Provincial Institute of Archaeology)

[155] *Archaeological Landscapes of the Wen-Si River Valley:*

Surveying the Hinterland of the Qufu Lu City

The 1977-78 survey and excavation of the Lu city in Qufu represents a classics in the archaeological studies of early cities. An international collaborative research project is developed to investigate the hinterland of this Bronze Age city and the historical transformation of cultural landscape around it. This paper discusses the archaeological foundations and presents results from the preliminary field research. We will discuss the challenges and promises of landscape archaeology in a region characterized by both cultural continuity and political rupture.

Li, Yongxian [155] see *Lu, Hongliang*

Li, Zhipeng [155] see *Campbell, Roderick B.*

Liang, Zhonghe [155] see *Li, Feng*

Liardet, Frances (Cardiff University)

[256] *Tricky Passes and Winding Trails: Learning to Make Ancient Glass Bottles, and What this Can Teach Us about Artefacts in Archaeology*

This paper describes my apprenticeship in the making of a group of glass alabastra originally manufactured in the Eastern Mediterranean around 500 BCE. These vessels were made by forming molten glass around a clay core. Central to the project was the idea that a craft tradition is primarily an extended process of skill teaching and learning. I will discuss the development of gestures, tools and materials which constituted my skill learning; the productive tension between my learning, my teacher's skill, and the demands of archaeological artefact reconstruction; and how my experience relates to typology studies and research into technological change.

Libbon, Jonathan (Indiana University of Pennsylvania)

[233] *Geophysical Investigations Along the Allegheny Portage Railroad*

The Staple Bend Tunnel was a key link in the 394 mile Portage Railroad that connected Pittsburgh to Philadelphia in the early 19th century. Through the use of geophysical methods it is possible to determine lost elements of the Portage Railroad. In this project I used ground penetrating radar to investigate previously identified anomalies by the western portal, along with, newly identified structures in the vicinity. Ground truthing was used to test the anomalies identified, as well as determine if they represent cultural or natural features.

Liebmann, Matt (Harvard University)

[1] *The Archaeology of Apostasy and Counterfactual History*

This paper presents the results of a long-term investigation of a relatively understudied phenomenon in archaeology, revitalization movements. Conducted in collaboration with the Pueblo of Jemez between 2001-2009, this research project set out to examine the archaeology of the Pueblo Revolt of 1680 in northern New Mexico, probing the material expressions of nativism and nativism. The results raise various theoretical and methodological questions regarding how archaeologists deal with causality and historical contingency. In an attempt to address these issues, this paper explores the viability of counterfactual reasoning in archaeological interpretation.

[66] *Discussant*

Lillios, Katina (University of Iowa)

[106] *The Role of Museum Guards in the History of Portuguese Archaeology*

Museum guards have a distinctive - though rarely investigated - role in mediating between official state bureaucracies (including museum directors), the public, and the treasured remains of a nation's past. My paper focuses on the guards of the largest repository of archaeological patrimony in Portugal, the Museu Nacional de Arqueologia, between the museum's foundation in 1893 and 1929, when its first director, Dr. Leite de Vasconcellos, retired. Archival research reveals that museum guards played a surprisingly active role in excavations in this early period of Portuguese archaeology, despite the fact that they were rigorously disciplined in their behaviors.

[106] *First Chair*

Lima, Lgia Trombetta [142] see Silva, Francini Medeiros

Lim3n Boyce, Morrison (Direcci3n de Salvamento Arqueol3gico, INAH), Omar Campos Lara (INAH) and Xochitl Del Alba Leon Estrada (UNAM)

[254] *Recent Research in the Northern Gulf Lowlands*

During the last 1 1/2 years I have directed research in the Northern parts of Puebla and Veracruz, Mexico, a region loosely referred to as "Huasteca Meridional." This work is a byproduct of the supervision of seismic surveys undertaken by PEMEX (Mexican Petroleum Company). We have intensively surveyed more than 1,300 square Kilometers, in a region where almost no previous systematic surveys have been undertaken. We have registered over 350 archaeological sites, made numerous surface collections, and constructed detailed maps of formal architecture. Preliminary information will be presented regarding settlement patterns, chronology and possible links with other regions.

Limp, Fred (University of Arkansas) [93] Discussant; [12] Discussant

Lincoln, Thomas (Bureau of Reclamation), Bill Chada (Bureau of Reclamation, Nebraska-Kansas Area Office) and Jennifer Huang (Bureau of Reclamation, Snake River Area Office)

[72] *Use of Light Detection and Ranging (LiDAR) Technology to Document the Condition of Historic-Era Rock Carvings and Petroglyphs in Threshing Machine Canyon, Kansas*

Threshing Machine Canyon was the site of significant activity throughout the 19th Century. Many visitors carved names and dates into the canyon's limestone walls. Reconnaissance survey and recordation was completed in 1994. Over the past 15 years the Bureau of Reclamation has noted vandalism, removal, and erosion of the inscriptions and glyphs. Reclamation is using LiDAR technology to create highly detailed 3-dimensional imagery of the inscriptions and glyphs to document their condition at a very fine scale, and pinpoint those panels that need intervention and treatment to retard erosion or reduce vandalism.

Lincoln-Babb, Lorrie (BIOARCH, L. L. C.) and Chris R. Loendorf (Gila River Indian Community)

[158] *Ritualistic Mortuary Performances During the Late Archaic in the Southwest: There's No Place Like Home*

Patterns in mortuary performances occur among Late Archaic or pre-ceramic sites within the Greater Southwest. Common attributes of these rituals include interment locations, offering types, grave construction, and body position. Evidence also suggests families may have been interred in the same location. Head orientation variability is suggestive of belief differences from later prehistoric populations. Data from Archaic period sites in central and southern Arizona, west Texas, and Northern Mexico are presented. The consistent nature of funeral rituals across this area is suggestive of a widely held mortuary system that emphasized kinship and may have played a role in land tenure.

Lindeman, Michael (Desert Archaeology), Gary Huckleberry, and Henry Wallace

[44] *The Martinez Hill to A-Mountain Irrigation Community*

The identification of Hohokam canals in the Santa Cruz River floodplain suggests the possibility that villages in the Tucson Basin may have been integrated into social and economic groups based, at least in part, on the construction and maintenance of irrigation canals and the attendant sharing of water for agriculture. Four Hohokam villages are known along the Martinez Hill to A-Mountain reach of the Santa Cruz. Canals beginning at Martinez Hill would have watered the floodplain shared by the villages. The system to manage irrigation would have encompassed all of the settlements, transcending traditional village boundaries.

Linderman, Mike (Indiana State Museum and Historic Sites)

[257] *Stabilization of Mounds A and G at Angel Site*

Angel Mounds State Historic Site was listed on the Endangered List of NHL's due to massive erosion of Mound A and erosion at the Ohio River/ Angel Slough connection point. A plan was formalized in 1999 to deal with Ohio River erosion and in 2001 stabilization of the mounds began. The discussion will focus mainly on the work done on Mound A, the most severely deteriorated earthen structure on the site, detailing the initial consultation with Cahokia, Kinkaid, NPS and USDA to the final repair work that eventually removed Angel Site from the dreaded list.

Lindsay, Ian (Purdue University)

[175] *Holding Down the Fort: Magnetic Survey in the Investigation of Political Dynamics at a Late Bronze Age Fortress Settlement, Tsaghkahovit, Armenia*

Geophysical archaeology is gaining popularity in the US as researchers increasingly find advantages in efficient, non-destructive means of investigating ancient human behavior. In the Caucasus, where the social dynamics of nomadic groups have long been debated, magnetic-gradiometry is proving an invaluable aid to identifying thin deposits from short-term occupations that often escape detection by traditional archaeological reconnaissance. This paper discusses a magnetic survey at a LBA fortress in Armenia, revealing for the first time the spatial organization and surprisingly ephemeral nature of LBA domestic architecture and forcing us to rethink how sedentary fortress elites exercised their authority over mobile subjects.

Linduff, Katheryn (University of Pittsburgh) [95] Discussant

Lipe, William (Washington State University), Donna Glowacki (University of Notre Dame) and Thomas Windes (University Of New Mexico)

[84] *Dynamics of 13th Century Depopulation of the Northern San Juan: The View from Cedar Mesa*

Chronological evidence from across the Northern San Juan culture area reveals spatial and temporal patterns of population growth and decline in the 13th century A.D. Depopulation proceeded roughly from west to east, with areas such as Cedar Mesa declining while parts of the Central Mesa Verde area continued to grow. This is consistent with the seriation results described by Curewitz and Matson. These spatio-temporal population trends are discussed in relation to environmental change, warfare, aggregation, and the socio-cultural restructuring of Central Mesa Verde communities.

[84] *First Chair* [130] *Second Organizer*

Lipe, William [84] *see Speller, Camilla F.*; [84] *see Kemp, Brian M.*

Lipo, Carl (California State University Long Beach), Jelmer Eerkens (University of California Davis) and Sachiko Sakai (University of California Santa Barbara)

[161] *Ceramic technology diffusion among prehistoric mobile populations of the California deserts*

Relative to sedentary and agricultural societies we know very little about pottery among smaller-scale and residentially mobile societies. With luminescence dating, we are able segregate the earliest pottery from later sherds allowing us to examine introduction of the technology, providing greater detail on the types of pots that were initially made and the functions they served. Using luminescence dates from multiple assemblages across the deserts of California and cultural transmission models that account for the diffusion of innovations in prehistoric settings, we explore how material technologies are transmitted across time and space within small-scale hunting and gathering groups.

Lipo, Carl [251] *see Hunt, Timothy D.*

Lippert, Dorothy (National Museum of Natural History)

[7] *Memory and Longing in the Practice of Repatriation*

Native people, like many "persons of color," are identified as having culture in ways that the non-colorful don't. This seems to have created a longing on the part of anthropologists to possess, and benefit from proximity to, Native culture. Objects and human remains present in collections serve as souvenirs of non-Native control over cultured peoples. Resistance to repatriation reveals a sense of nostalgia for the pre-NAGPRA era when the (good) Indians participated in archaeology only as sources of data. This is actually an Imperialist Nostalgia, resulting in the passage of repatriation laws that have irrevocably changed the discipline.

[7] *First Chair First Organizer*

Lippi, Ron [23] *see Gudino, Alejandra Mariana*

Lippi, Ronald (University of Wisconsin--Marathon) [23] *First Moderator*

Little, Nicole [161] *see Speakman, Robert J.*

Littman, Robert [92] *see Silverstein, Jay E.*

Liu, Haiwang (Henan Provincial Institute of Archaeology), Lingyu Hung (Washington University in St. Louis), Tristram Kidder (Washington University in St. Louis) and Yuqin Song (Peking University)

[189] *Excavations at Sanyangzhuang: A Deeply Buried Han Dynasty site in Henan Province*

The Sanyangzhuang site is a Han Dynasty agricultural community that was buried by Yellow River flooding in the first century C.E. Because of the circumstances of flooding, the site is exceptionally well preserved and provides a glimpse into settlement patterns and

agrarian practices in Wang Mang/early Eastern Han times. In this paper we discuss the excavations of four house compounds and adjacent agricultural fields in 2005 and more recent geoarchaeological research on flooding at the site and its relation to Yellow River floodplain evolution.

Liu, Li and Xingcan Chen (Chinese Academy of Archaeology, Institute of Archaeology)

[155] *From Macro to Micro: the Sino-Australian Yiluo Region Project*

The Yiluo collaborative archaeology project has employed multiple approaches ranging from full-coverage regional survey, site excavation, experimental study, to archaeobotanic analyses. The data generated over the last 12 years has enabled us to evaluate the development of complex societies over 6000 years of prehistory in this region, including changing subsistence strategies and the processes of state formation. Our current research questions are related to the transition from mobile hunting-gathering society to sedentary villages, and preliminary results from residue and usewear analyses have provide much insights to these issues.

Livingood, Patrick (University of Oklahoma)

[26] *Digital Image Analysis of Shell Temper from the Moon Site (3Po488), Arkansas*

This poster will present the methods and results from a pilot study using digital image analysis to measure shell-temper size and abundance on sherds from the Moon Site (3Po488) in Arkansas. This technique gathers data on temper that was previously only available through petrographic thin-section analysis and gathers it in minutes instead of hours for fractions of a penny per sample.

Livingood, Patrick [59] *see Regnier, Amanda L.*

Lizama Aranda, Lilia (Universidad Autonoma Metropolitana Mexico), Harlen Tzuc Salinas (Universidad Autónoma de Yucatán) and Julio Cesar Hoil Gutiérrez (Centro de Investigaciones y Estudios Superiores en Antropología Social, Unidad Peninsular, CIESAS)

[212] *Exposing Tangible Heritage in Correlation with a System of Values and Concepts within Mexican Archaeologies*

Mexican local concepts on which cultural heritage gets valued and why are oriented within global-age economics. Cases of archaeological sites will be discussed which are categorized within a staircase of economical importance based on political, social, and technological features. We will also present concepts concerning local populations' desires to help protect and promote a site for their own benefit. We suggest the importance of having a set of balanced values and concepts. We should educate ourselves and communicate about different perspectives of heritage to professionals and engage them with multiple publics in an effort to achieve development in developing countries.

Lizarralde, Marina (Washington University in Saint Louis) and Lee Arco (Washington University in Saint Louis)

[26] *Analysis of the Tetrahedron Deposit at Jaketown*

The 1951 excavations at Jaketown discovered a dense deposit at the base of Mound A composed of fragmented and intact pyramid-shaped fired-earthen objects associated with the site's Early Woodland component. Few examples of these tetrahedrons exist in the Lower Mississippi Valley archaeological record. Recent fieldwork at Jaketown in 2009 encountered this tetrahedron deposit and identified a fire pit feature filled with the objects in a distinct behavioral context. This poster presents the results of subsequent analyses of the composition, chronology, and function of these unique fired-earthen artifacts.

Lloyd, Timothy (John Milner Associates, Inc.)

[179] *Data Recovery of 12FR336, a Multi-Component Prehistoric Site along the Whitewater River in Southeastern Indiana*

JMA's data recovery of Site 12FR336 resulted in the excavation of 106 postmolds and 74 pit and hearth features. The pit and hearth features were encountered at all levels within the sub-plowzone to a

depth of 130 cm below surface (cmbs). All postmolds were located with the first 50 cmbs. Radiocarbon dates indicate that the near-surface features date to the Late Woodland, while the lower features date to the Late Archaic. The relative dearth of artifacts associated with the pit and hearth features is noteworthy and may be the result of alluvial scouring. Based on the artifact assemblage, including archeobotanical and zoo-archeological remains, Site 12FR336 appears to represent a series of short-term seasonal occupations, some of which may have been ceremonial in nature.

Lloyd-Smith, Lindsay [214] see *Krigbaum, John*

Lockhart, Jami J. [73] see *Ernenwein, Eileen G.*

Lockhart, Jamie, Juliet Morrow (Arkansas Archeological Survey) and Shaun McGaha (Arkansas Archeological Survey)
[217] *Archaeogeophysical surveying at the Prehistoric Old Town Ridge Site (3CG41) in Northeastern Arkansas*

This presentation highlights results of geophysical surveying at the Old Town Ridge (3CG41) site, located in northeastern Arkansas, 40 kilometers east of the Mississippi River. The site was occupied at approximately 1300 A.D. Artifacts signify ancient prestige, and suggest association with the Southeastern Ceremonial Complex. Aerial photographs indicate an eighteen-acre area of intensive use bounded on the north by a relict river channel. Magnetometry has revealed numerous anomalies that are consistent with aligned structures and other features. The imagery also reveals perimeter earthworks and a possible palisade. These data provide pinpointed locations for testing, and primary data regarding intrasite organization.

Lockwood, Christopher (University of Washington), Britton Shepardson ('a pō - The Rapa Nui Youth Involvement Program)
[259] *Assessing Kohala Field System Land Use through Geochemistry*

The Kohala Field System, a dryland zone used intensively by sweet potato farmers c. AD 1400-1800, has been a key area for studying the evolution of Hawaiian agriculture. This paper reviews efforts to track variation in soil nutrient levels across the landscape and to relate this variation to differential land use. Particular attention is paid to the impacts of prehistoric pigs and historic cattle upon the landscape.

Loebel, Thomas (University of Illinois-Chicago)

[90] *Microwear, Great Lakes Paleoindians, and the Perishable Record*

Most of what we know or think we know about the Eastern Fluted Point Tradition comes through the analysis of lithic assemblages. While most Eastern fluted point sites lack preserved organic remains, stone tools recovered from them often contain evidence of the perishable record, primarily in the form of optically distinctive use-wear polishes preserved on their surfaces. High-powered microwear provides an avenue to circumvent the poor organic record and gain insights into soft technology and adaptations of Late Pleistocene hunter-gatherers. In this paper I discuss results of recent microwear studies conducted at the Hawk's Nest, Gainey, Nobles Pond, and Shawnee-Minisink sites.

[224] see *Ellis, Christopher J.*; [210] see *Hill, Matthew G.*

Loendorf, Chris R. [158] see *Lincoln-Babb, Lorrie*

Logan, Melissa (PaleoResearch Institute, Inc.) and Linda Scott Cummings (PaleoResearch Institute, Inc.)

[55] *Organic Residue Analysis: Finding Evidence of Foods Using FTIR*

Application of infrared spectroscopy in archaeology for examining organic residues on/in ceramics, FCR, as well as other types of artifacts and sediments can yield an abundance of information on past lifeways, including subsistence, technology, and religion. FTIR has experienced a resurgence for identifying organic substances over the past few decades. Innovative use of this technology in

archaeology to recognize materials such as plant or animal fats, plant waxes, esters, proteins, and carbohydrates expands current databases by offering new information beyond that which can be obtained from existing methods of analysis.

[10] *Discussant*

Logan, Melissa [123] see *Cecil, Leslie G.*; [4] see *Puseman, Kathryn*

Lohse, Jon (Center for Archaeological Studies), C. Andrew Hemmings (Mercyhurst College), and Michael B. Collins (Gault School for Archeological Research)

[210] *Putting the Specialization Back in Clovis: What Some Caches Reveal about Skill and the Organization of Production in the Terminal Pleistocene*

Recent opinion regarding Clovis as big-game hunters has turned to the view that they were generalists, rather than the specialists archaeologists have long envisioned, who pursued megafaunal prey along with a number of other species. This question, whether or not Clovis diet was specialized, obscures the role of specialization in making possible the pursuit and exploitation of large herbivores. Using metric and technological data from Clovis caches, this paper advances a model for embedded specialization as an economic or craft undertaking that describes how some Clovis toolkits were manufactured.

Lohse, Jon [210] see *Hemmings, C. Andrew*

Lombera Hermida, Arturo [205] see *Miller, Alexandra E.*

Longacre, William (University of Arizona)

[119] *Binford in the Southwest*

Lewis R. Binford had a profound impact on Southwestern Archaeology beginning in the early 1960s. Beyond encouraging the "Ceramic Sociology" of that era, he also promoted early examples of sampling, both surface and subsurface, computer assisted sophisticated quantitative analyses and more all directed toward Archaeology as Anthropology. His influence continues today amidst many new directions in both method and theory.

Longman, Adam M. [186] see *Rice, Erin M.*

Longstaffe, Fred J. [138] see *Surette, Flannery K.*

Longstaffe, Matthew (Trent University) and Gyles Iannone (Trent University)

[54] *The View From Below: Community Response to Dramatic Political and Social Transformation at the Ancient Maya City-State of Minanha, Belize*

Over the span of its history, the community at the ancient Maya city-state of Minanha, Belize, underwent dramatic changes in its political and social environment, marked by the establishment of a royal court during the Late Classic period (AD 675-810). A community-based archaeological study aims to clarify the role, and function Minanha's commoner population maintained in relation to this royal court and to explain community response to the dramatic social, and political processes that led to its establishment, and eventual decline.

Looper, Matthew (California State Univ-Chico) [260] *First Organizer*; [260] *First Chair*

Loorya, Alyssa (Gray & Pape) and Michael Matts (Gray & Pape)
[252] *Millennium Public Outreach and Education Project*

The Millennium Pipeline Project traverses a large portion of New York State. As part of the CRM process, Gray & Pape, Inc., in conjunction with the New York State Office of Parks, Recreation, and Historic Preservation, proposed developing a public outreach and educational web site and curriculum package. The archaeological project uncovered several prehistoric and historic sites. Using detailed examples, an overview of the public outreach/educational project and its goals will be presented.

Lopez, Marko (Instituto Nacional de Cultura)

188] *Kasapatac-Kakallinca: A Tiwanaku Site in the Middle Chile Drainage, Arequipa*

Although Tiwanaku presence has been documented in Moquegua and northern Chile, its impact on the neighboring region of Arequipa remains relatively unexplored. There is convincing evidence that points to Tiwanaku influence, either direct or indirect, at sites such as Sachaca, Alatal, Pillo and Sonqonata, all located near the modern site of Arequipa. We present our analysis of ceramics from the site of Kasapatac Kakallinca, which sheds light on the precise relationship between Tiwanaku and contemporaneous local ceramic traditions, and my explain why Tiwanaku expanded outside of the Titicaca Basin into the Arequipa region.

López, Catalina [258] *see Kittel, Michelle*

Lopez Corral, Aurelio (Penn State University)

[156] *Land Tenure and Agricultural Production among Commoner Households in Late Postclassic Tepeaca, Mexico*

This paper examines the relationship between household agricultural production and the land tenure system in Late Postclassic Tepeaca. Ethnohistorical accounts show that elites owned all land while commoners were landless, but were allowed to work small parcels of a noble's estate and in return paid tribute in produce and service. Because agriculture depended on rainfall water, and may have been affected by volatile climatic conditions, productivity was probably low having few possibilities for surplus generation. This work explores the alternative economic strategies taken by commoners to buffer risk and agricultural failure, including reciprocity and intermittent or part-time craft production.

López Luján, Leonardo (Museo del Templo Mayor, INAH), Alejandra Aguirre Molina (Museo del Templo Mayor, INAH), Belem Zúñiga-Arellano (Museo del Templo Mayor, INAH), Norma Valentín (Museo del Templo Mayor, INAH) and Ximena Chávez Balderas (Museo del Templo Mayor, INAH)
[64] *Apanohuayan, The Place for Crossing the Water: Faunal Remains West of the Earth Goddess Tlaltecuhltli monolith in Tenochtitlan*

The objective of the seventh field season of the Proyecto Templo Mayor is to explore the ritual space located at the base of the main pyramid in Tenochtitlan. This paper analyzes the faunal remains recovered inside a series of superimposed entrances that hypothetically lead to the tomb of a Mexica sovereign. Identification of the zoological species and the areas of origin will shed light on the regions that were within the sphere of access to the Mexica empire. Discussion will focus on evidence of the capture/collection, transport, captivity, death, cultural modifications, and symbolism of the animals buried in this context.

Lopez Varela, Sandra (U. Aut. Estado de Morelos) [227]
Discussant

López-Hurtado, Luis (University of Pittsburgh)

[98] *Factional Competition and Religion at the site of Panquilma, Peruvian Central Coast*

Anthropological focus has been focusing in on the way that interested individuals or groups acquired and maintained ruling positions, and on the role that ideology played in this process. Recent research at the site of Panquilma evaluated the importance of ideology in the development of hierarchy at a site located in a region where, according to ethnohistoric documents, hierarchy was based in the religious ascendance of one of the most important pilgrimage centers of the Andes: Pachacamac. Evidence recovered at Panquilma is pointing towards a scenario where factional competition and religious activities were pivotal in the development of hierarchy at Panquilma.

López-Jiménez, Alejandro [235] *see Arroyo-Cabrales, Joaquin*

Lopinot, Neal (Missouri State University) and Gina Powell (Missouri State University)

[172] *Harvesting the Forests and Fields: A Summary of the*

Archaeobotanical Record for the Avenue of the Saints

The results of archaeobotanical analyses for 11 sites dating from Early Archaic through Late Woodland times will be summarized. Data for Archaic sites are scant, but the record for the Middle and Late Woodland periods near the northeast Missouri-southeast Iowa border is especially rich. Human-plant relationships generally coincide with those further to the south near the confluence of the Mississippi, Missouri, and Illinois rivers, although perhaps with less emphasis on starchy-seed production. Maize was a relatively late introduction and apparently a minor crop prior to Oneota occupation of the area.

[146] *see Ray, Jack H.*

Lopiparo, Jeanne (Rhodes College) and Geraldina Tercero (University of South Florida)

[65] *Re-Centering Currusté: Parks, Patrimony, Pedagogy, and the Public*

The development of Currusté as a national park is part of recent IHAH efforts to expand the definitions and accessibility of Honduran cultural patrimony. This multifaceted project has created simultaneous needs for intensive research, pedagogy, and public engagement to interpret and make relevant the history of regional research. Archaeological investigations have provided interpretations for extensive museological plans dedicated to themes of pedagogical and public interest. Collaborative efforts created detailed contextual reconstructions of the life-history of Currusté within its broader context, while foregrounding processes of knowledge creation to understand what archaeology might tell us about a pluralistic Honduran past and present.

[65] *Second Organizer*

LORE-LPB Team [135] *see Batista Martinez, Raquel; [135]* *see Ahrens, Corrie L.*

Lorenz, Joseph (Central Washington University), Brian Kemp (Washington State University), and John Johnson (Santa Barbara Museum of Natural History)

[122] *The Genetic Structure of California Indians: Using mtDNA to Analyze Relationships Across the Americas*

The mitochondrial genome is most widely studied segment of DNA in the human species. Due to its properties of inheritance mtDNA provides an insight into the maternal ancestry of individuals that is not possible with autosomal markers. It is most likely to be retrieved from postmortem tissue and hence mtDNA from past populations can be compared directly with that from modern populations. Using sequence variation in the control region of the mtDNA we have begun to construct a picture of how populations in Southern California fit into the broader picture of worldwide mitochondrial relationships.

Lorenzini, Michele (Southern Illinois University - Edwardsville), Gregory Vogel (Southern Illinois University - Edwardsville), Julie Holt (Southern Illinois University - Edwardsville)

[162] *Engaging Undergraduates in Archaeology: Curriculum and Beyond at SIUE*

The goal of the Anthropology Department at Southern Illinois University Edwardsville is to produce excellent undergraduates. Students learn anthropology best by actually doing it. All SIUE undergraduates complete a year-long senior assignment as the capstone to their undergraduate education. Most anthropology students conduct original research for their projects. Archaeology students, in particular, have been very successful winning grants to support their projects, winning student paper competitions, and publishing their research. This poster examines SIUE's archaeology curriculum, culminating in the senior project, as well as funding and other resources that enable us to produce high quality graduates who are already experienced archaeologists.

Loring, Stephen (Arctic Studies Center, Smithsonian Institution) and Derek Wilton (Memorial University)

[90] *Another "Ghost of Courageous Adventurers": a Ramah Chert Fluted Projectile Point from the Champlain Sea Beaches of northern*

Vermont

A fluted projectile point found in Fairfax County, Vermont approximately 70 years ago has been determined to be manufactured from Ramah chert from northern Labrador. Using laser ablation inductively coupled plasma mass spectrometry we analyzed the fluted point along with Ramah chert quarry samples, and a suite of other fine-grained quartzites found in northeastern North American archaeological assemblages. The acquisition of Ramah chert by Paleoindians from Vermont would have necessitated a round-trip journey of 3000 miles along a recently deglaciated coastline further supporting an interpretation that some northeastern paleoindian groups had perfected an Inuit-like arctic maritime adaptation.

Losey, Robert (University of Alberta) and Tatiana Nomokonova (University of Alberta)

[16] *Hunter-gatherers of Middle Holocene Lake Baikal, Siberia: Biocultural Discontinuity, Climate Change, and the Zooarchaeological Record*

At the southern margin of the eastern Siberian taiga is Lake Baikal, one of the world's largest lakes. The western Baikal region, our research area, consists of a mosaic of forest-steppe, boreal, alpine, littoral, and marine-like environments. One of the most intriguing features of its Middle Holocene archaeology is a gap and biocultural discontinuity in the region's mortuary record 6-7000 years ago. This transition appears to co-occur with a period of significant climate and environmental change. These sets of changes are examined here from the perspective of human subsistence patterns based on recent research on the region's zooarchaeological record.

Lothrop, Jonathan (New York State Museum), Arthur Spiess (Maine Historic Preservation Commission) and James Bradley (Archlink)

[224] *The Younger Dryas and Late Pleistocene Occupations of the New England-Maritimes*

This paper examines potential effects of the Younger Dryas (YD) on Paleoindian populations in the New England-Maritimes region (NEM). Unlike some regions to the south and west, human colonization of the NEM roughly coincides with, rather than predates, the onset of the YD. Archaeological data show no evidence of a cultural break or population decline at the start of the YD, but rather, ongoing adaptation to changing environments of the NEM during and after colonization. Provenience of sites and isolated point finds suggests Paleoindians did not occupy the northernmost reaches of the NEM until roughly midway through the YD.

Loubser, Johannes (Stratum Unlimited, LLC)

[104] *Mental States Are Locations: A Cognitive Interpretation of Rock Art and Built Structures*

Rock art and built structures from South Africa are interpreted in terms of statements made by direct descendants of those long-departed people who created the art and structures. The finding that most of our abstract ideas, including religious ones, are for the most part formulated in terms of concrete bodily sensations and experiences, help archaeologists interpret how culturally agreed-upon body movements and associated concepts determine the placement and form of rock art and house shape.

Louderback, Lisbeth (University of Washington)

[118] *Development of Grinding Stone Technology in the Great Basin*

The intense use of small seeds was a crucial turning point in human dietary history. Around 8,000 years ago, the Great Basin went through its own version of a "broad spectrum revolution", one that included technological change and small seed processing. O'Connell et al. (1982) have predicted that widespread aridity resulted in reductions of high-ranked foods and the adoption of small seeds in the diet. This hypothesis was tested by examining the development of grinding stone technology. I analyzed ages and abundances of stones in three regions of the Great Basin, comparing them to patterns in the paleoenvironmental record.

Loughlin, Michael (University of Kentucky)

[254] *The Classic Period in the El Mesón Area of the Eastern Lower Papaloapan Basin*

During the Early Classic period, settlements in the El Mesón area of the Eastern Lower Papaloapan Basin broke from Tres Zapotes' political control. This shift was accompanied by a boom in population and the establishment of new civic-ceremonial complexes. In this paper I examine this change, placing particular emphasis on shifts in the local settlement pattern and political and economic organization. I argue that with the decline of Tres Zapotes, the location of the El Mesón area, within an important trade corridor, provided an opportunity for local political leaders to establish the area as an independent political and economic entity.

[133] *Discussant [133] First Chair*

Love, Daniel P. [86] *see Matovich, Jeanette*

Lovett-Graff, Bennett (University Press of Colorado) [93] First Organizer, [93] First Chair

Lovis, William (Michigan State University), Gerald Urquhart (Michigan State University), John Hart (New York State Museum) and Robert Feranec (New York State Museum)

[4] *Alkali Processing of Maize and Resultant d13C Values on Systematic Experimental Carbonized Residue C3 Food Mixes*

Experimental carbonized residues composed of maize (*Zea mays* ssp. *mays*), a C4 plant, and C3 resources demonstrate that a single threshold d13C value will not necessarily identify maize in a residue. Other experiments using green kernels, whole wet hominy, and meal indicate it is the mobilization of carbon from maize and C3 resources that determines d13C values; maize can be under- or over-represented in d13C values based on the form cooked. Ethnographic evidence demonstrates that dried maize kernels were commonly processed with alkali to create hominy. Here we present the results of d13C determinations on whole kernel maize cooked with alkali, and compare these results against those for other forms of maize.

Lowe, Kelsey [217] *see Mehta, Jayur M.*

Lowe, Lynne [88] *see Sellen, Adam T.*

Lozada, Maria (University of Chicago)

[188] *Mortuary Landscapes in the Vitor Valley of Southern Peru*

The location and structure of cemeteries represent key means by which to understand the social structure and/or ideological perceptions regarding death and life in past societies. Human occupation in the Vitor Valley stretches over 4000 years, spanning the Formative Period until the modern era, allowing archaeologists to interpret how mortuary behavior adapted over time to various cultural, physical and socio-political changes. We explore the relationship between residential areas and cemeteries diachronically from the Ramadas Tradition (Formative) to the modern period. We argue that mortuary practices remained remarkably uniform over time despite dramatic changes in the cultural and physical landscape.

[188] *First Organizer, [188] First Chair*

Lu, Hongliang (Sichuan University), Amanda Henck (University of Washington), James Taylor (University of Washington) and Yongxian Li (Sichuan University)

[155] *Archaeological Research at a Han Dynasty Settlement in Jiuzhaigou National Park, Sichuan*

Starting in 2007, Sichuan University and the University of Washington, Department of Anthropology, have been conducting archaeological survey in the highlands of Northwest Sichuan. After discovery in 2007, excavations began at the Han Dynasty settlement of Ashaonao. Here we report our preliminary findings, among which are the first investigations of Han Dynasty residential structures in this region and Neolithic strata underlying the Han remains. The Han structure and construction technologies of this building show strong connections with settlements known from Northwest China (Gansu).

Lu, Xueming [155] *see Peterson, Christian E.*

Lucas, Steve (Nez Perce National Forest) [43] *Cultural Resource Management Along the Salmon River - Frank Church River of No Return Wilderness*

Nearly 40 years have elapsed since the first and last significant effort to document cultural properties along Idaho's Salmon River, within the Frank Church River of No Return Wilderness. The archaeologically rich corridor represents the longest un-dammed river system in the Inland Northwestern United States. The Nez Perce National Forest, in cooperation with Rain Shadow Research, Inc., have spent the last five years recording and monitoring numerous sites situated along 30 miles of the "River of No Return," in addition to surveying hundreds of acres within this remote, and federally designated wilderness area of central Idaho.

Lucero, Lisa (University of Illinois at Urbana-Champaign)

[153] *Climate Change and Classic Maya Political Decisions*

Setting in motion the events that led to the disappearance of Classic Maya kings by the A.D. 900's in the southern Maya lowlands was a long-term drought. Maya kings implemented short-term tactics that only exacerbated problems. These political decisions ultimately resulted in people abandoning rulers and centers because of the lack of water due to the drying up of massive reservoirs. If rulers had employed long-term solutions, would they have been enough to prevent their demise? This question is crucial in view of current concerns on climate change and similar short-term political decisions.

[153] *First Organizer*; [153] *First Chair*

Luchsinger, Heidi [47] *see Gutierrez, Maria A.*

Luhman, Hope (The Louis Berger Group, Inc.)

[180] *The Who, wot, Where, When & hw: Considering the Possibilities 4 Public Outreach in CRM*

Understanding the audience, organizing information, the venue, timing, and presentation offer challenges to achieving effective public outreach in a cultural resource management (CRM) context. This paper offers perspectives on where CRM might rethink and expand standard approaches while finding new ways to incorporate the evolving technological toolkit for reaching intended audiences.

[180] *First Organizer*; [180] *First Chair*

Luin, Luis (Aj-Ts'ib), Arthur A. Demarest (Vanderbilt University) and Brent Savoie (Primeros Pasos)

[212] *Maya Archaeology as an Instrument of Regional Education, Empowerment and Indigenous Development: Taking it to a Higher Level*

Maya archaeology has been slow in incorporating meaningful large scale outreach goals, especially given the fact that the "Indiana Jones" appeal of this subfield provides extraordinary visibility which can be used for ethical ends. In Guatemala the projects described here were planned from the beginning on a regional scale with creation of locally controlled parks, intercommunity collaboration, education, and indigenous empowerment as principal, not secondary goals. The battle with political and racist obstacles was won, but the reluctance of archaeologists themselves remains. Yet the success of these projects demonstrates that such research designs are a moral imperative in Maya archaeology.

Luke, Christina (Boston University)

[65] *Smart Power and Cultural Diplomacy in Honduras: Heritage and People-to-People Exchanges*

The intersection of foreign affairs and cultural diplomacy represents an increasing important arm of "smart power," the merging of hard and soft power in U.S. foreign policy. Much of the rhetoric associated with U.S. diplomacy in Honduras places heritage at the center of "people-to-people" exchanges, the programming meant to promote "mutual understanding" across national boundaries aimed at winning "hearts and minds." How such programming plays-out is dictated by the official governmental management of heritage, increasingly a material-focused heritage. Archaeologists balance the spheres of upper-echelon governmentality, long-term local community networks, and sustainable development projects within the mosaic of U.S.

foreign relations.

Lukowski, Susan (Washington State University) and Colin Grier (Washington State University)

[203] *Investigating Patterns of Resource Consumption in a Northwest Coast Plankhouse*

Household archaeology attempts to understand how households were ordered and how the house itself structures activities. Excavations in House 2 at the Dionisio Point site in the Southern Gulf Islands of British Columbia, Canada, produced a large set of artifacts and fauna. The artifact assemblage reflecting production activities has been analyzed previously. Here, faunal data within the house are examined spatially and quantitatively, revealing patterns of differential consumption of various faunal taxa. Comparison of production and consumption assemblages provides a basis for drawing inferences regarding the nature of cooperation, ownership, and status within a plankhouse.

Luksha, Victoria (Graduate Student, University of Montana)

[163] *Artifact Conservation: A Cost-Effective, Mildly Invasive Method*

The information recovered from organic artifacts is greatly reduced every hour it is exposed to the air. Traditional active conservation methods have saved many artifacts by using modern chemical additives or resins. These approaches are widely accepted and supported. It is important to consider the invasive nature of these compounds and the cost in storing, using, and disposing of these chemicals. This is a preliminary study involving methods and materials that are cost-effective and using common materials like paraffin to attain better preservation while saving the basic structure of the artifact for later molecular testing.

Lunagomez Reyes, Roberto (Universidad Nacional Autonoma de Mexico)

[254] *Medias Aguas, Veracruz: Datos e Interpretaciones*

En esta ponencia se presentarán los datos recientes de los distintos estudios y materiales arqueológicos del Proyecto Arqueológico Medias Aguas-PAMA. El reconocimiento de superficie, el mapeo y las excavaciones en la región de Medias Aguas, Veracruz iniciaron en el año de 1999 y continuaron durante los años 2000, 2003 y 2004. Los estudios realizados incluyen información sobre la lítica pulida, la lítica pulida-obsidiana, hachas y figurillas cerámicas, la restauración de vasijas cerámicas, arquitectura, sistema de enterramientos y el patrón de asentamiento prehispánico desde el periodo Preclásico Inferior (1,500 a.C.) hasta el periodo Clásico Terminal (1,000 d. C.).

Lundeen, Benjamin [235] *see Randklev, Charles*

Lunn, Anna

[59] *Archaeological Investigations at the Slayden Site (40HS1), Humphreys County, Tennessee*

The Slayden site (40HS1), located on the bluff of the Duck River in Humphreys County, Tennessee, was excavated in the 1930s as part of the New Deal programs. The site is characterized by a burial area, seven residential mounds, and a main village area and plaza. Field notes, maps, and photographs from the 1930s provided the basis for reconstructing site excavations, while artifacts were analyzed for temporal affiliation. Ceramic analysis and comparison to nearby sites indicate that the primary occupation was probably after A.D. 1000, though earlier components are also present.

Lupo, Karen D. [53] *see Safi, Kristin N.*

Lurie, Rochelle (Midwest Archaeological Research Services, Inc.) and Kathleen L. Ehrhardt (Illinois State Museum)

[102] *Setting the Stage: Historic and Archaeological Context for the New Lenox Site*

New Lenox is one of only a handful of archaeological sites in Northern Illinois with Upper Mississippian occupations containing European trade goods. Radiocarbon dates, along with artifacts recovered from discrete features, allow us to identify Langford, Oneota, and protohistoric occupations. In this paper, we review what

little can actually be said with confidence about these types of occupations in the region over the late prehistoric/early protohistoric period, and evaluate the new findings from New Lenox in terms of their potential contributions to longstanding questions of ethnic identity, settlement, and the onset of European influence in the area.

Lurie, Rochelle [102] *First Organizer*; [102] *Second Chair* [102] see Katz, Steven A.

Lusteck, Robert (Rhodes College)

[55] *Small Things Forgotten: Recovery of Phytoliths from Food Residues*

One of the benefits of working with phytoliths is their resistance to alteration by curation. Unlike chemical residues, phytoliths are not damaged by time, or altered by glues or storage methods. As long as pot sherds are not assiduously scrubbed, food residues that accumulate on the inside surfaces of ceramics are likely to remain in place and provide enough material for phytolith analysis. Phytoliths also can be derived from archaeological reference samples, like charred corn cupules or cobs. In this paper, I discuss the value of phytolith research on prehistoric maize specimens from the central and southeastern U.S.

Luzzadder-Beach, Sheryl (George Mason University) and Timothy Beach (Georgetown University)

[91] *Wetlands Agricultural Research*

We have now completed two decades of wetland studies in Blue Creek and Programme for Belize. In this time we have applied multiple paleoecological and geoarchaeological methods to understand wetland morphology, formation, physical and biological properties, functions, evolution, and human use. The last decade of research has focused on the human use potential, through excavations and mapping in the wetlands of Blue Creek and PfB. Herein we summarize the progress and findings of this research involving over forty excavations, and the most recent results of the 2009 field season, and their implications for interpreting other wetland sites across Northern Belize.

Lycett, Mark (University of Chicago) [255] *Discussant*

Lycett, Stephen (University of Kent)

[205] *Stone Tools and Hominin Dispersal: A Cladistic Analysis of Acheulean Handaxes*

Based on broad dating patterns, it has been suggested that the appearance of Acheulean handaxe technologies outside of Africa was the result of hominin dispersals, yet independent tests of this hypothesis remain rare. Here, this hypothesis is tested using an intercontinental dataset of Acheulean handaxes and a biological phylogenetic method (maximum parsimony). The analyses produce a cladogram consistent with phylogeographic predictions derived from the African Acheulean dispersal hypothesis. Moreover, a bootstrap analysis provides evidence that this pattern is statistically robust, and the maximum parsimony tree is also shown to be significantly different from a tree constrained by stone raw materials.

Lyman, R. (University of Missouri Co)

[207] *Taphonomy, Pathology, and Paleoecology of the "Big Elk" from Terminal Pleistocene Sediments at Marmes Rockshelter (45FR50)*

Human remains thought to be of Pleistocene/Holocene age discovered in 1968 at Marmes Rockshelter (45FR50) in southeastern Washington were associated with remains of what at the time were believed to be remains of a butchered elk (*Cervus elaphus*) that were significantly larger than modern elk. Recent analysis of these elk remains reveals a skeletally mature individual with no evidence of butchering but clear indications of carnivore gnawing. The elk had two types of pathologies, and was of a size only slightly larger than some modern elk. The elk is about 9500 C14 years old.

[207] *First Chair*

Lynch, Elizabeth (University of Wyoming)

[117] *Bedrocks Metates along the Chaquagua Drainage: Building an*

Conceptual Framework for Prehistoric Landscape Knowledge

The canyons and tributaries of the Purgatoire River in Southeastern Colorado reveal evidence of continuous occupation of indigenous peoples for thousands of years. Evidence abounds for habitation by plains hunter gatherers, horticulturalists and possibly ancestral woodland culture groups. A unique feature of this regional system is the presence of bedrock metates occurring in varied site contexts. This paper addresses the problem of how prehistoric peoples in this region may have incorporated bedrock metates within their socio-cultural view of the landscape by through the use of Photogrammetry and GIS to explore the regional typology and distribution of these features.

Lynch, Joshua [99] see Morton, Shawn G.

Lynch, Shaun and Thomas Rocek (University of Delaware)

[87] *The Dunlap-Salazar Site Lithic Sources, and Highland Pithouse Period Mobility in the Jornada Mogollon of South-Central New Mexico*

This paper examines mobility at the Dunlap-Salazar pithouse site in Lincoln County, New Mexico, ca. 550-850 cal. A.D. We use the relative percentage of local vs. non-local raw materials and of high quality chert as measures of lithic procurement strategies, and thus indirectly mobility. Comparing these values against earlier (Archaic) and later (Pueblo) occupations across the Formative boundary, we find that like pueblo period patterns, Dunlap-Salazar occupants used high percentages of local materials and limited quantities of chert. However, preliminary results suggest that the chert abundance may decrease over the course of the site's occupation, suggesting shifting patterns over time.

Lynott, Mark (National Park Service)

[176] *Ditches, Walls, Mounds and Monuments: What Do We Really Know About Ohio Hopewell Earthen Enclosures?*

For two centuries scholars have hypothesized about the purpose of the numerous prehistoric geometric earthen enclosure sites in southern Ohio. In recent decades, archaeologists have begun to examine the chronology and methods of construction associated with these great earthen monuments. Geophysical and geoarchaeological studies provide new data that offer more refined interpretations about these unique earthen monuments. Assumptions about the potential contemporaneity of various sites, and the role that borrow pits, ditches and surface scraping may have played in wall construction may need to be reconsidered.

[176] *First Chair* [176] *Second Organizer*

Lyon, Edwin (Tulane University) [59] *Discussant*

Lyons, Kevin (Kalispel Tribe of Indians)

[207] *An Analysis of Kalispel Ethno-historic Village Catchments in the Lower Pend Oreille Valley, Northeastern Washington*

Kalispel community histories provide rich contextual information on where and what people did to meet their provisioning needs. Viewed through the prism of cultural ecology these data provide measurable and rational expectations for the cultural uses of the watershed. Most striking is the intersection between place name and historic cover type data that jointly indicate a higher density of winter village packing than is typically expected and a near equal weighting of cover types selected for optimal winter encampment selection. These anecdotal data can be argued to serve as a proxy for cultural adaptation to a mesic forest environment.

Lyons, Kevin [207] see Hicks, Brent

Lyons, Patrick (Arizona State Museum)

[76] *Digital Curation at the Arizona State Museum*

Founded in 1893, the Arizona State Museum (ASM) at the University of Arizona is the oldest and largest anthropological museum in the U.S. Southwest and the country's largest non-federal archaeological repository. Technology has played an increasingly critical role in ASM's ability to store and retrieve artifacts, information, and images. In this paper, ASM's approaches to problems of permanence,

funding, standards, and access are examined in the context of its mission as a repository, the agency that issues archaeological permits, and an institution that serves students, professional archaeologists, and the public through teaching, access to collections for research, and public programming.

[76] *First Organizer*

Lytle, Whitney (Texas State University) and Kent Reilly (Texas State University)

[260] *Wrapped in the Clothing of the Sacred*

Rulership in Mesoamerica was publicly legitimized through elaborate ritual activity. Archaeological, and iconographic investigations have produced convincing evidence that certain stone monuments carrying elite imagery were often wrapped or bundled when not actively in ritual use. A close investigation of several Olmec monuments, that depict elite individuals, reveals that the concept of the sacred bundle was incorporated into their elite costuming. Items of elite dress were conceived of as framing devices associated with maize symbolism. These symbolic expressions identified the wearers as both sacred themselves, and as conduits through which that sacredness could be manifested in ritual space.

Mabry, Jonathan (Tucson Historic Preservation Office)

[44] *Paleoclimatic and Environmental Contexts for Early Agriculture and Water Control in the Desert Borderlands, Southwestern U.S. and Northwestern Mexico*

Following a middle Holocene population decline in the desert borderlands, the earliest radiocarbon-dated Middle Archaic occupations in the region coincide with the onset of a relatively wet interval at the beginning of the late Holocene, which created favorable conditions for both foragers and the first farmers in the region. The Middle Archaic population increase, the arrival and spread of maize, and the local development of water control techniques are discussed in the context of this wet interval that may have been due to intensification of ENSO cycles, and a related increase in the frequency and magnitudes of winter Pacific storms.

Mac Pherron, Shannon [8] see Turq, Alain

Macdonald, Danielle (University of Toronto)

[186] *Use-wear Analysis of Microlithic Tools using Three-Dimensional Microscopy*

With the development of new microscopy technologies, the field of lithic use-wear studies is undergoing an exciting stage of transformation and revitalization. New methodologies such as three-dimensional microscopy allow for quantification of wear features and produce high resolution images. This paper will discuss the results of use-wear analysis using three-dimensional microscopy on a collection of Epipalaeolithic microliths from the Near East. Results of use-wear analysis on a sample of these microliths will be presented, with a focus on the applications of new use-wear methodologies for lithic analysis.

MacDonell, George (Bureau of Land Management - Carlsbad FO) and Lynn Robinson (Bureau of Land Management)

[87] *Ongoing Research at Jornada Mogollon Village Sites of Southeastern New Mexico*

Located on the periphery of the Southwest and Plains culture areas, the Mescalero Sands of southeastern New Mexico is a marginal environment. However, several Late Formative villages of apparent residential stability (possibly horticulturally based) are found in this region where highly mobile foraging might be more expected. To date, very little investigation of these sites has occurred despite their great research potential. Analysis of existing data sets and new fieldwork projects are being conducted at these important sites through the Permian Basin Memorandum of Agreement, an alternative form of off-site cultural mitigation for energy projects in Southeastern New Mexico.

MacFadden, Bruce [26] see Church, Krista

MacFarland, Kathryn (University of Arizona)

[240] *Laterality and Directionality in Pottery Painting and Coiling*

In this project, the consistency of the directionality (clockwise versus counterclockwise) of painted lines and coiled bases on whole vessels was studied to determine tolerance within an open or closed cultural learning framework (Wallaert-Pêtre 2001:485). An experiment was carried out which linked directionality on pots with the laterality of the potter in an open system. These results were then compared with data from archaeological pots from sites in the Point of Pines area, Arizona (AZ W:10:50). Analyses of ceramic structure and design were used to extrapolate artistic tolerance with degrees of variation within and between types.

Machicek, Michelle [189] see Johannesson, Erik G.

Machiran, Anthony (Southeast Missouri State University) and Robin Machiran (Archaeological Research Center of St. Louis, Inc)

[2] *An Early American Frontier Farmstead in the American Bottom*

The Squire site (11Ms2244), located in the Six Mile Prairie area of Madison County, Illinois is the farmstead of an influential, early Frontier era family. Material remains recovered included four bayonets dating to the War of 1812, gun parts, glass beads, horse gear, fine ceramics, Spanish coins and material the Squires collected and reused from the earlier Mississippian occupation. A deep summer kitchen and/or smoke house, unique to the area, was located near the house. It is likely the residence was a gathering point for the local militia as well as a local trading factory.

Machiran, Robin (Archaeological Research Center of St. Louis, Inc.)

[2] *The Alexander Jacob Site: A Review of the Findings at a Early Mississippian Site in the American Bottom*

The Alexander Jacob site (11MS2288), located in Granite City, Illinois, is a unique, single component site occupied during the early Lohman phase of the Mississippian Period. Located on an American Bottom terrace, the village is laid out in a horseshoe shape with a central plaza opening to the south and an associated mound. The community had over 20 houses including one large structure measuring approximately 18 x 13 meters. Alexander Jacob represents early Mississippian habitation in the American Bottom and the findings shed light on the changes taking place as the Mississippian culture takes hold in the area.

[2] *First Organizer*; [2] *First Chair*; [2] *see Machiran, Anthony*

Macias, Juan Ignacio (Universidad Autonoma de Zacatecas)

[57] *An Evaluation of the Defensive Capacities of the Prehispanic Settlements at the Northern Basin of the Río Verde-San Pedro*

The results of an analysis applied to twenty-four sites located in the basin of the Río Verde-San Pedro are presented. The purpose of the analysis is to determine how the settlement systems in this region were affected by the emergence of new settlement systems during the Epiclassic period. It is proposed that if the Epiclassic was a period of conflict, then the settlements will show defensive capacities. The results revealed to what extent the sites were defensible, as well as the feasibility of GIS applications for understanding social behavior in the past.

Mackay, Alex [182] see Steele, Teresa E.; [182] see Schwartz, Steve

Mackey, Carol (California State University Northridge)

[67] *Late Period Spondylus Usage: Examples from Chimú and Inka Tombs*

Although there is clear evidence of continued Spondylus use in Chimú and Inka tombs on Peru's north coast, a significant change occurred during the Moche period. While elite individuals in earlier Moche burials wore necklaces or pectorals made from Spondylus beads, in late Moche, whole as well as cut shells were also included in burial offerings. Data from several late north coast sites provide further evidence for the persistence of whole Spondylus as well as

possible reasons for the shift in mortuary patterns.

Mackie, Quentin [224] *see Fedje, Daryl W.*

MacKinnon, Michael (University of Winnipeg)

[64] *"Tails" of Romanization: Animals and Inequality in the Roman Mediterranean Context*

Using zooarchaeological evidence, this paper examines "romanization" as it relates to dietary, economic, and social changes concerning animals and animal resources, with particular focus on the Roman Mediterranean context. Topics addressed include: (1) the connection of pork to Roman cultural identities; (2) improvements to animal breeds; (3) butchery and marketing changes that resulted from greater urbanization in many areas during Roman times; (4) the role of pets (especially toy breeds of dogs) and wild animals in displays of wealth, identity, and inequality among individuals; (5) cases for persistence in dietary practices and/or husbandry schemes, despite "romanized" contact, presence or control.

MacWilliams, A. C. [248] *see Hard, Robert J.*

Madsen, David B. [118] *see Beck, Charlotte*

Maggard, Greg (University of Kentucky)

[138] *Redefining Paiján: Changes in Late Pleistocene-Early Holocene Lithic Technology in Northern Perú*

The Paiján complex (ca. 10,800-9,000 B.P.) of northern Perú is best known for the distinctive 'needle-nose' projectile points that define the technology. Although it has been recognized that a range of stemmed point forms are commonly present on Paiján sites, this variability is generally subsumed within a single Paiján "type". Recent analysis of 161 points from the lower Jequetepeque Valley suggests that the Paiján "type" actually consists of several distinct forms with different and overlapping temporal relationships. These types correspond to Early and Late phases within the Paiján complex and are indicative of changing technology and mobility strategies.

[146] *Discussant*

Magnoni, Aline (Tulane University), Bruce Dahlin (Ancient Maya Environmental Studies Center) and Scott Hutson (University of Kentucky)

[178] *Living in the City: Settlement Patterns and the Urban Experience at Classic Period Chunchucmil, Yucatán, Mexico*

The prehispanic Maya city of Chunchucmil grew to become the most densely settled city of the Maya area during the middle of the Classic Period (A.D. 400-650), despite being located in an agriculturally marginal environment. Here we will describe the settlement patterns of this densely settled urban site focusing on the characteristics, composition, and variability of residential groups to illustrate how so many people lived here and may have experienced the urban environment. Chunchucmil's residential groups with a patio group layout and enclosed by stone boundary walls, which housed the city's basic social units, provide us with rich details of domestic life.

Mahar, Ginessa (American Museum of Natural History) and Elliot Blair (UC Berkeley)

[154] *Diet, Gender, and Colonialism: The Impact of the Spanish Mission System on Patterns of Consumption in the Coastal Southeast*

Two important archaeological observations have been made regarding colonial impacts on Native foodways during the Spanish Mission period (1587-1763) in La Florida: paleoethnobotanical and bioarchaeological data indicate a significant increase in the consumption of maize by Indians within the Mission system, while zooarchaeological data indicate considerable continuity in diets from the precontact era. In this paper we re-examine this evidence of change and continuity in colonial diets in Spanish Florida from the perspective of gender, particularly examining the dietary stable isotope data from the region that suggests that the colonial system may have affected and transformed gendered patterns of consumption.

Mahar, Ginessa [154] *see Mahar, Ginessa J.*

Mahoney, Maureen

[106] *Political Differentiation in Denmark during the Roman Iron Age*
Beginning ca. 300 BC, the Free German society in Denmark experienced increased political differentiation. At roughly the same time, the Free Germans constructed new types of settlements and began trading with the Romans. While I doubt that these three phenomena were unrelated, it is unclear whether the Romans caused the Free German chieftains. In this paper, I determine the proximity of the new type of settlement to the imported Roman goods that are in graves or bogs. According to my analysis, the Romans had contact with the Free Germans, but they did not cause the construction of the Free Germans' highly stratified society.

Makowski, Krzysztof (Pontifical Catholic University of Peru), Gabriela Oré (Pontificia Universidad Católica del Perú), and Mila Jimenez (Pontificia Universidad Católica del Perú)

[18] *New Lights on the Pachacamac Oracular Center in the Inca Time*

The excavations and the ground penetrating radar (GPR) survey in Pachacamac during the 2005-2009 seasons of the Proyecto-Escuela de Campo PUCP "Lomas de Lurin" allowed us to find and date the main entrances on the Second Wall that lead to the pyramids with ramp sector, to date the N-S street and the First Wall, and also to define the character of Inca occupation in the external space demarcated by the Third Wall. The results suggest a new understanding of the development of Pachacamac's spatial layout throughout the late periods, and invite a reconsideration of the date and possible functions of the pyramids with ramp.

Malainey, Mary (Brandon University), Phillip J. Innes (Brandon University) and Timothy J. Figol (Brandon University)

[55] *Taking a Second Look: Results of the Re-analysis of Archaeological Lipid Residues from North America and Beyond*
Lipid residues previously extracted from a variety of archaeological materials, primarily from the Great Plains and adjacent regions, are reexamined. Residues identified on the basis of fatty acid composition alone are reanalyzed using gas chromatography (GC) and mass spectrometry (MS). The value of the reanalysis is assessed with respect to occurrence of biomarkers, the nature and extent to which identifications could be clarified and the impact on site interpretations. These results form the basis of recommendations for the utilization of GC, high temperature GC and GC-MS and compound specific analysis with GC-C-IRMS in situations where time and money may be limited.

Malainey, Mary [87] *see Boggess, Douglas H M*

Maldonado, Blanca (Colegio De Michoacan, Mexico)

[156] *The "Chaîne opératoire" of Mesoamerican Metallurgy*

The analysis of technology is best approached by a theoretical perspective that regards it as an integral and active component of human systems. As a research method, the "chaîne opératoire" approach seems consistent with, and complementary to an evolutionary perspective which emphasizes both ecological and behavioral aspects of technology, and takes into account the social and political foundations of technological practices. It also offers a way to link specific crafts to the technologies of which they are part. This paper provides an overview of mining and metallurgy in Mesoamerica, presented within the framework of the "chaîne opératoire" or operational sequence.

Maldonado, Doris (UC Berkeley)

[65] *Repositioning and Expanding Inclusive Narratives in Honduran Archaeological Practice and Interpretation: Participatory Archaeology at Currusté*

Recent work at the site of Currusté in Northwestern Honduras has provided an opportunity to participate collaboratively with various stakeholding communities. Under Dr. Dario Euraque's leadership, the Instituto Hondureño de Antropología e Historia (IHAH) has pursued

the inclusion of narratives and projects promoting the multiethnic and multilingual Honduran past for an equally diverse Honduran present. Participatory research at Currusté complements IHAH goals by including educational components, activities, and workshops for apprentice archaeologists, while interviews and discussions with community members focused on gaining insight and understanding about relevant narratives that resonate with the daily lives and lived experiences of Hondurans today.

[66] *Discussant*

Maldonado, Ronald [235] *see* Marek-Martinez, Ora V.

Malpiedi, Jennifer (Southern Illinois University Carbondale), Heather Millis (TRC Environmental Corporation) and Heather A. Lapham (Southern Illinois University Carbondale)

[217] *Fishing Along the Outer Banks: Ichthyofauna from the Broad Reach Site*

Recent excavations at the Middle to Late Woodland period (ca. A.D. 200-1500) Broad Reach site (31CR218) in coastal North Carolina revealed an extensive habitation site along with almost 50,000 animal remains from shell middens and pit features. Located along Bogue Sound, the site is protected from the Atlantic Ocean by one of the Outer Banks barrier islands. Fishes dominate the faunal assemblage, indicating the importance of marine resources to coastal diets and lifeways. We examine fish exploitation and fishing techniques to better understand the importance of the Outer Banks in the development of marine adaptation by the coastal inhabitants of North Carolina.

Malville, John (University of Colorado) and Nancy Malville (University of Colorado)

[89] *The High Communities of Chimney Rock: Ceremony, Trade, and Astronomy*

Chimney Rock is unique among Chacoan outliers because it was not reoccupied after abandonment around AD 1130. Both indigenous and Chacoan communities are clearly represented in the archaeological record. Our hypothesis is that the High Mesa community was a ritual and trade center prior to the AD 1076 Chaco intrusion and that the local community accepted Chacoans and willingly shared the sacred space of the upper mesa. Trade of meat products may have alerted Chacoans to the lunar standstills that appeared between the chimneys. Pre-Chacoan ceremonialism is indicated by the fire pit on the upper mesa as well as by the large number of locally-made feather holders.

Malville, Nancy [89] *see* Malville, John McKim

Manahan, T. Kam [160] *see* Stockton, Trent

Mandel, Rolfe (Kansas Geological Survey), Jack Hofman (University of Kansas), and Steven Holen (Denver Museum of Nature and Science)

[259] *Geoarchaeology of Stratified Early Paleoindian Cultural Deposits at the Kanorado Locality, Northwestern Kansas*

Evidence for Early Paleoindian occupation on the Central High Plains is rare, and sites with both stratified Clovis and Folsom cultural deposits are even less common. However, recent excavations at the Kanorado locality in northwestern Kansas indicate there are buried Clovis-age and Folsom campsites in the valley of upper Middle Beaver Creek, an intermittent stream, or draw, cut into the High Plains surface. The Early Paleoindian cultural deposits are buried in alluvium beneath a low terrace. This paper presents the results of geoarchaeological research that has focused on the soil-stratigraphy, geochronology, and paleoenvironmental record at Kanorado.

[231] *Discussant*

Mandel, Rolfe [146] *see* Ray, Jack H.; [259] *see* Kessler, Nicholas V.; *see* Gottsfeld, Andrew

Mann, Rob (Louisiana State University) and David Chicoine (Louisiana State University)

[114] *Intrusions: Incidental or Indicative Cultural Phenomena?*

From issues of cultural heritage and taphonomy, to how and why sites are abandoned and reused, intrusiveness pervades archaeological practice. This paper introduces the concept of intrusiveness as it relates to archaeology. Archaeologists have come to see intrusive phenomena less as irksome, destructive events, and more as a potentially informative form of cultural activity that may provide insights into the use, abandonment, and reuse of cultural landscapes over long periods of time. Prehistoric and historic case studies from the lower Mississippi and Andean regions will be explored with the objective of further theorizing intrusiveness and defining its heuristic value.

[114] *First Chair* [114] *Second Organizer*

Manne, Tiina (University of Arizona) and Nuno Bicho (FCHS, Universidade do Algarve, Portugal)

[16] *Never Too Much of a Good Thing: Continuation of Subsistence Patterns during the Upper Paleolithic in southwestern Portugal*
25, 000 years ago in southwestern Portugal, humans were exploiting a wide variety of terrestrial and marine resources in addition to intensively processing large game for their bone grease. The Upper Paleolithic site of Vale Boi, located near to the most southwesterly point of continental Europe, indicates that these patterns, beginning in the Gravettian, continued largely in the same fashion throughout the Solutrean and into the Magdalenian. Though no increasing trend of diversification or intensification can be discerned, the exploitation of small, fast-moving game, along with the labor-intensive processing of large game, may suggest behavioral efforts to alleviate resource stress.

[16] *First Organizer, [16] First Chair*

Mannheim, Bruce (University of Michigan) and Guillermo Salas Carreño (University of Michigan)

[18] *Understanding the Andean Sacred: A Dozen Principles*
Scholars commonly make two moves in interpreting the Inka sacred: (1) they assume that the ritual practices of state elites are coterminous with ritual practices more broadly; and (2) they assume that ritual practices can best be understood by constructing an analogue theology (or "cosmology")—a logically integrated set of beliefs—despite the absence in Inka and modern Quechua societies of theological institutions. We propose instead a set of principles through which Inka and modern Andean practices of the sacred can be better understood through a "bottoms up", non-cosmological approach. These principles can be tested archaeologically, historically, and ethnographically.

Mans, Jimmy (Leiden University)

[47] *The Contemporary Archaeology of Trio Movements*

Over the last decade a group of Trio living in the larger village of Kwamarasamutu in the south of Suriname has been fissioning into small villages along the uninhabited middle Corentyne. This process is accompanied by renegotiating ties and identities. The material dimensions of one of these small villages are studied. Its inhabitants and their fluid connections with the material village are subsequently historicised within the time span of a century. The archaeo-ethnographic stasis of place on the one hand and the anthropological and ethnohistorical contextualisation of the villagers on the other broach Trio dynamics from a multi-scalar perspective.

Manzanilla, Linda (U Nacional Autonoma de Mexico)

[96] *Craft Activity and Administrative Devices at Teotihuacan, Central Mexico*

Ancient cities housed a large population of craftsmen, masons, priests, emissaries, guards, and people unrelated to the production of foodstuff. In the ancient Near East administrative devices (seals, sealings, bullae, clay tablets, tokens) are evident in the archaeological record, as are storerooms and storage loci. In Classic Mesoamerica, huge urban developments such as Teotihuacan, housed multiethnic populations devoted predominantly to craft activities as well as to the large-scale movement of sumptuary and allochthonous goods. Unfortunately no centralized storage facilities

have been recognized in the site. Even though there are no evident administrative devices such as the Postclassic codexes (the *Matricula de Tributos*, for example) clay roundels ("tejos") and trinkets are numerous and may represent administrative objects related to the craftsmen themselves. This paper will review the relevant data from the Teopanazco barrio center at Teotihuacan.

[96] *First Organizer*

Marceaux, Paul (University of Texas-Austin)

[120] *The Hasinai Caddo of East Texas: Ceramics and Social Organization*

In a recent effort to compile information related to Caddo archaeology, I have examined in detail ceramic collections from various historic Native American Caddo sites and Spanish missions in east Texas. My presentation will discuss the efforts to determine if and how specific attributes of ceramic style and technology correlate with sites in the presumed locations of the Hasinai Caddo as indicated by the historical records. It will also demonstrate how relatively user-friendly database software and tools associated with Geographic Information Systems (GIS) can be used to help answer questions regarding the relationships between material culture and social organization.

Marchegay, Sophie (INAH Tamaulipas, México)

[260] *Body Modification and Ornamentation Depicted in Formative Period Huastec Figurines*

By the time of Spanish conquest, the Huastec people were renowned for their rich and complex manners of modifying, clothing, and ornamenting their bodies. Practices of body modification and adornment appear to have been ancient in this region. During the Formative period, anthropomorphic clay figurines – almost always feminine – are shown naked and with artificial cranial deformation, scarification, and body painting. Various ornaments, including a large variety of headdresses and jewelry, are also featured. In this paper I examine these bodily practices evident in Late Formative clay figurines that hail from recent excavations along the southern coast of Tamaulipas.

Marcone, Giancarlo (University of Pittsburgh)

[114] *Pachacamac Temples and Archaeologists' Intervention*

The Pachacamac site in coastal Peru has been a permanent presence in Peruvian and Andean archaeology. Since the pioneer work of Max Uhle at the end of the XIX century, the site has undergone archaeological interventions. Several of these interventions left physical vestiges at the site and transformed Pachacamac's Landscape, mixing with the archaeological site and actively changing perspectives about the past. Using specific examples of past interventions at the site, I seek to show how these interventions contribute to create a "story" of the site that does not necessarily match prehistory. Furthermore, I will argue that sites as important as Pachacamac require an archaeology of the archaeologists interventions that have influenced it. Such an endeavor will help us understand how history and heritage were (and are) re-built or manipulated by scholars to construct perceptions of the past that serve their own scholarly or political interests.

Marcone Flores, Giancarlo [226] *see Marsteller, Sara J.*

Marcus, Joyce (University of Michigan) [178] *Discussant*

Marek-Martinez, Ora (University of California, Berkeley), Ronald Maldonado (Navajo Nation Cultural Resources Compliance Section), Taft Blackhorse (Navajo Nation Chaco Sites Protection Program), Timothy Begay (Navajo Nation Traditional Culture Program) and Tony Joe (Navajo Nation Traditional Culture Program)

[235] *Nihinaazáí—Our Ancestors: Perspectives on Cultural Affiliation from the Navajo Nation Historic Preservation Department*

For many years, the Navajo Nation has asserted its cultural affiliation with prehistoric cultures of the American Southwest. This relationship is confirmed in centuries of traditional history and more than 100

years of anthropological literature. In addition, several programs of the Navajo Nation Historic Preservation Department have added to this literature. The cultural affiliation asserted here is not exclusive, and it is confirmed by archaeological, genetic/biological, and linguistic evidence. However, in most cases this claim has not been recognized in the historic preservation and academic communities. In recent years, the Navajo Nation Historic Preservation Department has worked to strengthen this claim through research and consultation with knowledgeable individuals. This forum seeks to give the people of the Navajo Nation a voice and an opportunity to speak of their experiences and of the difficulties they encounter.

Margaris, Amy (Oberlin College)

[162] *Where Do We Go From Here? The Pursuit of an Archaeological Studies Major at Oberlin College and its Afterlife*

Oberlin College is a small liberal arts institution in northeast Ohio that offers undergraduate majors in both Anthropology and Archaeological Studies. The Archaeology major is highly interdisciplinary. Students design their own curriculum in close consultation with a faculty advisor from Anthropology, Art, Classics, or Religion, and graduates of the program have obtained higher degrees in all of these fields. Students must participate in a field school (Oberlin offers opportunities in Italy's Sangro Valley and Kodiak, Alaska) and complete a senior capstone project to graduate. These requirements help majors gain practical experience and disciplinary focus, and add verticality to their coursework.

Margus, Drago (Krka National Park, Croatia)

[9] *Evidence for Marine Shellfish Exploitation at Danilo Bitinj and Pokrovnik*

18 species of marine shellfish were recovered in the excavations at Danilo Bitinj and Pokrovnik, a considerable increase on previous estimates. All of them may still be found in the Adriatic Sea today. Of the >26,000 identified specimens, 80% were from the lagoon cockle (*Cerastoderma glaucum* [Cardium]). Other species included mussel (*Mytilus galloprovincialis*), oyster (*Ostrea edulis*), Noah's Ark shell (*Arca noae*) and European thorny oyster (*Spondylus gaederopus*). Most were probably collected from the nearby inlet of Morinj and Prukljan Lake. The shellfish were eaten, often after cooking, and also used for ornaments.

Marinova-Wolff, Elena [157] *see Riehl, Simone*

Marken, Damien (Southern Methodist University) and Jennifer Piehl

[77] *Reconstructing Divergent Identities within El Peru-Waka'*

As a significant milestone in human history, the rise of cities has witnessed extensive archaeological inquiry. Current research has emphasized the plural nature of urban identities, moving beyond conceptions of homogenous urban populations. This paper will present analyses of materials from nearly 200 test excavations in the 10km² surrounding the Classic Maya center of El Peru-Waka'. Comparisons of these data with more intensive investigations within the center suggest that divergent social groups inhabited distinct areas both within and outside the urban core. Although preliminary, this research advances understanding of the multi-vocal nature of Classic Maya cities and internal polity make-up.

Markoe, Glenn [160] *see Comer, Douglas C.*

Marks, Ted [35] *see Thomas, Jonathan T.*

Marley, Andrew (College of Wooster)

[30] *Evaluating Prehistoric Subsistence Patterns using Microwear Analysis of Flint Tools from Rock Shelters in Central Ohio*

Microwear analysis of stone tools is used to compare subsistence patterns at rock shelters in north-central Ohio dating from Archaic to Late Prehistoric. This study utilizes experimental procedures to create a body of data with which to compare artifacts from rock shelters in the Killbuck drainage. Several trials utilizing various combinations of use-materials and use-actions were conducted to provide data by

which to analyze excavated artifacts. The tools are examined under low to medium magnifications (40X-200X) using a metallurgical microscope, and qualitatively analyzed for micropolishes, edge damage and striations to determine degree of change in subsistence patterns over time.

Márquez Morfín, Lourdes [241] *see Hernandez Espinoza, Patricia O.*

Marquez-Morfin, Lourdes (Escuela Nacional de Antropología e Historia INAH) and Rebecca Storey (University of Houston)

[241] *Paleodemography is Hard but Worth It!*

Population scientists concerned with long-term trends in demographic profiles ought to be interested in skeletal samples from ancient societies, because they are the only possible source of information. Paleodemography is a slippery research area that must deal with fundamental methodological and technical problems. The goal of this presentation is to evaluate some methodological approaches that are best for doing Paleodemography. The Rostock Manifesto is one of the best; focused on adult aging problems and provided several new techniques to estimate the demographic profile for a target, archaeologically-excavated sample.

Marshall, Brooks M. [213] *see Baker, Larry L.*

Marshall, Fiona [182] *see Kimura, Birgitta K.*

Marshall, Joel (Glenn A. Black Laboratory of Archaeology, Indiana), Tammie L. Gerke (Glenn A. Black Laboratory of Archaeology, Indiana University) and Timothy E. Baumann (Glenn A. Black Laboratory of Archaeology, Indiana University)

[257] *Sun Circles and Science: Current Research on Negative Painted Pottery at the Angel Site*

Negative Painted Pottery is a unique late prehistoric pottery type found in four varieties within the Lower Ohio River Valley, the Nashville Basin, and the Missouri Bootheel. Vessel forms are primarily plates and carafe-necked water bottles with common designs of filled bounded triangle areas and Southeastern Ceremonial Complex motifs of a cross-in-circle and the sun circle. Most scholars suggest that these vessels were ritual wares used for special ceremonies or feasts. Utilizing GIS and various analytical techniques (e.g., Residue Analysis, XRF), current research is attempting to address the method of manufacture, function, and the spatial/temporal patterns of this pottery type.

Marshall, John [33] *see Carpenter, Tina M.*

Marshall, Maureen (University of Chicago) and Ruzan Mkrtchyan (Erebuni Museum, Republic of Armenia)

[101] *The Practice of Violence: A Bioarchaeological Investigation of Trauma in the Late Bronze and Iron I periods in the South Caucasus* Violence, militarism, and warrior identities play significant—often fundamental—roles in many narratives of the emergence of socio-political complexity. The material culture, fortress architecture, and destruction levels found in the South Caucasus during the Late Bronze Age (1500-1200 B.C.) and the Iron I (1200-850 B.C.) periods all seem stress the prominence of interpersonal conflict and increasing militarism in Late Bronze and Iron I society. In this paper we examine the bioarchaeological evidence of trauma from Bronze and Iron I period mortuary sites in the Sevan Basin, Shirak plain, and Tsaghkahovit plain located northern Armenia.

Marsteller, Sara (Arizona State University) and Giancarlo Marccone Flores (University of Pittsburgh)

[226] *The Sociopolitical Significance of Child Burials at "Lote B" (Cerro Manchay), Lower Lurín Valley (Perú)*

Children are rarely considered significant in archaeological interpretations of social and political processes. The assumed marginality of children is reinforced by frequent underrepresentation of subadults in mortuary contexts and by common interpretations of subadult remains as sacrificial offerings. The site of Lote B on the

central Peruvian coast presents a unique case study in which natural deaths of subadults were utilized by local rural or regional Lima elites for political means. Burial styles, locations, and associations suggest that local rather than highland Wari state symbols were utilized to garner the support of the lower Lurín Valley population.

Marston, John (University of California, Los Angeles)

[151] *Identifying Agricultural Risk Management Using Paleoethnobotanical Remains*

Identifying how ancient societies assessed and mitigated the risk of subsistence failure is particularly important for understanding why some pre-industrial agricultural systems flourished and others collapsed. Paleoethnobotanical remains offer an effective mechanism for investigating agricultural risk management systems employed in the past. In this paper, I consider how various theoretical models for risk management lead to specific predictions that can be tested with paleoethnobotanical remains. I then demonstrate the utility of this approach with data from the multi-period mounded site of Gordion in central Anatolia, modern Turkey, which show diachronic changes in agricultural risk management practices at the site.

Martin, Alexander (University of Pittsburgh) and Benjamin Carter

[67] *Regional Craft Standardization Through Domestic Cottage Production: New Data From the Spondylus Industry of Coastal Ecuador*

Between c. A.D. 700-1200, the manufacture of shell beads, many of which are made from Spondylus, becomes widespread and technologically similar across much of coastal Ecuador. At the same time, settlement pattern analysis suggest that this manufacturing industry was organized around the domestic mode of production as family units included part time shell manufacturing activities within a broader range of subsistence pursuits. This cottage production appears to have resulted in very regularized production sequences and finished products throughout coastal Ecuador without the need for politically coordinated oversight or full-time specialized productive strategies.

Martin, Andrew (Cultural Resource Analysts, Inc.), Andrew Bradbury (Cultural Resource Analysts, Inc.) and Paul Bundy (Cultural Resource Analysts, Inc.)

[172] *Archaic Sites Excavated During the Avenue of the Saints Project*

Significant Archaic components were documented at four sites (Baxter Lake, Logsdon Fan, Berhorst, and Big Branch Fan) excavated as part of the Avenue of the Saints archaeological project. Early Archaic components were documented at the Baxter Lake and Logsdon Fan sites, Middle Archaic components were documented at the Berhorst Site, and multiple Late Archaic components were documented at the Big Branch Site. This paper provides an overview of the findings for each site.

Martin, Andrew [172] *see DelCastello, Brian G.*

Martin, Cheryl M. [211] *see Edwards, Susan R.*

Martin, Dan (BLM), Derrick Baldwin (BLM), Jeanne Moe (BLM) and Neffra Matthews (BLM)

[75] *Archaeological Information Technology [Computing] in BLM's NLCS, throughout BLM and Beyond*

This poster will present a review of the development and application of Information Technology [Computing Capabilities](including world wide web tools, Geographic Information Systems, Remote Sensing, GPS, etc.) by the Bureau of Land Management, its partners, and researchers to create a body of work that has contributed to the science of archaeology as well as a better understanding of BLM resources.

Martin, Kristie (The Ohio State University)

[151] *The Missing Sister: Assessing Variability in Fort Ancient Subsistence Systems*

The picture of Fort Ancient peoples as consummate maize agriculturalists generally relies on data from excavations of large communities. Recent research at a small settlement in Ohio's Miami Valley suggests greater variability in Middle Fort Ancient (1200-1400 CE) economies than previously recognized. This research explores alternative explanations for the apparent lack of reliance on maize and seeks to address new questions concerning taphonomic processes, social and economic relationships, and incentives to invest in farming introduced crop species.

Martin, Lana (University of California Los Angeles)

[232] *Reconstructing Paleoenvironmental Instability and Plant Resource Availability at Santa Cruz Island using Macrobotanical Analysis*

Fluctuations in climate change and biodiversity over time have been linked to changes in human culture and social organization. Identification of plant genera present in macrobotanical samples obtained from four sites on Santa Cruz Island suggests the Chumash were forced to cope with changes in plant resource availability during the Transitional period (A.D. 1150 – 1300). Analyses of these patterns of plant availability and usage, compared with previous analyses of other material evidence, contribute to our understanding of how the island Chumash coped with changing resources and why they actually flourished during and after a period of environmental disruption.

Martin, Terrance (Illinois State Museum)

[125] *Animal Exploitation Patterns at French Colonial Sites in the Illinois Country*

Recent archaeological investigations permit an examination of animal exploitation patterns within the French colonial and post-colonial occupations of the Mississippi Valley. Whereas the small villages in the Illinois Country provided wheat flour and salted pork to French settlements in the lower Mississippi Valley during the eighteenth century, faunal analyses indicate that these Creole habitants relied on wild animals to a greater extent than did those people living at the administrative center at Fort de Chartres. These findings reveal inter-site complexity and supplement the sparse documentary record of French colonial foodways.

Martin, Trevor (University of Oklahoma)

[52] *Berry Site Ceramics: An Analysis of Burke Phase Pottery Associated with Fort San Juan*

The most common class of artifacts recovered at the Berry site is Burke phase ceramics. This paper focuses on ceramics recovered from feature contexts associated with the five structures of Fort San Juan. Ceramic data from these contexts, including surface treatment, vessel size and form, and serving dish to cooking vessel ratios are compared with ceramics recovered from portions of the site associated with the Native occupation. These data provide a better understanding of daily life at Fort San Juan and offer insights into relations between the people of these different cultures while they were in close, sustained contact.

Martinez, Desiree (Harvard University)

[181] *The "Shoshonean Wedge" Should Only Be the Name of a Shoe: The Wedge Theory and Its Affects on Tongva History and Identity*

Gabrielino (Tongva) community members have been fighting for federal, state, and local recognition while inserting themselves into projects and processes that deal with their ancestor's cultural remains and material. However, this movement had been hindered by the idea that the Gabrielino (Tongva) immigrated to Southern California from the Great Basin around 500AD (i.e. Shoshonean Wedge Theory). Scholars and non-scholars alike point to this theory to silence and ignore Gabrielino (Tongva) calls for inclusion in decision making regarding archaeological material within their traditional homelands. This paper explores how academic research has political, social and economic ramifications for the Gabrielino (Tongva) community.

[174] *Discussant*; [127] see Teeter, Wendy G.

Martinez, Estela

[195] *Estudio Regional de Chalchihuites Prehispánico, Zacatecas, México*

El enfoque regional sirve de base para las investigaciones que hemos desarrollado en los últimos cinco años en la región de Chalchihuites. Expondré algunas reflexiones relacionadas a la comprensión de los procesos que permitieron un complejo desarrollo sociopolítico regional durante el primer milenio de nuestra era. El aspecto económico, particularmente la minería, serán tratados con mayor énfasis ya que sus productos (piedras azul-verdes, pigmentos minerales, oro en polvo, etc.) fueron la materia prima para la producción de bienes de prestigio, referente importante de su complejidad social.

Martinez, Gustavo (CONICET-INCUPA-UNICEN)

[120] *Hunter-Gatherer Social Interaction Networks in an Arid Landscape (Argentina)*

The hunter gatherers who inhabited the lower stream of the Colorado river valley (Pampean-Patagonian transition) underwent organizational changes during the late Holocene. Since 1000 yrs BP subsistence included a boarder spectrum of consumed species, while the exploitation of local raw materials predominated and a more complex pattern of artifact production characterized lithic technology. Mobility decreased and places were used redundantly. Secondary burials are recorded in complex funerary disposals. These changes will be discussed regarding open and close social interaction networks experienced by local residents groups.

[47] see Gutierrez, Maria A.

Martinez, Maria (Univ. of Texas at Austin)

[112] *Conceptualizing Space: The Use, Function, and Meaning of Maya Architecture, La Milpa, Belize*

Despite over 150 years of studying monumental architecture in the Maya Lowlands, archaeologists continue to struggle with the fundamental questions of use, function, and above all, meaning of architectural groupings. Courtyards within Maya centers are comprised of various architectural forms, and merit further exploration in terms of how we conceptualize the social practices that take place within these socially constructed spaces. Departing from a strictly functionalist view, this paper explores the architecture of a mini-acropolis occupied from the Late Preclassic through the Late/Terminal Classic periods at La Milpa, Belize, through a relational account and a configurational view of space.

Martinez, Natalia [235] see Pailles, Matthew C.

Martinez, Nathan [190] see Connolly, Cara D.

Martínez, Ronald [196] see Oconitrillo, Giancarlo

Martínez Tuñón, Antonio (Zona Arqueológica de Monte Albán-INAH)

[103] *La Cueva de los Machines: Diversidad en la Pictografía Rupestre en Oaxaca*

El Proyecto Cuevas Prehistoricas de Yagul y Mitla ha logrado registrar mas de cien sitios arqueologicos con distintas manifestaciones culturales. De estas una de las mas llamativas es la pintura rupestre documentada en una gran cantidad de sitios. Si bien en muchos casos los diseños constan tan solo de series de puntos o lineas, en un sitio particular, "Cueva de los Machines", se registraron una diversidad de diseños entre los que destacan los zoomorfos, fitomorfos, antropomorfos y otros. Este trabajo hará una descripción puntual de ellos.

[103] see Tuross, Noreen C.

Martins, Mafalda [98] see Wauters, Valentine

Martos, Luis

[195] *Resultados de los Recientes Trabajos en Plan de Ayutla, Chiapas*

A finales de 2008 iniciamos un programa de investigación y

conservación en el sitio arqueológico Plan de Ayutla, Chiapas. Aquí exponemos los primeros resultados con nuevos datos sobre las características arquitectónicas del sitio que reúne elementos propios de la región del alto Usumacinta, así como características propias; los estudios de cerámica comprueban una cronología que se extiende desde el Clásico temprano hasta el Clásico terminal y posclásico temprano. Destacan los trabajos en el Juego de Pelota y la exploración de la estructura 13 de la acrópolis norte, edificio importante y emblemático del complejo palacio, que posee elementos de relevancia astronómica.

Marty, Johanna (California State University, Los Angeles), Amanda Taylor (University of Washington), Nicolas Poister (California State University, Los Angeles) and Rene Vellanoweth (California State University, Los Angeles)

[232] *Anatomy of Mound: Sediment Analysis at Tule Creek Village, San Nicolas Island, CA*

Excavations of a 5 x 1 m trench at Tule Creek Village (CA-SNI-25) on San Nicolas Island, CA during 2008 and 2009 field seasons centered on understanding site formation processes at Mound B, a habitation area occupied from the middle Holocene to late prehistoric times. We encountered alternating layers of darker and lighter sediment, both of which contained abundant cultural materials. To investigate the cultural and natural processes that created this stratigraphy, we conducted loss-on-ignition and grain-size analysis of column samples taken from the trench. In this poster, we discuss the results of this work.

Martz, Patricia C. [31] see James, Steven R.

Marwick, Ben (University of Washington)

[194] *Do Model-based Explanations suit Archaeology Better than Inference to the Best Explanation?*

Lars Fogelin's recent paper on Inference to the Best Explanation (IBE) has substantially sharpened the focus on how archaeologists actually explain, and advocated a historically and philosophically popular approach to explanation. In this paper I argue for a different approach to explanation based on model-building and ranking. I discuss van Fraassen's objections to IBE, the revival of the hypothesis-testing in historical sciences and current work in philosophy of science in general and biology in particular. These recent developments suggest that a better way to articulate mechanisms of cause and effect in archaeology is likely to involve modeling and model selection.

Maschner, Herbert (Idaho State University) and Buck Benson (Idaho State University)

[175] *Interaction Spheres and Aleut Ethnogenesis*

Historically the Aleut were differentiated into eight language dialects and at least twenty regional polities focused around specific island groups. Social networks across this 2100km region were facilitated by advanced boating technology and mental maps of considerable scale. Excavations on the western Alaska Peninsula and analyses of igneous lithic materials demonstrate that some of these networks were in place as early as 3300 BC. Comparable data to the east indicate that these networks did not include regions that were occupied by non-Aleut peoples in historic times. These findings demonstrate that Aleut social boundaries were established early and continued for millennia.

Maschner, Herbert [175] see Misarti, Nicole; [27] see Lech, Veronica

Massey, Alexandra [166] see Bell, Alison

Massey, David (The Ohio State University), Anne Bomalaski (The Museum of Archaeology and Anthropology of the University of Pennsylvania) and Ayse Gürsan-Salzmann (The Museum of Archaeology and Anthropology of the University of Pennsylvania)

[183] *Managing the Legacy Data from the University of*

Pennsylvania's Survey and Excavation at Tepe Hissar in North Eastern Iran (1931-2, 1976) through GIS.

The necessity of digitizing legacy data from past excavations and surveys is becoming increasingly important as archaeologists continue to shift into a digital environment for analysis and archival purposes. Vast archaeological datasets still exist in undigitized form in books and museum basements; digitization often presents several challenging problems. Managing the legacy data from the Penn Museum's excavations at Tepe Hissar in northeastern Iran (1931-2, 1976) provides a case study of how this digital era of archaeology is reexamining the archaeological record.

Massineo, Pablo [21] see Larson, Mary Lou

Masson, Marilyn (University at Albany SUNY)

[20] *Economic Linkages from Houselot to Temple at the Ancient Capital City of Mayapán*

Variation in work routines of daily life at Mayapán is expressed across the city's neighborhoods in terms of degree and type of occupational specialization, domestic and public contexts for work activities, and the affluence derived from productive efforts by members of various households. Eight fully excavated houses, one workshop and a portion of one outlying ceremonial group provide robust artifact samples used to evaluate the interplay between labor diversification and affluence. Particular attention is paid to production and consumption linkages that tied the economies of daily life to the practices and demands of neighborhood governors and priests.

[20] First Organizer; [20] Discussant; [20] see Hare, Timothy S.; [20] see Delgado Ku, Pedro

Massouh, Paula

[152] *The Largo-Gallina Household: A View from the L/102 Site*

While artifact assemblages relating to Largo-Gallina sites are housed are several depositories in the Southwest, few have been examined and reported. As a result the knowledge that could be derived from researching such collections remains undisclosed. In this study information obtained from analyzing ceramic, lithic, faunal and archeobotanical assemblages, skeletal remains and architectural attributes have been integrated to define a Largo-Gallina household at the L/102 site. Data also was used to infer what activities and social, political and economic interactions might have taken place on the household level.

[152] First Organizer; [152] First Chair

Masucci, Maria (Drew University)

[67] *Beyond Spondylus in Regional Developments: Shell working and Explanatory Models for the Regional Developmental Period, Coastal Ecuador*

Early investigations of coastal Ecuador labeled socio-political change and regionalization in ceramic styles ca. 500-300 BC as the Regional Developmental Period. Emphasizing commonalities among regions, an explanatory model cited competition over long distance trade in Spondylus shell. Subsequent research supports shell working within domestic contexts as a constant throughout the period, first within the context of an increase in settlements dispersing into inland drainages and finally to a population shift to nucleated centers along the coast ca. AD 600-800. Spondylus shell working is one of the constants across regions but does not explain the now recognized diversity in "regional developments".

Mathews, Jennifer [212] see Glover, Jeffrey B.

Mathien, Joan [123] see Hull, Sharon K.

Mathiowetz, Michael (U.C. Riverside)

[199] *The Aroma and Nectar of Flowers: Floral Symbolism in the Art and Ritual of the Aztec Tradition of Ancient West Mexico*

With the development of the Aztec tradition, the Postclassic period (AD 900-1521) in West Mexico realized dramatic and widespread shifts in social, political, religious and economic organization. Symbolism and ritual practices evident in Aztec material culture

reflect the florescence of a new system of religious beliefs in West Mexico associated with the Flower World Complex and the solar deity Xochipilli, a shared belief system recently identified in Mesoamerica and the American Southwest. The identification of this religious complex in West Mexico provides a critical link in understanding the nature of long-distance interregional interaction in Northwest Mexico and the American Southwest.

[199] **First Organizer**; [199] *First Chair*; [199] *see Ohnersorgen, Michael*

Matisoo-Smith, Lisa (University of Auckland) and Jose-Miguel Ramirez (University of Valparaiso, Chile)

[68] *More Biological Evidence for Polynesian Contact in Chile?*

While the presence of kumara in Polynesian archaeological sites provided conclusive evidence of prehistoric contact between South America and Polynesia our discovery of pre-Columbian Polynesian chicken bones at El Arenal, Chile indicated that the voyaging was two way, yet people still question the interpretation of this result. Evidence of Polynesians or their direct descendants, found in a secure prehistoric context would put the issue to rest. Here I will discuss the evidence from physical anthropology, including both anthropometric and genetic data that may provide conclusive evidence of Polynesian presence in South America and help assess the nature of that contact.

Matovich, Jeanette (Jeanette Matovich), Daniel P. Love (BLM Special Agent), Patrick G. Brosnan (FBI Special Agent) and Richard McKelvie (AUSA)

[86] *Overview and Lessons Learned from Cerberus Action, History's Largest ARPA Case*

On November 30, 2006, the Utah Bureau of Land Management in partnership with the Federal Bureau of Investigation opened a criminal investigation targeting artifact theft and trafficking in the Four-Corner region. The ongoing case, known as "Cerberus Action" has (to date) indicted and charged 25 subjects in with violations of ARPA and NAGPRA. Cerberus Action has created a "marriage" of science and law enforcement in order to support and ensure the success of the largest ARPA case in history. The experiences and lessons learned throughout will likely influence national policy and protocol, and certainly the nature of future ARPA investigations.

Matson, R. (Univ of British Columbia) and Jesse Morin (University of British Columbia)

[84] *Differentiating Archaic and Basketmaker II Projectile Point Manufacturing Techniques*

Geib recently argued that production technologies differ for Archaic versus Basketmaker II projectile points; for the latter, indirect punches and wide compound pressure flakers were used to produce very thin, broad bifaces. To test this model we measured 6 attributes of flake scar morphology on Archaic and BM II bifaces from Cedar Mesa. These variables show statistically significant differences between the two groups of artifacts in accord with Geib's model. Metric multidimensional scaling of these attributes clearly differentiates Archaic from BM II bifaces and also detects previously misclassified artifacts. This BM II technological tradition may well be an enculturated style useful for tracking populations.

Matson, R.G. [84] First Organizer; [84] *see Curewitz, Diane*; [84] *see Kemp, Brian M.*

Matsunaga, John (UC Berkeley)

[175] *Technological Practice and Household Ceramic Production at Vinca-Belo Brdo*

This paper presents the results of a technological analysis of ceramic objects from the Neolithic and Eneolithic Vinca Culture settlement of Vinca-Belo Brdo. The goals of this analysis are: 1) to increase our knowledge of the technological choices and practices involved in Vinca ceramic production, and 2) to further our understanding of the organization of ceramic production and social organization within the Vinca Culture. Based on this analysis, it is argued that models of Vinca social organization that emphasize the significance of

autonomous households need to be reevaluated and that more communal forms of organization may have been in existence.

Matthews, Neffra [75] see Martin, Dan W.; [22] *see Bies, Michael*

Matthews Cascon, Leandro [142] see Caromano, Caroline F.

Matts, Michael [252] see Loorya, Alyssa

Mattson, Hannah (University of New Mexico)

[131] *Utilitarian Ceramics from the Pueblo Bonito Mounds*

Over 97,000 grayware sherds were analyzed during the course of the Pueblo Bonito Trash Mound project. The resulting data on utilitarian wares from the middens allow for a new look at important issues such as site function, mound formation, and interaction. Specifically, this paper will focus on chronology, vessel attributes and frequencies, and importation. Comparisons with Pueblo Alto and small sites in Chaco Canyon will also be discussed.

Mauldin, Raymond [74] see Munoz, Cynthia M

May, David W. [210] see Hill, Matthew G.

May, Kevin [160] see Tilton, James C.; [160] *see Yatsko, Andrew*

May Cia, Rossana [178] see Bey, George J.

Mayer, Gary [184] see Bergin, Sean M.

Mayer, James M. [234] see Hill, Matthew E.

Mayfield, Tracie (Illinois State University)

[134] *Ceramics, Landscape, and Colonialism: Archaeological*

Analysis of the British Sugar Estate at Lamanai, Belize 1837-1875

In 1837, two-hundred acres of land at Lamanai, Belize were granted to James Hyde and Company by the British government in order to establish a sugar estate. However, the mill was not in working order until around 1860 and only remained a viable facility until approximately 1875. The construction of this landscape was a concerted effort by the colonists to establish permanence at Lamanai. But, the brevity of the formalized, profit-making occupation points to a critical incompatibility, whether of social, political, or economic systems and resources.

Maynard, J. Barry [257] see Gerke, Tammie L.

Mayne, Karla (N/A)

[62] *The Importance of Collaborative Efforts Between Cavers and Archaeologists*

Caves and rockshelters often present an excellent environment for the preservation of archaeological material. Caves also present a challenging environment. They are often difficult to reach, are dark, and contain complex terrain. Recreational cavers can be an excellent resource to use in cave archaeology studies. Their knowledge of cave locations and skills in navigating the cave environment often mean that they are the first to find sites within caves. A friendly relationship between cavers and archaeologists is required to gain access to that knowledge and to the assistance that cavers can provide in reaching caves and the deposits within them.

Mazow, Laura (East Carolina University)

[186] *Throwing the Baby Out with the Bathwater: Innovations in Mediterranean Textile Production at the End of the 2nd/Beginning of the 1st Millennium BCE*

Bronze Age bathtubs from the eastern Mediterranean have been interpreted as basins for bathing and/or purification rituals. Their find-spots, however, demonstrate that 'bathtubs' are often found in industrial locations in association with weaving tools. This context suggests that bathtubs functioned within the manufacture and production of textiles. I propose that bathtubs were used for fulling wool. The identification of fulling in the archaeological record of the Late Bronze and early Iron Ages corresponds with a suite of other

innovations in textile technologies that appear at this time in the Eastern Mediterranean, reflecting changes in textile manufacture and scale of production.

McAllister, Martin (WCRM / ARI)

[86] *Archaeological Damage Assessment Under ARPA: A Long, Strange Trip*

There are four periods in the history of archaeological damage assessment under ARPA: 1979 through 1984 (statute only); 1984 through 2000 (statute and regulations); 2000 through 2003 (statute, regulations and specialized training); and 2003 through the present (statute, regulations, specialized training and professional standards). This presentation will discuss how the professional status of archaeological damage assessment has progressed through these four periods to its current level of development today. Also addressed will be the positive and negative aspects of the current state of this process relative to ARPA litigation in the future.

[86] *First Organizer*; [86] *First Chair*

McAnany, Patricia [212] Discussant [159] Discussant [159] Second Organizer

McAndrews, Timothy (University of Wisconsin - La Crosse)

[94] *Culture Continuity and Change from Formative through Tiwanaku Times at Pirque Alto*

The site of Pirque Alto, in the department of Cochabamba, Bolivia, is a multicomponent site dating from the Formative Period through Tiwanaku times and beyond. Research at Pirque Alto is beginning to reveal a number of important socio-cultural developments including one of the earliest copper smelting industries in the Andes, an ongoing exchange relationship with distant populations, and a clear material culture influence from the Titicaca Basin. These and other recent findings from research at Pirque Alto will be discussed in this presentation.

[94] *Second Organizer*; [162] *see Anderson, David A.*

McBride, Kevin [117] *see Kasper, Kimberly*

McBrinn, Maxine (PaleoCultural Research Group) and Bradley Vierra (Statistical Research Inc.)

[248] *Resistant Foragers: The Problem of Low Maize Ubiquity at Sites in the Northern Rio Grande Valley*

In much of the Southwest, people appear to have been significantly invested in maize horticulture by A.D. 200 and earlier. However, in the Northern Rio Grande Valley, maize seems to have played only a supplemental role in subsistence strategies until much later. Although there is evidence that maize was grown in the region by 1200 B.C., its remains do not become archaeologically ubiquitous until A.D. 600 or later. We propose that potentially rich piñon harvests, combined with locally abundant cheno-ams and other wild seeds, provided sufficient yields of easily stored foods, making the labor costs for maize agriculture generally unattractive.

McBrinn, Maxine [118] *see Seamont, Morgan S.*; [248] *First Organizer*; [248] *Second Chair*

McCafferty, Geoffrey (University of Calgary) and Carrie Dennett (University of Calgary)

[191] *Evaluating the 'Out of Mexico' Migration Theory: New Light on the Bagaces/Sapoa Transition in Pacific Nicaragua*

The Greater Nicoya region of Lower Central America has long been identified with Mesoamerica. This has been particularly acute for the 'Postclassic' period based on ethnohistorical accounts, and supported by polychrome pottery with Mexican iconography. Excavations along Lake Nicaragua have specifically targeted the ethnicity of cultural groups dating to the Bagaces and Sapoa periods, with interest in cultural changes and continuities. This paper presents results of these investigations as they relate to the 'Out of Mexico' theory, concluding that while some evidence suggests ideological affiliation there is also conflicting evidence to suggest a more complex process of culture change.

McCafferty, Geoffrey [191] *First Organizer*; [202] *see McCafferty, Sharisse D.*

McCafferty, Sharisse (University of Calgary) and Geoffrey McCafferty (University of Calgary)

[202] *Mortuary Practices at Locus 1, El Rayo, Nicaragua*

A small cemetery spanning the Bagaces and Sapoa periods (AD 500-1300) was discovered at the tip of the Asese peninsula into Lake Nicaragua. This poster documents burial practices relating to cultural changes, possibly relating to the arrival of 'mexicanized' migrants known as the Chorotega. It also contrasts Sapoa patterns involving distinctive shoe-shaped urns that have been excavated at related sites such as Santa Isabel and Tepetate. Numerous disarticulated skulls may indicate sacrificial rituals, trophy head offerings, or ancestor veneration.

McCall, Grant (Tulane University), Jonathan Thomas (University of Iowa), Kurtis Kettler (University of Iowa), Merritt Sanders (Tulane University) and Sherman Horn (Tulane University)

[35] *An Overview of the 2009 Excavations at the Erb Tanks Site, Western Namibia*

This paper reports on the 2009 excavations at the Erb Tanks site in the central Namib Desert, Western Namibia. This paper presents information concerning the site's geographic context, a description of the stratigraphy, dating attempts, and an inferred chronology for the new discoveries. Present at the site are (1) Upper Pleistocene Middle Stone Age (MSA) lithics and ostrich egg shells (OES) fragments (including beads), and (2) Middle Holocene to historic-period Later Stone Age (LSA) lithics, faunal remains, OES beads, glass beads, and ceramics. This paper presents an overview of these finds.

[35] *First Organizer*; [35] *First Chair*

McCall, Grant [35] *see Horn, Sherman W.*; [35] *see Kettler, Kurtis H.*; [35] *see Thomas, Jonathan T.*; [190] *see Johnson, Scott A. J.*

McCarty, Sue Ann (University of Virginia)

[64] *Transforming Cattle into Rain: Reassessing Relationships with Animals in the Late Neolithic Halaf of Northern Mesopotamia*

The relationship between nature and culture forms a fundamental part of the way human communities understand order in the world. Ceramics from the Halaf cultural horizon (5,900-5,350 Cal. B.C.E.) in northern Mesopotamia are well-known for their prominent painted depictions of natural forms and, especially, cattle in various states of transformation and abstraction. Although many other domestic animals were also utilized, cattle often formed a major source of meat in Halaf villages. This paper discusses the possible role of cattle pastoralism as a source of inequality in a time period for which the evidence for marked status differentiation remains uncertain.

[64] *First Chair* [64] *Second Organizer*

McClung de Tapia, Emily (UNAM MEXICO)

[161] *Stable Carbon Isotopes applied to Landscape Reconstruction: Teotihuacan Valley, Mexico*

Stable carbon isotope values from organic material in sediments suggest possible sources of carbon and contribute to the development of hypotheses concerning the composition of regional vegetation. Such data provide complementary information which can be combined with the determination of stratigraphic micro- and macrobotanical remains from archaeological contexts, thus broadening our perspective concerning past landscapes. This poster explores applications to the study of soils and sediments in the Teotihuacan Valley, Mexico, the complexity of human ecodynamics through time and implications for landscape reconstruction.

McClure, Sarah (University of Oregon) and Emil Podrug (Muzej Grada Sibenika)

[9] *The Pottery of Pokrovnik and Danilo Bitinj: 1,000 years of Pottery Production in Dalmatia*

The ceramic assemblages of Pokrovnik and Danilo Bitinj provide an unparalleled window into pottery production during the Early and

Middle Neolithic on the Dalmatian coast. Both sites yielded large quantities of pottery, and, in the case of Pokrovnik, assemblages span 1,000 years of continuous production. We present preliminary results of stylistic and technological analysis of pottery from these two sites and highlight questions of technological innovation and exchange.

McCormick, Charla (Indiana University) and Frederika Kaestle (Indiana University)

[257] *Burial Location and Maternal Relatedness at Angel Mounds*
In the early years of excavation at Angel Mounds over 300 human burials were uncovered, many of which occurred in the eastern village area of the site. However, a number of individuals were buried in other locations as well, such as within mound structures and outside palisade walls. This raises the question whether familial relationships affected burial location at Angel, as they often do today. In this paper, the spatial patterning of burials on the landscape at Angel Mounds is addressed by analyzing ancient mitochondrial DNA (mtDNA) recovered from Angel residents. Maternal relationships present among the mortuary population are discussed.

McCormick, Michael (Harvard University)

[243] *A Small Town Experiences the Fall of the Roman Empire: (2) Thinking about Tarquimpol's New Answers to an Old Question*
The results outlined in Henning's paper offer new insights into the end of the Roman empire whose importance transcends the local situation. The hitherto unknown restoration of a settlement center at Tarquimpol in the fourth century and its subsequent demise shed important new light on the archaeology and history of the security challenges, imperial responses, and the communications systems that characterized the late Roman and post-Roman period. They powerfully exemplify the way in which archaeological and historical investigation can be brought together to illuminate the human past. This paper will present further new findings from Tarquimpol and the written sources, and discuss the archaeological results in the light of recent historical investigation, particularly with respect to the Roman and post-Roman economy.

McCorriston, Joy (The Ohio State University) and Matthew Senn (The Ohio State University)

[11] *Political Ecology of Frankincense Production in Southern Arabia*
The South Arabian archaeological record suggests pure pastoral economies (household labor dedicated to herding domesticated animals) emerging before agriculture, offering a diachronic perspective on ethnographic observations of political tribal organization confronting centralized states. Arabian prehistory raises questions about how socioeconomic factors of (re-)production in pastoral ecosystems constrained other environmental choices, including agriculture and participation in the frankincense trade of Arabia's Caravan Kingdoms. Current research in Yemen and southern Oman incorporating remote sensing and archaeological survey data has generated a GIS modeling least-cost pathways for ancient pastoral groups. This research explores pastoralists' participation and engagement with centralized Arabian states.

McCorvie, Mary (US Forest Service)

[59] *The New Deal in Illinois Archaeology: an Introduction*
During the worst of the Great Depression, CCC or WPA sponsored archaeological excavations occurred at a minimum of 17 sites in Illinois, in addition to a smaller number of satellites sites that had only limited testing programs. Since the 75th Anniversary of the FDR's work-relief projects was celebrated in 2008, it is important to remember that WPA archaeology, through the use of Illinois' unemployed labor force, established the basic cultural chronologies we use today; the current state of our archaeological knowledge is largely the result of the foundation laid by the Illinois' WPA archaeological initiative.

McCoy, Curtis [29] see Pedler, David

McCoy, Mark (University of Otago), Greg Asner (Stanford

University), Keith Prufer (University of New Mexico), and Michael Graves (University of New Mexico)

[230] *Research Applications of Lidar in Archaeology: A Case Study in Reconstructing Irrigated Agriculture in the Hawaiian Islands*
Lidar has proven remarkably useful as an aerial remote sensing tool for archaeological prospecting. But, it is less common for archaeologists to use the digital elevation model (DEM) produced by this method for other purposes, such as spatial analysis. In this study, we discuss the application of a high quality, lidar derived DEM in reconstructing how irrigation water was diverted and allocated in agricultural fields built by Native Hawaiians in the era before European contact. This paper builds upon traditional field survey and excavation data of canals and fields and demonstrates the value of research directed applications of spatial technology.

McCray, Brian [166] see Clites, Elizabeth A.

McCulloch, Tom (Advisory Council on Historic Preservation) [130] Discussant

McCullough, Robert [219] see Strezewski, Michael

McDonald, Josephine (Australian National University) and Peter Veth (Australian National University)

[104] *From Altamira to Australia: Aggregation and Dispersal as an Explanatory Framework for Stylistic Complexity in the Western Desert*
Meg Conkey's study of decorated antler/bone objects at Altamira highlighted the need to formulate explicit test implications of aggregation and dispersal in hunter gatherer settlement systems. She introduced the concept of diversity in design elements into the aggregation 'mix' of subsistence, social behaviours and ritual expression, thereby opening the door to rock art as a suitable element for archaeologists studying aggregation behaviour. This paper explores how Conkey's originally defined expectations and predictions for aggregation locales have been taken from Magdalenian rockshelters to petroglyph and pictograph sites, style provinces and culture blocs in the Australian Western Desert.
[104] *Second Organizer*

McDonough, William F. [161] see Inanez, Javier G.

McElrath, Dale [146] see Evans, Madeleine G.

McEwan, Colin, Cirilo Vivanco (University of Huamanga), Francisco Ferreira (Rpyal Holloway College), Frank Meddens (Pre-Construct Archaeology) and Gabriel Ramon (The British Museum)

[18] *Re-cognizing and Marking the Andean Landscape: Ushnus, Apachetas, Sayhuas and Wankas*
Two folio pages in the recently published Galvin manuscript portray a high montane landscape dissected by roads around which are arrayed cultural features broadly identified as 'apachetas'. This paper reports the results of field studies around the Ayacucho Basin and Huanco Sancos respectively that reveal a larger range of cultural constructions than hitherto suspected, including ushnu platforms, apachetas, sayhuas and wankas. The systematic description and classification of these structures offers insights into their role in appropriating and marking the high puna landscape, especially within the context of Inca imperial expansion.

McEwan, Colin [18] see Meddens, Frank

McFadden, Douglas (McFadden Archaeological Consulting) [75] Recent Investigations on the Paria Plateau, Vermilion Cliffs National Monument

This display highlights recent archaeological investigations carried out on the Paria Plateau in northern Arizona. Intensive inventories suggest that a population, originating from the west, moved onto the Plateau during favorable climate conditions about A.D. 1100. A strategy of dry-farming the natural basins that characterize the Plateau is examined. Plaza-style pueblos, suggesting the occupation

extended into the 1200's, raise the possibility of discontinuous occupation during periods of drought. Exceptional site preservation on this NLCS unit offers opportunities for detailed examination of site layouts, construction histories and social organization.

McFarlane, William (Johnson Co. Community College, KS) and Miranda Stockett (Johnson County Community College, KS)
[65] *What Does It Mean to be Non-Maya (or Lenca, for that matter)? Composing a Lenca Identity from the Archaeological Record of Western Honduras*

Recent efforts of the Honduran Institute of Anthropology and History have renewed interest in investigating the diversity of pre-Columbian and historic communities of Honduras. For archaeologists working in Honduras, a specific outcome has been a reconsideration of the dynamic and multi-ethnic composition of the region. In this paper we synthesize a decade of our own research in locales across Honduras and suggest a move beyond essentialized models focused on constructs such as the "non-Maya" to those that emphasize distinctive communities across time and space. In essence, we argue that the data show what it means to be "Lenca" in pre-Columbian times varied across time, space, and socio-historical context.

McGaha, Shaun [217] see Lockhart, Jamie J.

McGill, Dru (Indiana University) and Erica Ausel (Indiana University)

[257] *Early Angel: Revealing Discoveries from a Burnt Mississippian Structure, c. A.D. 1100*

In 2007, the Glenn A. Black Laboratory of Archaeology began excavations in an Angel Mounds structure first identified by its strong dipole signature in a magnetometry survey. Two subsequent summers of field-school excavations revealed a severely burnt structure with several unique features, dating to the earliest periods of Mississippian occupation at Angel Mounds, circa A.D. 1100. Most impressive among these features was a well-preserved cane mat that covered the structure's ground surface, and large pottery vessels (one fully intact) resting on the mat. The excavations and lab analyses augment our understanding of life at Angel Mounds during its formative periods.

[257] *First Chair* [257] *Second Organizer*

McGill, Dru [257] see Stockdell, Eric K.

McGuire, Randall (Binghamton University)

[167] *Archaeology as Political Action in the Coalfields*

The Ludlow Massacre and the Battle of Blair Mountain represent two of the most violent and clearest examples of class warfare in U.S. history. Excavating the remains of these conflicts defies the ideology that class warfare never occurred and propels archaeologists into political struggles. A theory of archaeological praxis can guide us in such struggles. Praxis uses the craft of archaeology to help communities construct meaningful, honest histories, and to strive for real collaboration. At Ludlow and Blair Mountain, praxis challenges the omnipresent class struggles of the modern world by working in solidarity with working people.

[33] *Discussant* [181] *Discussant*

McIlraith, Erin (WSU)

[203] *Talking to the Dead: Using Correspondence Analysis to Understand Gender, Age, and Time at the Greenville Burial Ground, BC*

Mortuary data on the Northwest Coast has primarily been used to support claims of status differentiation throughout time. Mortuary data, however, can also be used to understand important differences in gender, age, and burial time. Burial goods and treatments have the potential to share information about the social structures and behaviors of the living, and by using correspondence analysis, the meanings of certain burial treatments and goods can be seen to be associated with a specific gender or age group. This study exposes social dynamics and gender-object associations of the living by using correspondence analysis on mortuary data.

McIntosh, Susan [121] see Cisse, Mamadou

McKee, Arlo

[72] *The Application of Ground Penetrating Radar at Kanorado, an Early Paleoindian Locality in Northwest Kansas*

The Kanorado locality in northwestern Kansas consists of three Early Paleoindian sites with cultural deposits 1-2 m beneath an alluvial terrace. A Ground Penetrating Radar (GPR) survey of site 14SN106 was conducted in an attempt to delineate the site stratigraphy. High attenuation rates at the site limited the depth of imaging and resolution of the survey. However, the survey was successful because it helped to delineate the extent of the site as well as an unknown paleo-arroyo under the terrace. This study demonstrates how GPR can be an effective research tool even if cultural remains are not imaged directly.

McKee, Arlo [231] see Fullerton, Ben L.

McKelvie, Richard [86] see Matovich, Jeanette

McKenzie, Dustin, John Schlagheck (Cabrillo College) and Mark Hylkema (California State Parks)

[81] *Middle Holocene Subsistence and Settlement Patterns at the Sand Hill Bluff Site*

The Sand Hill Bluff Site (CA-SCR-7), located five miles north of Santa Cruz, has played a significant role in the identification of Middle Holocene cultural adaptations along the central coast of California. Collaboration between California State Parks and Cabrillo College resulted in the systematic excavation of over twelve cubic meters of site deposit during the 2008 field school. Analysis of recovered materials suggests that site occupants maintained a subsistence economy focused on the exploitation of rocky inter-tidal shellfish and terrestrial mammals and may indicate seasonal population movements between the coast and interior valleys during the Middle Holocene.

McKillop, Heather (Louisiana State University), April Sievert (Indiana University), C. Wayne Smith (Texas A & M University), George Harlowe (American Museum of Natural History) and Michael Wiemann (USDA Forest Products Laboratory)

[139] *Demystifying Jadeite: Underwater Discovery at Ek Way Nal, Belize*

Underwater archaeology in Paynes Creek National Park, southern Belize led to the discovery of a jadeite gouge with a wooden handle, resting by a wooden building post at the Ek Way Nal salt works. Geological analysis revealed the tool is of exceptionally high quality and consistent with jadeite from the Motagua Valley, Guatemala. The handle is rosewood, radiocarbon dated to the Late Classic. The quality of the jadeite tool might suggest its use in a burial or cache, but its context at salt works indicates it was just a tool.

McKnight, Justine [247] see Gallivan, Martin

McLaren, Duncan [224] see Fedje, Daryl W.

McLaughlin, Meredith (Archaeological Research Center of St. Louis, Inc.)

[187] *Archaeological Excavations of the "Modern" Historic: Findings from the Missouri Botanical Garden, Multi Modal Site (23SL1215)*

The Missouri Botanical Garden, Multi Modal Site (23SL1215), located near the corner of Shaw and Vandeventer in St. Louis City, Missouri, is a "modern" historic site that was tested in May of 2003. Archival research found that the area formerly contained a tavern and ten homes that were constructed in 1894. The homes were occupied by families of unskilled or low paid laborers, a group under represented in the historical record. The archaeological testing helped to fill in these historic gaps and gave a face to the lower classes of St. Louis at the start of the 20th century.

McLeester, Madeleine (University of Chicago) and Melissa Rosenzweig (University of Chicago)

[11] *Managing Nature: Integrating Political Ecology and Archaeology*
This presentation examines the continuity (and discontinuity) of the history of ecology in Northern Indiana. Relying upon pollen analysis of two sediment cores, I will argue that the historical accumulation of human strategies, decisions, and actions have shaped and continue to shape this landscape. In particular, I challenge our conceptions of industrialization as a rupture and end of "natural" nature. Drawing on examples from an industrial, remnant wetland and a conservation area, this presentation will introduce the themes of this symposium and explore the ways in which the political ecological perspective can advance archaeological research and theory.

[11] *First Chair*

McLemore, Virginia [144] see *LeTourneau, Philippe D.*

McLoughlin, Patrick (USDA-Natural Resources Conservation Service)

[249] *A Look at Two Buried Prehistoric Sites in the Driftless Area of Southeast Minnesota*

The Upper Mississippi River Valley cuts through the rugged and unglaciated Driftless Area. This unique setting of rich and diverse natural habitats characterized by dramatic limestone bluffs, river valleys, and forested hillsides starts at Lake Pepin, below Red Wing, Minnesota, and ends near Dubuque, Iowa. In recent years there has been an increase in funding at both the state and federal level to implement streambank protection practices along smaller tributaries of the Mississippi River in the Driftless Area. The goals of these practices are to impede erosion, improve water quality, and improve riparian and prime cold water fish habitat. This paper focuses on two buried prehistoric archaeological sites encountered in the Driftless Area of southeast Minnesota during compliance activities for federally funded streambank stabilization projects. These stratified, multi-component sites, that appear to date from the Woodland period to possibly well into the Archaic, are helping to shed light on time periods and site types that are poorly known in the Driftless Area and Upper Mississippi River Valley in general.

McManamon, Francis (Digital Antiquity) [12] *First Organizer, [12] Discussant [12]* *First Chair*

McNeil, Cameron (Lehman College, CUNY)

[258] *In the Country and in the City: Terminal Classic and Postclassic Land Use in Copan, Honduras*

The analysis of sediment cores and archaeological sites from the Copan Valley, Honduras demonstrates that people were utilizing the landscape of the low valley floors and upland regions in different ways during the Terminal Classic and Postclassic periods. While the ninth century collapse of the ancient city saw the near abandonment of the valley floor, people took refuge in the more defensible sections of the valley's hills where agricultural fields are found past A.D. 1000. In this presentation this pattern will be discussed and compared with evidence from other areas of the southeastern periphery.

McNeil, Lynda (University of Colorado, Boulder)

[104] *The Spread of Old Uto-Aztec Flower World Complex into the American Southwest: Anthropomorphized Cult Deities in Rock Art and Other Media*

This paper tracks the spread of Old-UA Flower World Complex into the American Southwest where evidence in rock art and other media appears ca. 1000 B.C. to A.D. 1300. To narrow the scope, the paper focuses on the reproduction and transformation of an iconic suite of anthropomorphized cult deities spanning Early Agricultural (Basketmaker II-III and Fremont) Style rock art, Hohokam and Salado pottery styles and designs, and other media. In historic times, this iconography survives in Hopi katsinas, rituals, and ritual paraphernalia, in particular those related to Powamuya, spring purification and planting rites.

McNeill, Casey (University of Notre Dame), Alissa Nauman

Ian Kuijt (University of Notre Dame) and Nathan Goodale (Hamilton College)

[185] *The Dynamic Village: 19/20th Century Organization of InisAirc, Co. Galway, Ireland*

Drawing upon living memory, archival research, and historical documentation, this poster explores tempos of life experienced by 19th through 20th century residents of InisAirc, a historic fishing village off Western Ireland that was abandoned in 1960. By combining oral history research with historical 1838, 1911, and 2008 maps of the village we are able to trace broader patterns of construction, inhabitation, and abandonment of vernacular architecture. This study, as well as oral interviews, helps us reconstruct village scale land use and residential patterns, as well as the connections between individual building life histories and the specific residents who lived in them.

McNeill, Casey [185] see *Tynan, Collins P.*

McPherron, Shannon (Max Planck Institute), Alain Turq (National Museum of Prehistory (Les Eyzies, France)), Dennis (Simon Fraser University) and Harold L. Dibble (University of Pennsylvania)

[8] *Small Flake Production and the Levallois Assemblages from the Lower Levels at Roc de Marsal, Dordogne*

The Roc de Marsal sequence includes two major Mousterian components: the upper Levels (4-2) characterized by Quina industries and the lower Levels (10-5) dominated by Levallois technology. The Levallois levels are distinct from the upper levels in several respects: they include a significant focus on the production of small flakes as reflected in the occurrence of diminutive Levallois ("Asinipodian") elements, truncated-facetted pieces and Kombewa elements; they have a significantly higher blank to core ratio; and they have a particularly low tool to blank ratio. These and other characteristics of the lithic technology of these lower levels are examined here.

McPherron, Shannon [8] see *Aldeias, Vera I.d.*; [8] see *Sandgathe, Dennis M.*; [58] see *Iovita, Radu P.*; [8] see *Dibble, Harold L.*

Meadow, Richard (Harvard University) and Jade D'Alpoim Guedes (Harvard University)

[162] *The Undergraduate Concentration in Archaeology at Harvard University*

Archaeology has been taught in one form or another in Harvard College for at least a century. However, Archaeology's status as a concentration (major) separate from those in Social and Biological Anthropology developed only in the last quarter of the twentieth century, continuing to today. We review curricular developments in Archaeology at Harvard over the past three decades, showing how instruction has changed in order to educate students about contemporary practice and concerns in the discipline within the context of a liberal arts education at a premier private university.

Meadow, Richard [189] see *Valentine, Benjamin*

Means, Bernard (VA Commonwealth Univ/Versar, Inc.)

[59] *Brother, Can You Spare a Dime... for Archaeology? The New Deal and American Archaeology*

Franklin Delano Roosevelt's New Deal for the American people initiated massive work programs to alleviate the crippling nation-wide unemployment that characterized the Great Depression. The "alphabet soup" of New Deal work relief funding agencies included the Civil Works Administration (CWA), the Works Progress Administration (WPA), and the Civilian Conservation Corps (CCC). Relief workers excavated archaeological sites across the USA, ranging from small camps to large mounds. I present an overview of New Deal archaeology, which incorporates renewed attention to old collections of field notes and artifacts, and new excavations of sites associated with the New Deal, notably CCC work camps.

[59] *First Organizer, [59] First Chair*

Meddens, Frank (Pre-Construct Archaeology), Colin McEwan

(British Museum), Millena Frouin (Royal Holloway) and Nick Branch (University of Reading)

[18] *Locating Usnus: The Inca Rationale for the Placement of Sacred Platforms*

Cristobal de Albornoz between 1581 and 1585 identified two types of Inca usnus; one located in the main square of Inca settlements and the other along side the Inca road system. This paper presents new evidence that helps to explain the rationale behind regional variations in the location, architecture and construction methods of these sacred platforms. In addition to the administrative importance of the usnus, we explore the symbolic function with respect space, liminality and performance.

Meddens, Frank [18] see McEwan, Colin

Medeiros da Silva, Francini (Universidade de São Paulo), Lígia Trombetta Lima (Universidade de São Paulo) and Myrtle P. Shock (UC Santa Barbara)

[142] *Amazonian Potential in Archaeobotanical Remains*

The humid conditions of the tropics have been seen as a limiting factor to archaeobotanical research focused on plant seed remains. The excavation and flotation of sediment from large features at Laguinho, a site in the central Amazon, is helping to break this paradigm as seed material has been recovered. Ongoing analysis leads us to believe that there is great potential for an expanded understanding of diet based on complete sediment recovery from hearth type features within black earths (terra preta).

Medeiros, Melanie (University of Arizona/William Self Associates)

[213] *Performance Theory and the Archaeological Record: Theorizing Hohokam Feasts*

Realization that feasting is an important aspect of many societies has driven archaeologists interested in politics, power, ritual, and ideology to explore how feasting was actively involved in the performance of these concepts. While recent studies have recognized this performative nature of feasting, few have utilized performance theory to explore the political, ritual, or ideological aspects of feasts. Application of performance theory to feasting data from several Hohokam sites suggests that while feasting was an important activity, further refinement of the archaeological data set is necessary before inferences regarding the performative significance of Hohokam feasts can be made.

Meeks, Scott (University of Tennessee, Knoxville) and David Anderson (The University of Tennessee, Knoxville)

[224] *Evaluating the Effect of the Younger Dryas on Paleoindian Cultures in the Southeastern United States*

The Younger Dryas (ca. 12,900 to 11,600 cal yr BP) has been attributed a casual role in Paleoindian culture change across the southeastern United States, including the fragmentation of the widespread Clovis tradition, the development of more geographically circumscribed cultural traditions, and an apparent population decline. In this paper, we use fossil pollen data and the regional archaeological record to examine the complex interactions occurring between humans and abrupt climatic shifts associated with the Younger Dryas event and how these climatic shifts may have promoted time-transgressive changes in terms of demography, land-use patterns, and technological organization.

Mehta, Jayur (Tulane University), Jay Johnson (The University of Mississippi), John Connaway (Mississippi Department of Archives and History), Kelsey Lowe (Coastal Environments, Inc.) and Rachel Stout Evans (Natural Resource Conservation Service)

[217] *An Epic Flood and the Genesis of a Monumental Mound Center: Geomorphological Investigations at the Carson Mounds Site (22CO505), Coahoma County, Mississippi*

Preliminary investigations have corroborated an 1894 map of the Carson Mounds site. Located in the Northern Yazoo Basin, this site once contained 88 pyramidal and small conical mounds over the

extent of one mile. The main purpose of this study is to map the river channel chronology and discover any remaining mounds – 11 have been found to this date. Two weeks of fieldwork are described in this study and demonstrate for a flood event underlying some of the mounds and interrupting construction at others. While these data are yet preliminary, they should refine methods in geomorphological and geophysical investigation.

Meierhoff, James (University of Illinois at Chicago) and Mark Golitko (University of Illinois at Chicago)

[139] *Sourcing of obsidian from the ancient Maya farming village of Chan, Belize using portable-XRF*

This study focused on determining the elemental composition of the obsidian artifact assemblage from the ancient Maya village of Chan. The extreme longevity of settlement at Chan (roughly 800 B.C.-1200 A.D.) in contrast to the rapid florescence and decline of other larger sites in the Belize River Valley allows us to examine the impact these major socio-political changes had on the maintenance of exchange networks that supplied smaller settlements with obsidian. Also, this project assessed the efficacy of portable XRF instrumentation for identifying Mesoamerican obsidian sources, demonstrating the promise of p-XRF as a rapid, low-cost, portable method of characterizing obsidian.

Meiggs, David (University of Wisconsin- Madison) and Benjamin Arbuckle (Baylor University)

[214] *Where Shepherds Roam: Tracing Changes in Pastoral Management at Kösk Höyük, Central Turkey*

Traditional archaeozoological methods reveal a wealth of information about prehistoric pastoral systems. It has been more difficult to ascertain the geographic and seasonal character of herd mobility. Strontium isotope analysis of intra-tooth samples elucidates geographic facets of herd management. Previous archaeozoological analysis of ovicaprids from Neolithic/Early Chalcolithic Kösk Höyük (6200-4800 cal BC) suggests shifting emphasis in herd management practices through time. This paper presents 87Sr/86Sr tooth enamel data augmenting these observations, detailing changes in extent and variability of land use from the Neolithic to Chalcolithic. Results will highlight the potential of 87Sr/86Sr to elucidate intra-regional mobility and consider methodological issues.

Meinkoth, Michael (Missouri Department of Transportation)

[172] *Archaeological Data Recovery on the Avenue of the Saints*

The Missouri Department of Transportation planned improvements to U.S. Route 61, the Avenue of the Saints, in northeastern Missouri. The archaeological investigations mirrored the MoDOT philosophy of "Practical Design," which is to get the best value for the least cost through innovation, creativity, and flexibility. Over 1000 features excavated, 60,000 artifacts collected, and archaeobotanical, faunal and paleoenvironmental data recovered from over two-dozen of the 55 sites examined. This project gives us access to data regarding 10,000 years of human history and environmental changes in a 15-mile segment of the Mississippi River valley.

Meissner, Nathan (Southern Illinois University at Carbondale), Andrew K. Balkansky (Southern Illinois University at Carbondale) and Katherine E. South (Southern Illinois University at Carbondale)

[169] *Early Evidence for Figurine Embodiment in the Formative Mixteca Alta, Oaxaca, Mexico*

This study examines archaeological data from the site of Tayata in the Mixteca Alta region of Oaxaca where human and non-human ceramic figurines dating from the Early Formative (1,500-1,000 B.C.) to the Early Middle Formative transition (1,000-900 B.C.) provide a unique opportunity to understand early household practices of embodiment. A holistic approach to Tayata data including bioarchaeological, faunal, and ethnographic information illuminates key aspects of the embodiment of Tayata figurines and indicates a relationship between the life cycle termination of both human and non-human figurines relating to the post-mortem treatment of individuals.

Melgar, Emiliano [67] *see Velazquez, Adrian*

Meltzer, David (Southern Methodist University) and Vance Holliday (University of Arizona)

[224] *The Impact (or not) of Younger Dryas age Climate in the Plains and Rocky Mountains*

It is often assumed cooling temperatures during the Younger Dryas Chronozone would have impacted biota and thus posed significant adaptive challenges to Paleoindians. Yet, assumptions about the nature, severity and abruptness of Younger Dryas cooling are often based on cores from the Greenland ice sheet. There changes were significant. However, a review of climatic and environmental records from the Plains and Rocky Mountains indicate that conditions in these regions were hardly so demanding. Accordingly, such changes as occurred may not have measurably added to the challenges routinely faced by Paleoindian groups.

Meltzer, David [224] *see Holliday, Vance T.*

Mendizabal, Tomas [226] *see Wake, Thomas A.*

Mendjusic, Marko [9] *see Fadem, Cynthia M.*

Mendoza, Rubén (CSU Monterey Bay)

[89] *Archaeoastronomy and Solar Eucharistic Worship in the Millennial New World*

A new Hispanic Catholic doctrine rose with the conquest of the Americas, which linked Armageddon to indigenous conversions. The imminent return of the Solar Christ is seen in meridian alignments and the solar geometry of Colonial and Hispanic Catholic missions, church iconography, and tabernacle enclosures from throughout the Southwest and Mesoamerica. Feast day illuminations and meridian alignments were discovered at twelve of twenty-one California missions, seventeen Southwestern sites, as well as others in Mesoamerica and Perú. Fully one-third of these sites were constructed with heliocentric, calendrical, and or solar Eucharistic considerations in their syncretic and millenarian elaboration and architectonic layout.

[89] *First Chair*

Mendusic, Marko (Ministry of Culture, Croatia) and Emil Podrug

[9] *The culture of Danilo Bitinj and Pokrovnik: results of excavations from 2003 to 2006*

Excavations at Danilo Bitinj (2003-2005) and Pokrovnik (2006) have illuminated the Early Neolithic (Impressed Ware) and Middle Neolithic (Danilo) cultural episodes in Dalmatia. Both sites were large villages with considerable horizontal variation in structures, including terrace walls, houses, and pits. This variety suggests that each settlement had a complex layout. The abundant artifacts, including large quantities of pottery and some ground stone tools, flints, bone artifacts and other objects, attest to the cultural richness that developed during the Neolithic in Dalmatia.

Mentzer, Susan (University of Arizona), Mary Stiner (University of Arizona) and Mihriban Özbasaran (Istanbul University)

[259] *Micromorphological Investigations of Anthropogenic Features at the Aceramic Neolithic site of Asikli Höyük, Turkey*

Asikli Höyük is a Neolithic tell situated in Anatolia's Cappadocia region. In conjunction with a new phase of conservation and excavation, micromorphological samples were collected from anthropogenic features (walls, floors and midden) in order to characterize and compare building materials, maintenance, discard, and post-depositional modifications amongst three occupation levels. The construction materials vary in texture, carbonate content, temper and other inclusions. Floors exhibit phases of construction and maintenance, while overlying fills contain debris related to combustion and domestic activity. Analyses of middens reveal well-preserved refuse lenses as well as plant materials, phosphates and calcareous spherulites likely derived from ruminant dung.

Mercier, Norbert [8] *see Guerin, Guillaume*

Merewether, Jamie [235] *see Arakawa, Fumiyasu*

Mergen, Vanchigdash [122] *see Eng, Jacqueline T.*

Merkel, Stephen [235] *see Tyson, Erin R.*

Merrill, Michael (Arizona State University) and Dwight Read (UCLA)

[6] *A New Method Using Graph and Lattice Theory to Discover Spatially Cohesive Sets of Artifacts and Areas of Organized Activity in Archaeological Sites*

We will present a new method to analyze spatially cohesive sets of artifacts and relate them to intrasite activity areas using the spatial similarity and cohesion of artifact types. This method can incorporate heterogeneous data and is able to reveal and deconstruct overlapping areas into their constituent elements. We will also discuss the results of the method applied to a Chumash Early period habitation site (CA-LAN-803) from coastal southern California that enables us to distinguish several spatially cohesive sets ("tool kits") of artifact types and relate these to specific types of "indoor" and "outdoor" activities.

Merrill, William [248] *see Hard, Robert J.*

Merriman, Christopher [21] *see O'Brien, Matthew J.*

Messenger, Phyllis (University of Minnesota) [237] *Discussant*

Messer, Andrea (Penn State)

[50] *Archaeology in the Age of Aquarius – Media Coverage in the 60s*

From civil rights marches to flower children and from assassinations to the Chicago Democratic Convention, the 1960s were memorable. But how memorable was the archaeology of the sixties? An investigation of how archaeology was portrayed in newspapers and magazines during the decade will highlight what made the news and how it was presented. Was New World archaeology the focus or did Egypt and Europe hold sway. Did the Viet Nam War and the problems in Laos and Cambodia bring to light the archaeology of Southeast Asia? How were archaeologists depicted and who were they?

[50] *First Organizer; [141] Discussant*

Messner, Timothy (Smithsonian NMNH) and

[215] *Ground-Up Grains: Middle Holocene Plant Processing in the Lower Illinois River Valley*

The ability to process plants has enabled people to gain sustenance from otherwise nutritionally inaccessible elements in their environment. The archaeological recovery of grinding stone technologies provides insight into prehistoric processing strategies, yet their actual function and the plants utilized remains speculative. This paper presents preliminary findings from an extensive starch grain analysis study focused on mortars and metates recovered from mid-Holocene sites distributed throughout the Lower Illinois River Valley. Findings demonstrate that this technology was used to process substances including small seeds. This data has implications for increasing our understanding of mid-Holocene human/environmental interactions in the mid-continent and abroad.

[215] *First Organizer; [215] First Chair*

Meyer, Cailin (Rhodes College)

[219] *Land Value and the Formation of the Planter Class in Fayette County, Tennessee*

In order to better understand the relation between land value and social status in Fayette County, Tennessee, a study consisting of 309 land deeds registered in 1825-1860 was conducted. This study identified important factors and patterns in the buying habits of the region's slaveholding farmers. One key component was the Panic of 1837, when land prices artificially rose in value instead of decreasing due to planter activity. Others include the location of purchased land

to the buyer's original parcels, and the buyer's economic class status held the most influence on land prices, while a land's growth potential held little impact.

Meyer, Lauren [235] see *Tyson, Erin R.*

Meyer, Michael (MoDOT)

[187] *Industry and Innovation: Archaeological Investigations of a 19th-Century Brass Foundry*

In Summer 2009, the Missouri Department of Transportation conducted a data recovery project at the John C. Kupferle Foundry site, a late-19th-century iron and brass foundry located in northern St. Louis. The factory was in operation from 1882 to 1910, and represents a transition from preindustrial to industrial manufacturing. The factory was built on the former location of Big Mound, the last vestige of the St. Louis Mound Group finally destroyed in 1869. Several historic features, dating to the critical period between the destruction of the mound and the establishment of the foundry, were also uncovered below the factory foundations.

[187] *First Organizer*; [187] *First Chair*; [187] see *Greenwood, Brianne*

Meyer, Regina (Missouri National Guard) and Judith Deel (Missouri State Historic Preservation Office)

[187] *Preserving Jefferson Barracks: A Case Study of the Management of Military Sites*

The Missouri National Guard manages and operates Jefferson Barracks near St. Louis, MO. Established in the 1820s as the country's first "Infantry School of Practice", this property continues to meet the needs of the National Guard as an active and significant training center. Military sites such as this face constant modernization in the form of renovation, construction, and demolition. These alternations must be considered in context of a property listed on the National Register while actively serving the military. This paper will discuss past and current successes in the management of Jefferson Barracks, the military gateway that opened the west.

Meyers, Maureen (University of Kentucky)

[127] *Frontier Landscapes and Power Formation at the Mississippian border*

Frontiers are unique landscapes because they are physically and metaphorically removed from core regions' power. They are often placed in mountain areas because they contain natural resources prized by cores for trade good production. Frontiers are areas where identity is more malleable than at the core, and as a result, power is more easily co-opted through control of trade. This paper will examine the Mississippian frontier Carter Robinson mound site to identify how power formation within a frontier landscape varies through an analysis of architectural grammar, ceramic attributes and trade goods.

Michel, Mark (The Archaeological Conservancy) [86] *Discussant*

Mickelson, Andrew (University of Memphis)

[244] *The Unobtrusive Mississippian Village: Rethinking Late Prehistoric Settlement Patterns in Western Tennessee*

Magnetometry, surface survey, and excavation results from the Early Mississippian Ames site located in southwestern Tennessee are presented. For decades Ames was known only for its four platform mounds and an associated "low density" artifact scatter. The seeming lack of a village scale settlements in the Ames region had perplexed researchers for decades. Magnetometry and excavation data, however, revealed that the mounds are part of a community plan that included a 2 ha village surrounded by a substantial palisade. Surface survey and test pit data utilized in the development of prehistoric landuse models are reexamined in light of these findings.

Mickleburgh, Hayley and Roberto Valcarcel Rojas (Centro de Investigaciones y Servicios Ambientales y Tecnológicos de Holguín)

[97] *What's in a Smile? Patterns of Dental Wear and Pathology at El*

Chorro de Maíta, Cuba

A dental anthropological study of 76 dentitions from the site of El Chorro de Maíta, Banes, Cuba, was carried out in order to understand diet and subsistence strategies, possible gender-based divisions in 'teeth-as-tools' activities, and the implications hereof for oral and general health. The site, which dates to the Late Ceramic Age and early contact period, has yielded interesting preliminary results, including the first case of intentional dental modification at an Amerindian site in the Caribbean, and a small number of cases of what appears to be a new form of LSAMAT (lingual surface attrition of the maxillary anterior teeth).

Mihok, Lorena (University of South Florida)

[204] *Consequences of Contact in the Bay Islands*

Although the Bay Islands of Honduras were claimed by Spain in the sixteenth century, English settlers, along with French and Dutch buccaneers began arriving in the islands during the early seventeenth century. By using historical descriptions of indigenous and European settlements as guides to archaeological investigation, this research contributes to a baseline of knowledge regarding the early colonial period of the islands before the removal of indigenous populations by Spain in 1650. As modern development threatens to destroy remaining archaeological resources, culture contact studies are vital to our understanding of the ways in which colonial interactions have shaped contemporary attitudes toward identity and heritage.

Milbrath, Susan (Florida Museum of Natural History), Carlos Peraza (Instituto Nacional de Antropología y Historia, Merida)

[20] *Effigy Censers of Mayapan: Context, Iconography, and External Connections*

Chen Mul Modeled effigy censers comprise a large percentage of Mayapan's late Postclassic Tases ceramic complex. Mayapan remains the center of greatest production and iconographic diversity. Some Central Mexican gods indicate contact with the Central Highlands, but most are Maya deities, including well known gods from the codices. Paired figures probably served as katon idols, in accord with Landa's descriptions. Other groupings may represent cosmological diagrams. The censer cult was widespread at a number of sites in Campeche, Peten, Belize, and on the east coast of Quintana Roo, sites where censer use continued after the fall of Mayapan in 1450.

Miles, Wesley [44] see *Wright, David K.*

Millaire, Jean-François [138] see *Surette, Flannery K.*

Miller, Alexandra (Arizona State University), Arturo Lombera Hermida (Universidade de Santiago de Compostela), C. Michael Barton (Arizona State University) and Ramón Fábregas Valcarce (Universidade de Santiago de Compostela)

[205] *A New View of the Paleolithic Settlement of the Galician Hinterland, Spain*

Despite a long history of archaeological study in neighboring areas of Asturias and Cantabria, the autonomous region of Galicia has only recently become a focus for Paleolithic research. Much of Galicia is densely vegetated and topographically rugged, making traditional survey techniques difficult. In the last 4 years, a systematic survey of the Paleolithic occupation has been undertaken in the inland areas of Galicia. Alternate technologies, such as remote sensing and GIS analysis, have been a valuable supplement to traditional methods for detecting sites and land-use patterns – with potential application to regional studies elsewhere in temperate Europe.

Miller, Christopher (University of Tübingen) and Paul Goldberg (Boston University)

[157] *Geoarchaeology, Paleoenvironments and Settlement Dynamics in the Swabian Jura: A Micromorphological Approach*

A micromorphological study of Hohle Fels and Geißenklösterle caves revealed a variety of sediments that permitted us to interpret taphonomic influences and variations in deposition linked to climatic changes. We observed a marked difference in sediments at the

Middle-Upper Paleolithic boundary that represents a shift from a warmer environment to a colder, drier environment. These results are linked with analysis of anthropogenic deposits to interpret past behavior and settlement systems within the caves. Our results show that the virtual absence of Middle Paleolithic occupation prior to initial Aurignacian settlement in the two caves was not connected to unfavorable climatic conditions.

Miller, Christopher [157] *First Organizer; [157] Second Chair*

Miller, D. Shane (University of Arizona), Erik N. Johanson (University of Tennessee) and Joseph A.M. Gingerich (University of Wyoming)

[90] *Ambiguous Chronologies and Biface Morphology: Examining Spatial and Temporal Trends in Eastern Fluted Points*

In the Eastern United States, stratified sites extending into the Paleoindian period are extremely rare. As a result, researchers often have to rely on well-dated sites from outside the region to extrapolate chronological sequences. To this end, this analysis utilizes a geometric morphometrics approach to compare samples of Eastern fluted points recorded in the Paleoindian Database of the Americas (PIDBA) with those from well-dated contexts from other regions. Finally, we argue that the application of multivariate approaches and the creation of adequate comparative samples may prove invaluable for understanding spatial and temporal trends in Paleoindian biface morphology.

Miller, D. Shane [90] *see Smallwood, Ashley M.*

Miller, Donald [252] *see Pretola, John P.*

Miller, Jason [162] *see Davis-Salazar, Karla L.*

Miller, Karen [59] *see Howe, Mark L.*

Miller, Mark [28] *see Kornfeld, Marcel*

Miller, Mason (Hicks & Company) and John Campbell (Hicks & Company)

[59] *The CCC and Garner: Archeological Inventory of the Materials and Aesthetics from the Creation of One of Texas' Most Prized State Parks*

Hicks & Company archeologists conducted an archeological survey of portions of TPWD's Garner State Park in Uvalde County, Texas. Along with prehistoric sites and artifacts, surveyors paid particular attention to those resources directly attributed to the park's construction by CCC Camp 879 during the late 1930s. This paper will describe a brief history of the CCC at Garner, the park planners' reliance on 'inconspicuously pleasant' aesthetics for its conception, and the methods used during its construction through varied archeological artifacts and features inventoried during the survey as well as park planners' designs, schematics, and photographs from the period.

Miller, Melanie [245] *see Capriles, José M.*

Miller, Myles (GMI)

[128] *Dust to Dust: Ritual Termination of Jornada Mogollon Pueblos in South-central New Mexico*

Excavations at fourteenth century Jornada Mogollon pueblos in south-central New Mexico have identified prescribed sequences of ritual abandonment and termination, including emplacement of termination objects by individual households, burning of roof remnants in civic-ceremonial rooms, and communal burial of ritual and medicinal paraphernalia gathered from distant places. Different types of ritual deposits were formed through such actions. This paper explores how abandonments of transitory pueblo settlements were mediated through communal ritual and decision-making practices and how the materiality of such termination practices reflects geographies of social relations involved in the abandonment of place and movements across the landscape.

[128] First Organizer; [128] First Chair

Miller, Myles [87] *see Kenmotsu, Nancy A.*

Miller, Myles R. [235] *see Beasley, Virgil*

Miller, Naomi (Univ of Pennsylvania Museum-ISAW)
[132] *Discussant*

Miller, Sarah, Amber Grafft-Weiss (Florida Public Archaeology Network) and Richard Estabrook (Florida Public Archaeology Network)

[219] *Three Cemeteries and a Funeral: Preliminary Results of GPR Testing at the Huguenot, Tolomato, and National Cemeteries in St. Augustine, Florida*

The Northeast FPAN Center conducted small scale surveys of three cemeteries in the historic district of St. Augustine. Included was the earliest known Catholic Cemetery (Tolomato), the Territorial period Huguenot Cemetery, and the National Cemetery—all of which are downtown in the historic district. The Center was further invited to look for the burial of the celebrated Menorcan figure Father Camps down the center aisle of the Cathedral during lent. This paper will provide the preliminary results of the surveys and discuss general trends in using GPR as a tool in urban northeast Florida environments.

Miller, Sarah [26] *see Grafft-Weiss, Amber*

Miller, Shane [24] *see Johanson, Erik N.*

Millhauser, John (Northwestern University)

[13] *Obsidian, Conflict, and Commerce in Postclassic Tlaxcala*
Obsidian was a key commodity in Tlaxcala during its century-long conflict with the Aztec empire. Domestic needs notwithstanding, provisioning weapons required access to high-quality sources of obsidian. This paper presents an XRF analysis of a random sample of 45 gray obsidian artifacts from systematic surface collections at three Postclassic Tlaxcalan sites: Tepeticpac, Ocotelulco, and Quiahuixtlan. Surprisingly, the Tlaxcalans acquired as much as 75% of their obsidian from the Paredon source in Hidalgo, within the sphere of Aztec influence. With these data, I consider the "flowery war" and how and why states engage in sustained conflict.

Millhouse, Philip (University of Illinois-ITARP)

[88] *Burial Mound Preservation in Northwestern Illinois and the Success of Multi-Party Cooperation*

Since 2003 the University of Illinois-ITARP has been involved in preservation efforts with the Jo Daviess County Conservation Foundation and several state agencies. Through a combination of public involvement and land owner outreach it has been possible to purchase three parcels of land totaling 200 acres that include numerous habitation sites and 53 Native American burial mounds. These parcels are currently being converted to publicly accessible parks with restored natural habitat, hiking trails and informational kiosks. This successful project can serve as a good model for future preservation efforts in the region.

Milligan, Colleen (Michigan State University) and Adrienne Daggett (Michigan State University)

[124] *"America's Healthiest City": A look at Comparative Studies of Health and Paleopathology from the Milwaukee County Indigent Grounds Cemetery*

The combination of archaeological investigations, historical archives, and bioarchaeological analyses of skeletal remains can provide valuable insight into the lives of past populations. However, the need exists for comparative studies to provide a more complete picture of the biocultural factors at work in regional, national, and global contexts. This poster highlights research that would contribute to such discussions of Milwaukee's past and present, and that of historical urban areas. Particularly, paleopathological evidence of disease and nonspecific indicators of health from the MCIG cemetery allows for extensive demographic and historical comparisons in what was once

deemed "America's Healthiest City".

Millis, Heather [217] see *Malpiedi, Jennifer T.*

Mills, Barbara (University of Arizona), Deborah Huntley (Center for Desert Archaeology), Jeffery Clark (Center for Desert Archaeology), Meaghan Trowbridge (University of Arizona) and W.R. Haas (University of Arizona)

[113] *The Southwest Social Networks Project: Late Prehispanic Social Dynamics in the Southwest U.S.*

The Southwest Social Networks Project focuses on the interval from A.D. 1200 to 1550, a period that was both a tumultuous and "connected" period in the Southwest with large-scale migrations generating broad stylistic horizons and exchange systems. We outline our efforts to build a macroregional GIS-based database of ceramics, obsidian, and architecture, and then discuss some of the results of the application of social network analysis to the data. We focus on questions addressing network dynamics before, during, and after the late 13th century migrations to elucidate how social network analysis augments interpretations of regional interaction in archaeology.

Mills, Barbara J. [14] see *Ferguson, T. J.*; [200] see *Trowbridge, Meaghan A.*

Millward, Georgia (Indiana University) and Frederika Kaestle (Indiana University)

[239] *Maternal Genetic Relatedness in Mississippian Burial Practices:*

Ancient mtDNA at Mound 2, Yokem Mounds, Pike County, Illinois
Yokem Mounds is located on the northern edge of the lower Illinois River Valley and individuals were continuously interred at the site from the Archaic through the Mississippian period. Mound 2 (AD 1430) is notable for interment of primarily females (15/20) and its charnel structure that housed four pairs of individuals. Mitochondrial DNA sequences from these individuals are used to assess the influence of maternal genetic relatedness on the placement of individuals within the mound, including proximity to the charnel structure and within pairs. We also compare these results to aDNA analyses from other Midwest sites.

Milner, George (Pennsylvania State University)

[61] *Population, Economy, and Warfare: Their Relationship to Sociopolitical Evolution in Prehistoric Eastern North America*

Long-term trends in population size, subsistence practices, and warfare in eastern North America are quantified and summarized within the context of changes over time in sociopolitical complexity. Of special interest are 1) different rates of population growth that do not correspond to conventional archaeological periods or cultural stages; 2) an occasionally step-like, as distinct from gradual, transformation in ways of life, specifically subsistence economies; and 3) variation in the intensity of warfare. While population, economy, and conflict appear to be intimately related to one another, archaeological demonstrable relationships among them defy simple explanatory mechanisms in the Eastern Woodlands or elsewhere.

Milner, George [140] see *Stahlman, Kathleen F.*

Minar, C. Jill [232] see *Binning, Jeanne Day*

Mink, Philip (Kentucky Archaeological Survey)

[253] *Formative Period Land Use Strategies on the North Rim of the Grand Canyon*

The North Rim of the Grand Canyon was inhabited by both Kayenta and Virgin branch ancestral pueblo groups during the Formative Period. This paper will examine the variation in land use strategies and settlement patterns by these groups. By combining regional geographic information system analyses with geophysical survey a multi-scalar examination of land use will be explored. These North Rim results will be integrated into the larger discussion of subsistence settlement strategies in the Grand Canyon and compared to the land-use strategies proposed for the Arizona Strip.

Mires, Ann Marie [69] *Discussant*

Misarti, Nicole (Institute of Marine Science – UAF), Bruce Finney (Idaho State University) and Herbert Maschner (Idaho State University)

[175] *Isotopes and Social Complexity in the Aleut Region*

Recent genetic and isotopic analyses of human remains from the Aleutian Islands have revived the debate of population continuation versus replacement ~1,000 years ago among the Aleut. Genetic data suggest a closely related population (Neo-Aleut) moved into the region and co-existed with the earlier population (Paleo-Aleut). The isotope data have been interpreted as Neo-Aleuts hunting at higher trophic levels than Paleo-Aleuts. Using isotopic data of the actual foods consumed, we propose that the genetic and isotopic differences found are based not on population movements but on effects of increasing social complexity and differential access to higher status foods.

Misarti, Nicole [27] see *Lech, Veronica*

Mitchell, Mark (Paleocultural Research Group)

[220] *Modeling Middle Missouri Warfare*

In their studies of warfare, anthropologists and archaeologists have mainly been interested in its causes, especially its origins, and its consequences, especially for social evolution. Less attention has been paid to how warfare articulated with other cultural, social, and economic practices in various times and places. The abundant evidence for recurring, organized conflict among agricultural communities in the Middle Missouri affords an opportunity to consider how warfare functioned as a social institution. A model for Middle Missouri warfare is developed using archaeological, ethnographic, oral historical, and documentary data from the Plains.

Mitchell, Seth (Caprock Environmental Services)

[150] *One Project, Over 60 Eligible Sites: No Problems?*

From 2007-2009 a phased archaeological investigation was conducted on the 639-mile Rockies Express East Pipeline (REX-EAST) Project. In total over 60 sites were recommended as eligible for listing on the National Register of Historic Places. These sites were identified within a 200-foot corridor which crossed portions of Missouri, Illinois, Indiana and Ohio. This paper will provide a brief overview of these sites, discuss strategies developed to avoid or reduce impact from construction, if these strategies were successful and provide detailed information on the challenges faced to complete a large CRM project.

[150] *First Organizer*; [179] *First Organizer*

Mizoguchi, Koji (Kyushu University, Japan)

[113] *Explaining the Emergence of Large-scale Centralized Hierarchy: A Network Theory-based Approach*

This paper reveals by applying social network analysis-derived methods that the centralised hierarchy that emerged at the beginning of the Kofun (mounded tomb) period in Japan can be explained by the geographical locations that the polities to be hierarchised occupy and the differences in the topological potentials that these locations generate. The paper argues that the topological structure of a social network itself can be a significant cause of its own hierarchisation, and it compares the finding with the manner in which the concepts of agency and power are applied to the explanation of social hierarchisation and centralisation in general.

Mkrtyan, Ruzan [101] see *Marshall, Maureen E.*

Moak, Jason W. [250] see *Reitz, Elizabeth J.*

Modzelewski, Darren (UC Berkeley), Corey Abramson (UC Berkeley) and Phillip Fucella (UC Berkeley)

[181] *Legal Categories and Vested Interests: Cultural Affiliation, Knowledge Power, and the Symbolic Control of the Past*

Cultural affiliation as a salient contemporary legal term, raises significant questions about traditional archaeological understandings

of affiliation; which tribal groups claim ancestry to objects, and how such claim are made. Yet discussions of affiliation need to continue to highlight larger questions about the relationship between the construction of categories and the production of knowledge-power, its control, dissemination and destination in archaeo-legal contexts. Drawing on Foucault, I explore some of the power dynamics and struggles of that arise from affiliation and repatriation, and trace the way symbolic power functions to provide specific groups with material and cultural control over the past.

[66] *Discussant*

Moe, Jeanne [75] *see Martin, Dan W.*

Moffat, Charles (Commonwealth Cultural Resources Group, Inc.) and Katherine Guidi (Commonwealth Cultural Resources Group, Inc.)

[150] *Investigations at the Montezuma Mound Group (11PK1245)* CCRG located many of the previously reported mounds at Montezuma and also found two previously unrecorded mounds. Investigations on the bluff crest identified an extensive Late Woodland habitation with both Bauer Branch and Jersey Bluff affiliations. REX decided to drill under the mounds using an HDD pad at the base of the bluff that extended onto a distinct bench. Investigations within the HDD pad identified 13 shallow pit features, mostly associated with the Late Woodland occupation, and a small sinkhole, filled with a mixture of historic and prehistoric debris, that may have been used for ritual purposes.

Moffat, Charles [150] *see Weir, Donald J.; [150] see Hambacher, Michael J.*

Moigne, Anne-Marie [58] *see Moncel, Marie-Hélène*

Mol, Angus (Leiden University, Netherlands)

[116] *Connecting the Dots: Social Network Theory and Methodology Applied to Exchange in the Late Ceramic Age Caribbean* Social Network Theory is an untapped resource that will lead to a better understanding of past exchange practices. The combined network methodology (graph theory) and theory provide a powerful heuristic. This, with the aid of network software (i.e. UCInet & Visone), enables the visualization and analysis of Pre-Columbian social networks from an alternative angle. Instead of focusing on insights gained through the study of attributes of artifacts and iconographic styles, this paper will discuss data gathered on social networks of the Pre-Columbian Caribbean from a relational perspective. This is used to explicate communities, actors and their positions in their networks.

Monaghan, G. William (Glenn Black Laboratory of Archaeology, Indiana U)

[257] *Deconstructing Mound A: Tracing the History of the Angel Site (12VG1) through its Earthworks*

Geophysics, solid-earth coring and 14C chronology at Angel site indicate that Mound A was built to nearly its full 8m height just after AD 1050-1100, which coincides with site founding. Mound A was constructed by stacking 10-15-cm-thick turf blocks 2m high near its center. The chronology of a structure excavated by Black (1955) on top of Mound A indicates that the mound was used throughout site occupation but like Mound F, also excavated by Black (1939-1942), its surface was buried just prior to site abandonment. This final mound capping may be part of a "ceremonial closing" of the Angel site.

[257] *First Organizer; [257] Second Chair*

Monaghan, John (University of Illinois at Chicago)

[221] *The Rain, Lightning Bolts and Obsidian Blades: The Machete in Contemporary Mixtec Culture*

According to early colonial sources Mixtec speakers used the word yuchi to refer to obsidian blades. Today Mixtec people only rarely use obsidian for cutting, but they still use the word yuchi, only now it means "machete." This paper examines contemporary Mixtec ideas about the machete, and suggests possible connections with beliefs

and practices surrounding obsidian knives in ancient times.

Moncel, Marie-Hélène, Anne-Marie Moigne (National Museum of Natural History), Jean Combiér (CNRS) and Sam Youssef (Post-doctor)

[58] *Behavioral Characteristics of the Middle Palaeolithic Roots in Western Europe: New Data on Orignac 3 (France)*

Orignac 3 is dated to MIS 9-8, a key period. It can be considered a model for observing the progressive appearance of new features concerning technology, land use, subsistence, fire and spatial organization. Recent studies on the complete faunal and lithic assemblages offer new insights into human occupation and behavior. The emergence and development of Levallois knapping, bifacial shaping flakes, predominant use of local stones, specialized hunting focused on one main herbivore, and higher fragmentation of bones in the middle and upper parts of the sequence gives us an opportunity to discuss evolutionary processes.

Mongelluzzo, Ryan (University of California - Riverside)

[99] *Ahau in the Abstract: Ancient Maya Rulership as a Power Strategy*

The foundations for Ancient Maya rulership led to particular strategies meant to maintain the hierarchical social relationships that were in place. By using various theories on power to provide a nuanced definition of Maya rulership, one can gain a better understanding of the efforts that were undertaken by these sovereigns. Of particular use are the works of de Certeau, Foucault, and Gil. I am particularly interested in how the nature of Maya rulership subsequently affected architectural design choices in the spatial layout of royal palaces. Scholars who link space to power relations include Giddens, Soja and Harvey.

Monroe, Cara (UCSB Anthropology and Washington State University), Brian Kemp (Washington State University, Pullman), John Johnson (Santa Barbara Museum of Natural History), Robert Kruszynski (The Natural History Museum, London) and Silvia Gonzalez (School of Natural Sciences and Psychology, Liverpool)

[56] *Ancient DNA Analysis of Prehistoric Burials from the Santa Barbara Channel Region*

Archaeological and linguistic research indicates that the Chumash have deep roots in the Santa Barbara Channel region and have occupied the southern California Coast for millennia. Previous genetic studies indicate that some Chumash belong to an ancient mitochondrial DNA (mtDNA) lineage that appears to be coastally distributed along North and South America. Ancient DNA was extracted from 21 individuals, approximately half of which are from El Monton archaeological site, a large shell midden deposit from Santa Cruz Island, in order to further elucidate the prehistory of the Chumash people. Preliminary results indicate direct maternal connections dating back 4000-6000 years.

Monroe, Cara [84] *see Speller, Camilla F.; see Kemp, Brian M.*

Montes, Lourdes [177] *see Aura, J. Emili*

Montgomery, John (Eastern New Mexico University)

[87] *Burned Rock Feature Variability in Southeast New Mexico*

Intensive archaeological field survey along portions of the Black River undertaken in 2006 and 2007 recorded a high concentration of burned rock features. Variation in size, content, artifact association, and age provides some interpretive basis for understanding later Holocene cultural lifeways (near the Pecos River) at the edge of the American Southwest.

Monton-Subías, Sandra (ICREA Research Professor, Universitat Pompeu Fabra)

[143] *Feminism and Archaeology in Spain: the Maintenance Activities Perspective*

I will review here the emergence and development of feminist perspectives in Spanish archaeology, focusing specially on

Maintenance Activities (MA). The concept of MA appeared in Spanish archaeology in the 1990's and remains in widespread use today. MA refers to the basic tasks that regulate the course of human life and social stability on a daily basis, being therefore crucial for the reproduction, cohesion and welfare of human groups. Its performance entails social actions implicated in the formation of identity; they create a specific range of social experiences, abilities, qualities and responsibilities and a specific relationship of self to society.

Moody, Carlisle (University of Oklahoma)

[52] *Structure 1 at 31Bk468: Public Space in Joara's Shadow*

A compound of five large buildings at the Berry site in western North Carolina probably housed Spanish soldiers stationed at Fort San Juan, built by Juan Pardo in 1567. In 2005, archaeologists identified and excavated a similar and contemporary structure at the Ensley Site (31Bk468), a mile from Berry. Lithic data from Structure 1 at Ensley suggest that it was a public building and possibly a men's house. Comparison of the Ensley structure with those from Berry suggests different uses for these architectural spaces and allows us to hypothesize about the relationship between the two sites during this time.

Mooney, Douglas (Philadelphia Archaeological Forum (PAF)) [3] Discussant

Moore, Andrew (RIT), Anthony Legge (University of Cambridge), Kelly Reed (UCL) and Susan Colledge (UCL)

[9] *Economy, Chronology, and Environment*

Large-scale sieving and flotation of the excavated deposits from Pokrovnik and Danilo Bitinj have yielded significant quantities of charred plant remains and animal bones from domestic species. The economy of both sites was a mature farming system based on cultivated cereals and caprine herding. Interviews with traditional farmers are illuminating farming practices during the Neolithic. 20 AMS dates, mostly from charred seeds, document occupation from c. 8,000 to 6,800 CalBP. The two sites were located in a well-filled landscape of intervisible villages in every valley from the coast inland to the foothills.

[9] *First Organizer, [9] First Chair*

Moore, Andrew [9] see Fadem, Cynthia M.

Moore, David (Warren Wilson College), Christopher Rodning (Tulane University), David Moore (Warren Wilson College) and Robin Beck (University of Michigan)

[52] *The Exploring Joara Project: Chiefdoms, Spaniards, and Research Design for the Western North Carolina Piedmont*

The Exploring Joara Project explores early contact between Native Americans and Spanish armies in North Carolina's western Piedmont region during the sixteenth century. The project developed from archaeological and documentary evidence supporting the Berry site (31BK22) as the location of the Native American town of Joara and the Spanish Fort San Juan, constructed in 1567 and destroyed in 1568. This paper summarizes the history of the project and the comprehensive research design focused on native responses to early contact with European invaders. We also discuss the opportunities and challenges of coordinating a long-term public archaeology project.

[52] *First Chair*

Moore, David [52] see Rodning, Christopher B.; [52] see Beck, Robin A.

Moore, David G. [52] see Sanders, Merritt M.

Moore, Katherine (University of Pennsylvania)

[222] *Economy and Ecology of Bone Tools at Chiripa*

Bone tools at Formative sites in the Lake Titicaca basin, Bolivia, range from expedient scrapers and awls to elaborate ornaments. Research at Chiripa allows this assemblage to be compared to multiple aspects of the local and regional archaeological sequence.

Questions emerging from the analysis of more than 2000 bone artifacts include 1) the locus and organization of bone tool manufacture, 2) how supposed weaving tools related to production of camelids for wool, and 3) the response of the bone tool industry to broad shifts in subsistence.

[245] *Discussant*

Moore, Michael (Tennessee Division of Archaeology) and Kevin Smith (Middle Tennessee State University)

[217] *Archaeological Explorations of the Peabody Museum in Middle Tennessee, 1877-1884*

The Peabody Museum at Harvard University sponsored archaeological explorations across Middle Tennessee between 1877 and 1884. Extensive records and artifact collections from 38 site investigations were uncovered during three research trips to the Peabody Museum and Harvard University Archives between 1998 and 2002. The authors transcribed roughly 550 pages of letters, field notes, and other written materials generated from these expeditions; and also conducted an analysis of roughly 1700 complete to nearly complete mortuary objects. Using the site records and artifact data, we present hypotheses to refine our previously published chronological periods for Middle Cumberland Mississippian sites.

Moore-Shay, Laura (University of Notre Dame), Alissa Nauman (Washington State University), Ian Kuijt (University of Notre Dame), and John O'Neil (University College Dublin)

[185] *The Iron Age Shell Middens of Omei Island, Co. Galway, Ireland*

Archaeological survey of the northwest corner of Omei Island, Co. Galway, Ireland, has identified over 100 prehistoric and historic sites. The majority of these are collections of shell and fire cracked rock, typically covering an area of less than 25m² horizontal and 40 cm deep, and are situated inland by up to 200 meters. Radiocarbon dating indicates that the majority of the shell middens date to the Iron Age period, a period that remains poorly known in Galway. The results of this research are used to reflect upon marine resource use during the Iron Age.

Moraes, Bruno (Universidade Federal do Amazonas - UFAM (Brazil))

[142] *Rethinking the Space: GIS applied to the Central Amazonian Archaeology*

Archaeological research in the Central Amazonian region has produced a large corpus of data over the last fifteen years. A new theoretical approach, allied to empirical data, has led to different accounts of traditional models of occupation for the Amazon in general. This project organizes the sum of this empirical work into a single spatialized database, in order to produce a predictive model for the occurrence of archaeological features within the research area. Results of this work make possible the prospection of new sites, as well as the testing of land use pattern models and ancient landscape reconstruction.

[142] *Third Organizer*

Moraes, Claide (Universidade de Sao Paulo)

[142] *Ring Villages in the Central Amazon: A COntrast Between the Paredão and Guarita Phases*

We present the results of survey, excavation, and analysis of archaeological material from sites in the Lago do Limão and along the Madeira River, Amazonas State, Brazil. In the Lago do Limão the sites have mounds constructed during the Paredão phase (7th to 12th century AD) and structured as ring villages. Based on the ceramic chronology of these archaeological sites and the structure of villages in the landscape, a hypothesis is proposed to explain the relation between polychrome ceramics (Guarita phase 9th to 15th century AD), and the Paredão phase.

Morales, Reinaldo (University of Central Arkansas)

[22] *Faces in Places: Modified Speleothems of Cuba and their Working*

Cave art in the Antilles has many manifestations, from paintings and

drawings to low-relief engravings and their more sculptural cousins, modified speleothems. Typically, these speleothems are modified with faces, or face-like forms, having the visual effect of transforming the cave formations from mere supports into virtual torsos. This anthropomorphization allows for a mode of communication beyond and more expressive than that of a simple signifier-signified relationship. This allows for communication with a uniquely human affect, that of a worlding, a face to face human encounter. Cave art from Cuba will illustrate this phenomenon. Ethnohistoric sources will illuminate its possible significance.

Morales, Santiago [258] *see Kittel, Michelle*

Morales Jr., Reinaldo [22] *see Morales, Reinaldo*

Moran, Kimberlee (Forensic Outreach) [69] *First Organizer; [69] First Chair; [168] First Organizer;*

Moratto, Michael [81] *Discussant*

Moreau, Luc (Dpt. for Palaeolithic Archaeology, RGZM) [157] *The Aurignacian-Gravettian cultural change in Southwestern Germany*

This contribution addresses the question of a possible endogenous evolution of the Gravettian out of the Aurignacian in the Swabian Jura (Southwestern Germany). My approach consisted in a study of the assemblages of this given region, including economical, typological and technological aspects. Geißenklösterle cave served as the starting point due to the quality of the excavation method and given the stratigraphic integrity of the site, demonstrated by refits. Through this integrity, the Aurignacian and Gravettian industries of this site constitute key reference series for the early and middle Upper Palaeolithic of Central Europe.

Morehart, Christopher (Northwestern University) [13] *Configurations of Prosperity, Power and Tragedy: Cooperation and Change in the Creation, Maintenance, and Collapse of Chinampa Agriculture at Xaltocan, Mexico*

Archaeological research complicates the romanticism of past peoples as timeless stewards of their environmental milieu. This work serves as a corrective critique for modern planners who envision the reconstruction of "traditional" practices as providing a solution to contemporary problems. The relationships people established with their environment were embedded in particular historical milieus. Sustainability, thus, is fundamentally a social issue. This paper presents such an approach by examining chinampa farming at the Postclassic, central Mexican community of Xaltocan. Configurations of household autonomy, communal cooperation, and political economy were critical components in this landscape's history, including its development, persistence, and eventual collapse.

Morell-Hart, Shanti (U.C. Berkeley) [151] *Practical Re-imagining of Ancient Plant Use*

Paleoethnobotanical data emerge as a reflection of our practices, and vice versa, especially in terms of such loaded concepts as "weeds". Using daily practice as starting point, and borrowing from linguistic analogs, I here explore ways of considering plants that allow for more overlap of activities and meanings surrounding them. By slightly reshaping the conceptual framework, and retooling the methods, I detail an alternate possible set of paleoethnobotanical practices, including how data may be split and lumped, and subsequently analyzed and interpreted. I use, as case study, archaeobotanical materials recovered from the site of Currusté, Honduras. [132] *Second Chair*

Moreno-Cortes, Jose (University of South Florida) and Christian Wells (University of South Florida)

[65] *The Everyday Relevance of Cultural Patrimony and Heritage in the Naco Valley, Honduras*

The Instituto Hondureño de Antropología e Historia has enriched our understanding of cultural patrimony and heritage in Honduras by

embracing a multiethnic perspective of the past. But in what ways and to what extent does this understanding have social and economic relevance in the everyday lives of contemporary Hondurans, especially those residing alongside prehispanic ruins in rural areas? The research discussed in this paper explores perceptions about patrimony and heritage in the Naco Valley region of northwest Honduras to better evaluate municipal, department, and federal efforts toward community-based participatory preservation and conservation of archaeological remains.

Morgan, Brooke (Southern Methodist University), Brad Koldehoff (Illinois Transportation Archaeological Research Program) and Daniel S. Amick (Loyola University) [146] *Clovis Land Use Patterns in the Midwest: Evidence from the Mueller-Keck Site Complex*

The Mueller and Keck Clovis sites are located in Southwestern Illinois in the uplands along the American Bottom and occupy a shared landform. Repeated collections since the 1970s have yielded several hundred Clovis tools and waste flakes made primarily from exotic Attica chert, located 350 km to the east in west-central Indiana. Recent field and laboratory investigations document spatial patterning and context of Clovis artifacts at this complex. Though the potential for intact buried deposits is unlikely, the assemblage size and abundant non-local raw material provide critical information for evaluating models of Clovis colonization and land use in the midcontinent.

Morgan, Brooke M. [200] *see O'Brien, Lauren*

Morgan, Chris (Utah State University), Dongju Zhang (Lanzhou University), Loukas Barton (National Park Service) and Robert Bettinger (University of California, Davis) [155] *Tracking Paleolithic Behavioral Variability on the Western Loess Plateau*

Collaborative research between Chinese and American archaeologists and geomorphologists points to significant technological and settlement pattern variability between ca. 80 and 15 kya. Using core/flake quartz technology, sporadic human occupation of the plateau began perhaps as early as 100 kya. Intensified settlement of previously occupied sites and exploitation of new landscapes using bipolar quartz shatter technology developed during a warm/wet interval (MIS3) between 60 and 30 kya, after which the area saw significant depopulation and sporadic use during the Last Glacial Maximum. Later, Terminal Pleistocene/Early Holocene adaptations shifted dramatically towards an intensive hunter-gatherer adaptation focused on microlithic technology.

Morgan, Joelle (University of Oklahoma) [235] *Specialized Agriculture in the Prehistoric Casas Grandes Region*

Agricultural specialization is present in the emergence of many hierarchies. This idea that this type of economic specialization was a factor in the development of intermediate polities is examined through an analysis of the regional differences in the Casas Grandes region, one of the premier polities in the U.S. Southwest and northern Mexico. The results of the analysis of the first modern assemblage of plant remains for near Casas Grandes are discussed in relation to specialized agricultural production and anthropogenic ecology. These works complements recent work that documents the integral role plants played in Casas Grades tradition and political dynamics.

Morgan, Michele [235] *see LeBlanc, Steven A.*

Moriarty, James [86] *ARPA Undercover Investigations: One Path to Success with ARPA*

Over the past several years, the Bureau of Land Management has carried out several successful undercover investigations of ARPA violators in the Southwest. Since detecting and apprehending these violators in the act of looting archaeological sites is a rare occurrence, undercover operations targeting their illegal artifact trafficking

activities are a very effective tool in the ARPA investigation process. This presentation will review in general terms how ARPA undercover investigations are conducted and discuss how they can be more effectively carried out in the future.

Morin, Eugene (Trent University)

[16] *Diet Breadth in the early Upper Paleolithic of France*

This paper examines the evidence for changes in diet breadth during the emergence of the Upper Paleolithic in France. Data from Saint-Césaire, the Grotte du Renne at Arcy-sur-Cure, and other sites are not consistent with the hypothesis of a diet breadth expansion. These findings have implications for our understanding of the Middle to Upper Paleolithic transition.

Morin, Jesse (University of British Columbia)

[108] *Near Infrared Spectroscopy and the Trade and Exchange of Nephrite/Jade Celts in the Pacific Northwest*

Nephrite jade was a preferred material for the production of celts both in the form of small wood working tools and very large prestige objects in the Pacific Northwest from about 3000 BP to contact. Using a portable non-destructive near-infrared spectrometer, I have analyzed the mineralogy of more than one thousand such artifacts. The spatial patterns of distribution of small and large nephrite celts, and sawn nephrite cores are markedly divergent. Nephrite celts were traded and exchanged within a 400 km radius of primary production zones located along the Mid-Fraser and Fraser Canyon.

Morin, Jesse [84] see Matson, R. G.

Morris, Elizabeth Ann [51] see Hays-Gilpin, Kelley A.

Morris, John (Institute of Archaeology, Belize) [91] *Discussant*

Morris, Margaret (University of Wyoming)

[117] *Are We the Tools of our Tools? Understanding Impacts of GIS Approaches on Archaeological Research*

Archaeological investigation has been heavily affected by spatial technologies such as GIS. Although GIS and related approaches provide researchers with useful applications, there are problems. Failure to properly integrate spatial technologies potentially harms our knowledge foundation. Ongoing dialogue is necessary to discuss and understand the relationship between GIS and archaeological spatial approaches and define proper applications of the technology in archaeological investigation to ensure that the technology is properly applied. This paper investigates GIS approaches to archaeological research and seeks to understand how the program is changing how archaeologists deal with spatial data and the problems associated with current integration.

[117] *Second Chair* **[117]** *Second Organizer*

Morrison, Alex (University of Hawaii, Manoa)

[127] *Mapping the Structure of Communities: Landscape Scale Analysis of Community Organization, Rapa Nui, Chile*

A central goal of many archaeological research projects is to develop a framework for explaining the evolution of complex community organization. However, researchers studying the archaeological record must begin by developing a concrete definition of "community" and then use appropriate analytical methods for documenting community structure. A landscape scale analysis is necessary for understanding the articulation between social organization and characteristics of the natural environment. This paper provides a working definition of "community" and then outlines an approach for mapping "communities" across the landscape of Rapa Nui, Chile. Methods highlighted include geo-spatial statistical techniques and multi-spectral satellite imagery.

Morrison, Alex [153] see Stark, Miriam T.

Morrison, Alexander [206] see Cochrane, Ethan E.

Morrison, Kathleen (University of Chicago)

[11] *Separate Histories, Separate Archaeologies: a Political Ecology of Foraging, Farming, and Rule in South Asia*

In South Asian historical research, agrarian histories and forest histories are generally quite distinct, while the archaeological division of labor between the study of hunter-gatherers, settled agriculturalists, and states is even more distinct. In this paper, I outline some aspects of the political ecology of food and organic trade goods in South Asia -- from rice and millets to cotton, spices, wood, camphor, and dyes -- that linked these disparate worlds.

D.

Morrow, Juliet (Arkansas Archeological Survey)

[222] *Clovis in the Americas: Still the Best Theory for the Peopling of the New World*

This presentation examines the human migration patterns throughout the New World at the end of the Pleistocene, the data they are founded upon, and the models that have been put forth to explain those patterns.

[238] *Discussant*; **[146]** see Taylor, Robert A.; **[217]** see Lockhart, Jamie J.

Morsink, Joost (University of Florida)

[116] *Chiefdoms and Maisons: Socio-political Organization in the late pre-Columbian Caribbean*

The socio-political organization of the Greater Antilles in late pre-Columbian Caribbean region is often categorized as a chiefdom society. However, the neo-evolutionistic and normative principles encapsulated in this concept fail to recognize important aspects of socio-political interaction on a local level. This paper proposes a maison-perspective, a concept introduced by Levi-Strauss, as an alternative that emphasizes social interaction, kinship, and social identity. The maison-perspective applies a practice-oriented approach to local social organizations on the islands and focuses specifically on how people maintain, organize, and manipulate social relations within the existing socio-political framework before the arrival of Columbus in the Caribbean archipelago.

Mortensen, Lena (University of Toronto Scarborough)

[65] *Patrimony, Popular Imagination, and Shifting Visions of Archaeological Pasts in Honduras*

In popular imagination the Honduran past is commonly reduced to but a few well-known sites, figures, and tropes. In recent years IHAH has worked to counter this trend with new initiatives to broaden the public vision of the past, and actively engage citizens in a recalibrated sense of national patrimony. These efforts involve expanding the archaeological tourism sector, a primary mode for experiencing patrimony which also raises particular sets of complications. In this presentation I discuss some of these complications, and reflect on both the challenges and opportunities of shifting the popular archaeological vision of place in Honduras.

Morton, Shawn (University of Calgary), Gabriel Wrobel (University of Mississippi), Joshua Lynch (University of Mississippi) and Rebecca Shelton (AR Consultants, Inc.)

[99] *Ritual Circuits and Subterranean Material Assemblages in the Caves Branch River Valley, Belize*

Ritual circuits are well attested in the ethnographic and ethnohistoric records of Mesoamerica. Such circuits have been interpreted as prominent components of the ritual stable of past populations as well. In the Maya area, and in the Classic Period in particular, circuits have been suggested to be ubiquitous ritual features supporting social incorporation, political aggrandizement and accession. In this paper we employ such ritual circuits as explanatory frameworks for the material record encountered in caves and rockshelters in the Caves Branch River Valley, Belize, and tie these rituals to regional shifts in population size and political complexity.

Morton, Shawn [112] see Andres, Christopher R.

Moss, Madonna (University of Oregon)

[56] *Diversity in North Pacific Shell Middens – the Case of*

Kit'n'Kaboodle Cave, Alaska

Mike Glassow has built an important legacy in the study of shell middens. On the Northwest Coast of North America, most shell middens located along estuaries are dominated by clams (such as *Saxidomus*, *Protothaca*, etc.), while those on the outer coast are dominated by mussels (*Mytilus californianus*). At Kit'n'Kaboodle Cave in southeast Alaska, barnacles are unusually abundant. This paper will present data from Kit'n'Kaboodle Cave within the larger geographic context to more closely examine patterns of barnacle use by First Nations of the Pacific Northwest. While the dietary importance of barnacles is recognized in other parts of the world, particularly Europe, indigenous use of barnacles on the Pacific coast is not well-documented.

Most, Rachel (University of Virginia)

[50] *Greed, Excess and Bad Fashion: The 1980s*

Princess Diana's wedding, the first woman elected to the Supreme Court, the stock market drops 508 points, Exxon Valdez, and the severe drought of 1988. What impact did these events have on the archaeology of the 1980s and how was archaeology portrayed during this decade? With the release of the first three Indiana Jones movies and *Clan of the Cave Bear* it seems somewhat clear that both archaeologists and the past continued to be portrayed in a less than realistic fashion. And, was this the decade where we began to realize that the US could also collapse? Did archaeology gain more relevance because of a renewed concern with the environment?

Mountain, Rebecca (Boston University) and Ksenija Borojevic (Boston University)

[151] *Preliminary Analysis of Fiber Source from Ancient Cordage*
Ancient cordage discovered in a cave at a Near Eastern maritime site is examined. The cordage was well preserved due to the arid conditions of the site, and could potentially reveal important information about seafaring technology of the period. In order to determine what type of plant was used to construct the cordage the sample fibers were examined using light microscopy, thin section analysis, and scanning electron microscopy. These analyses allowed for detailed comparison of our sample to previously identified plants native to the region in antiquity allowing for a high degree of confidence in the final plant identification.

Moya, Jorge [23] see *Rivera, Mario A.*

Moyes, Holley (University of California, Merced) and Keith Prufer (University of New Mexico, Albuquerque)

[148] *The Kayuko Mound Group: A Mountain Shrine Complex*
The Kayuko Mound Group consists of six structures located directly below Kayuko Naj Tunich, an Early Classic ritual cave shrine associated with the site of Uxbenká in southern Belize. The Uxbenká Cave Project (UCP) cleared and began excavations of the group during the 2009 field season. Our work uncovered two apsidal structures and a carved glyph block. This paper presents the preliminary results from the site and discusses the relationship between the surface architecture and the cave.

[62] *Discussant*

Mraz, Veronica (University of Iowa)

[111] *Lithics at the Scott County Pueblo, Western Kansas*
This paper addresses the lithic assemblage recovered from James Gunnerson's 1960s excavations at Scott County Pueblo (14SC1) in western Kansas, apparently occupied around the late 1600's. Research goals include comparison of the types of tools being produced and lithic raw materials used at the pueblo versus the surrounding areas of the site. One future research goal is flake analysis to see which stages of production are being performed at the site.

Muchnikoff, Nicola [193] see *Eiselt, B. Sunday*

Mueller, Emily (University of Wisconsin -Milwaukee)

[124] *Accessioning Preparation of MCIG Burials, Identification and*

Treatment of Mold on Human Remains

Human burials recovered from the Milwaukee County Institutional Grounds (MCIG) in 1991-1992 under the direction of Principle Investigator, Patricia Richards total 1,649. The Wisconsin Historical Society Director determined in 2007 that human remains and other materials associated with excavations be transferred to the University of Wisconsin-Milwaukee (UWM) for final disposition. Mold has been observed on human skeletal material during the accessioning preparation process. This poster presents information on the identification and treatment of such mold as well as the subsequent affects of discovery and stabilization upon the greater accessioning preparation effort.

Mueller, Jenn (Alpine Archaeological Consultants, Inc. RPA)

[111] *The Long Knife Site (5MF5827): A Shoshone Occupation on the Fringe*

The Long Knife Site (5MF5827) is a shallow archaeological site with evidence for two Protohistoric components, one of which is a Shoshonean occupation. This occupation represents one of the southernmost Shoshonean sites in western Colorado, located south of the ethnographically indicated boundary between the Ute and the Shoshone. The Shoshonean component is the primary occupation, dating between 490-320 cal years B.P. Despite the absence of structural remains, it is a winter camp. Feature clusters allow for the inference of households or hearth groups, and an estimated population of 12 to 24 individuals. Because of its age and cultural affiliation, the large and diverse assemblage at the Long Knife site offers a rare opportunity to address Ute/Shoshonean border politics, Shoshonean group dynamics and resource use. The second component indicates a series of repeated reoccupations in the form of short term camping events occurring between 300-150 years cal B.P., which offers the chance to consider how oral history and landscape memory may structure resource use and site reoccupation.

Muenzel, Susanne (University of Tuebingen) and Michael Hofreiter (University of York, UK)

[157] *Mammalian Fauna and Human Adaptations from the Aurignacian of the Swabian Jura*

The main game species represented in the rich Aurignacian faunal assemblages of the Ach Valley include not only mammoth, horse and reindeer, but occasionally cave bears, who hibernated in the caves of the Swabian Jura and who were hunted, as butchering marks and a projectile point in a cave bear vertebra demonstrate. This study integrates an analysis of bone assemblages from Hohle Fels and Geißenklösterle with a study of cave bear population genetics to investigate seasonality, subsistence strategy and changing animal populations during the Paleolithic of southwestern Germany.

Mullane, Elizabeth (Stanford University)

[73] *Megaliths, Mounds, and Monuments: Applying Self-Organizing Theory to Ancient Human Systems*

The theory of self-organization was developed in physics and has been applied successfully to biological systems. In human groups, self-organizing systems theory can be used to understand how some traditions and practices within a culture may be implemented, changed, and maintained without direct leadership. Three archaeological case studies are the core of this analysis: Megalithic South India, the Middle Mississippi River Valley, and Roman Britain. I examine these three case studies to identify the nature of human interactions, understand how local practices can generate large-scale societal changes, and determine the role of self-organization in the creation of sociopolitical complexity.

Mullen, Kevin [34] see *Ostovich, Marta E.*

Mullen, Patrick (University of Wyoming)

[73] *Simulated Effects of Forager Demography on Diet Breadth*

In this research, I simulated the effects of fluctuations in forager demography on diet breadth through time. To do this, I used a SHPO radiocarbon database corrected for taphonomic bias as a proxy for the demographic history of Wyoming. The simulations show how

faunal prey species were included or excluded from the diet and at what relative proportions as a consequence of human population changes. This technique produced hypotheses to test using the subsistence faunal record from excavated archaeological sites in Wyoming. Although these results are particular to the prey species and demography of Wyoming, the principles are broadly applicable.

Mulligan, Connie [182] see *Kimura, Birgitta K.*

Muniz, Mark (St. Cloud State University) and Steven Holen (Denver Museum of Nature & Science)

[210] *The CW Cache: Can Production Strategies Identify Clovis Flintknappers?*

This paper examines a cache of artifacts from northeastern Colorado. Although no projectile points were included, the geomorphic setting and the condition of the bifaces indicates considerable antiquity. Metric dimensions of the bifaces and the production strategy used to make them is very similar to that documented at Clovis sites throughout the West. However, large, well-made bifaces have also been recovered from Woodland sites in the Midwest and Late Prehistoric sites on the Great Plains. This paper compares the CW cache to both Clovis and Late Prehistoric biface caches in order to determine a prehistoric cultural affiliation.

Muñiz García, David Arturo [242] see *Punzo, Jose L.*

Munoz, Cynthia (University of Texas at San Antonio), Raymond Mauldin (University of Texas at San Antonio), Robert Hard (University of Texas at San Antonio) and Stephen Smith (University of Texas at San Antonio)

[74] *Monitoring Fine-Grained Paleovegetation Shifts through Variation in Stable Carbon Isotopes of Leporids collected from Hunter-Gatherer Sites*

Stable carbon isotope analyses of cottontail (*Sylvilagus* sp.) and jackrabbit (*Lepus californicus*) bone collagen can track short-term, local vegetation conditions. Leporids occupy small territories (ca. 500 ha) and have short lives (<3 years). Their collagen reflects local, short-term vegetation conditions, and change in collagen values can track ecological shifts at these fine-grained scales. Hunter-gatherers adapt to these local, short-term ecological shifts. While large numbers of analyses are needed, shifts in collagen values from several Late Archaic and Late Prehistoric sites in Central/South Texas and other regions suggests that fine-grained ecological reconstructions may be possible through the analysis of leporid collagen.

Muñoz, Lizette (University of Pittsburgh), David Goldstein (University of South Carolina), and Nilda Condori (Proyecto Arqueológico Tuti Antiguo)

[188] *Paleoethnobotanical Studies in the Collesuyo Region: The Case of Malata*

We present the results from two hundred soil and macrobotanical samples from the habitational area of Malata, a transitional Late Horizon/Early Colonial site in the Colca Valley. Of major importance is the legacy of historical visitas that allow a potential comparison between the historical and archeological record as far as ecology, economy, and subsistence are concerned. Our dataset represents sealed features and surfaces from clearly defined architectural units (e.g., houses, workshops, religious precincts). We conclude with our preliminary insights into the impact of a major socio-political change in the production and consumption of plant resources by the Malata denizens.

Muñoz, Melissa [258] see *Hall, Lauren*

Munro, Andy (Centre for Astronomy, James Cook University)

[89] *Astronomy and the Design of Late Bonito Great Houses at Chaco Canyon*

The six Late Bonito Great Houses of Chaco Canyon stand apart from the Classic Bonito structures due to their single-phase construction to planned designs. During the 1970's it was determined that two were placed to complete formal lines of cardinality through the center of the

canyon. Research during the 1990's determined that two were sited and designed to operate as December Solstice calendrical stations. Cardinality and solstitial alignments demonstrate intentional application of astronomical observations to architectural design. New findings extend the association of astronomy and architectural design to the full set of Late Bonito Great Houses at Chaco.

Munro, Natalie (University of Connecticut) and Mary C. Stiner (University of Arizona)

[16] *Diversity Analysis of the Late Paleolithic and Mesolithic Fauna of Franchthi Cave, Greece*

Franchthi Cave in southern Greece contains one of the most important records of Late Pleistocene human diet change in Mediterranean Europe. Diversity analysis of the rich Upper Paleolithic-Mesolithic faunal series reveals a complex history of diet diversification and a dramatic shift from strictly terrestrial to marine-terrestrial foraging. Human meat diets diversified dramatically with time, first with respect to terrestrial resources as large game diversity diminished and small mammals and bird diversity increased, and subsequently a marine trajectory that began with high-yield littoral sources and expanded to include costly fishing ventures on the open sea.

Munro-Stasiuk, Mandy [160] see *Stockton, Trent*

Munson, Marit [200] see *Schleher, Kari L.*

Münzel, Susanne [157] see *Bocherens, Hervé*

Murguia Hernandez, Ana Iris

[57] *Architectural Diversity at Chalchihuites Sites in the Guadiana Valley*

The Chalchihuites culture was defined in the 1930s by Alden Mason based primarily on ceramic distributions. Investigations realized in the past five years in the Guadiana valley finally give us a large enough sample of the architectural variability present at Guadiana branch Chalchihuites sites. This paper presents an analysis of the sites in the region based on architecture, intersite relationships and their locations in the landscape.

Murray, Wendi (University of Arizona), Kacy L. Hollenback (University of Arizona) and Maria Nieves Zedeno (University of Arizona)

[228] *Central Places in the Back Country: Investment Scales and Community Formation among Blackfeet Hunters, Montana*

Among the Montana Blackfeet, the transition from bison hunting in the open prairie to elk hunting in the intermountain valleys of the northern Rocky Mountains not only required a shift in ecological and technological focus but a reorganization of "community," development of new social networks, and concomitant investment in place-making at various scales. We analyze the archaeology and geography of a central place--Beaver Lake, Lewis & Clark National Forest, Montana--and discuss its significance for the formation and persistence of the Blackfeet elk hunting community.

Myers, Ruth [252] see *Picklesimer, John W.*

Nadel, Dani (Zinman Institute of Archaeology, University of Haifa, Israel), Danny Rosenberg (Zinman Institute of Archaeology, University of Haifa, Israel), Reuma Arav (Israel Institute of technology, Haifa, Israel) and Sagi Filin (Israel Institute of technology, Haifa, Israel)

[147] *Detailed Three-dimensional Characterization of a Flint Quarrying Complex in Mt. Carmel, Israel*

A high-density complex of flint quarries in Nahal Galim (Mt. Carmel, Israel), is presented. Below dozens of natural flint exposures, there are large masses of limestone debris (quarrying by-products), commonly containing flint artifacts. The quarries are located at the immediate vicinity of many prehistoric sites, and only a few kilometers away from the famous prehistoric caves. We present a 3D documentation method, based on terrestrial laser scanning. The

mapping and characterization of the flint outcrops and limestone piles provides a powerful analytical tool regarding the location, dimensions and volume of limestone debris, and their correlation to the flint outcrops.

Nado, Kristin (Arizona State University) and Paul Goldstein (University of California, San Diego)

[226] *Social Boundary Maintenance at the Rio Muerto Site Cluster: A Bioarchaeological Perspective on the Mutability of Group Interactions within the Tiwanaku Diaspora*

The complexity of Tiwanaku state expansion resists characterization using simple models of centralized imperial colonization. Combining information about cranial modification style and nonmetric morphological traits from a skeletal sample interred at the Rio Muerto site cluster, this study investigates the ways in which Tiwanaku colonists in the Moquegua Valley defined themselves relative to other members of the diaspora to forge distinct systems of social organization and community identity. Results suggest that colonial Tiwanaku populations in Moquegua either descended from distinct parent populations or diverged in the peripheral setting through the creation of new social identities and boundaries among migrant groups.

Nado, Kristin [175] see Contreras, Daniel A.

Nagaoka, Lisa [19] see Wolverton, Steve; [235] see Hoffman, Amy

Nagle, Kimberly [236] see Green, William

Nagy, Andras (University of Cincinnati) and Kenneth Tankersley (University of Cincinnati)

[30] *Human Migrations in the Ohio Valley, 1520 to 1830*

In order to rigorously examine changes in land use through time, it is essential to diligently obtain precise data for the movement of human populations on the landscape. Early historic maps, which contain information from ethnographic documents, oral testimonies, and ethnographic descriptions, can provide "texts" to aid archaeological interpretations. These texts can also provide information about the processes of human adaptation, which is the ultimate goal of archaeology. The reoccurrence of distinctive geographic features and geological formations suggests landscape familiarity and pre-adaption in human migration patterns.

Nagy, Andras [62] see Tankersley, Kenneth B.

Nakamura, Shin'ichi [155] see Qin, Ling

Nakazawa, Yuichi (Zao Board of Education), Fumito Akai (Kagoshima Board of Education), Masami Izuho (Tokyo Metropolitan University)

[177] *Hunter-gatherers Responses to the Younger Dryas in Japan* Recent accumulation of chronometric dates from Japanese archaeological sites makes assemblages attributable to the Younger Dryas (ca. 13,000-11,500 cal. B.P.) visible. The technological characteristics of the Younger Dryas assemblages are observed both among the technocomplexes of Upper Paleolithic (ca. 35,000 – 13,000 B.P.) and those of the incipient Jomon (ca. 13,000-9800 B.P.): potteries and projectile points invented (or adopted) by the Jomon hunter-gatherers are often associated with Upper Paleolithic tool classes such as stone axes, bifaces, and various unifacial tools. The goal of this paper is to evaluate adaptive strategies of the Younger Dryas hunter-gatherers through an examination of interassemblage variability.

Nash, Carole (James Madison University)

[59] *The Civilian Conservation Corps and the Archaeology of the Recent Past in Virginia*

Civilian Conservation Corps camps were intended as temporary communities. Despite the passage of only seventy years since occupation, the archaeological documentation of these transitory resources that fall between recorded history and remembered events

proves difficult. In contrast to excavation-based strategies, auxiliary methods of remote sensing, GPS, GIS, repeat photography, and oral history are necessary to the proper study of these resources. In Virginia, where over a quarter-million young men worked out of 175 CCC camps to shape public lands, archaeological testing has demonstrated profound spatial relationships between work, domestic, and recreation areas, illustrating a tension inherent in the quasi-military camp organization.

Nash, Robert (University of California, Davis)

[120] *Maize Storage and Hunting among Northern Periphery Fremont Groups*

Originally designated the Northern Periphery of the Southwest, the Fremont culture is today considered distinct. Red Canyon Fremont groups, living at the northern fringe of agricultural expansion, were the northern periphery of the Northern Periphery. The presence of high-elevation sites, including storage features, in the northeastern Uinta Mountains raises the question of whether maize had the same role among people on the northern periphery of the Fremont as it did among the rest of the Fremont. I argue the Red Canyon Fremont used maize for tactical purposes in order to maintain foraging efficiency by prolonging access to high-ranked resources.

Nash, Stephen (Denver Museum of Nature & Science)

[59] *Gender-Role Reversals, Big Digs, and Myriad Exhibitions: New Deal Archaeology at the Field Museum*

The Great Depression hit Chicago and the Field Museum during an important transition period in their respective histories. The Field Museum sought to move beyond collecting for its own sake and to engage in more scientifically oriented archaeological research. In 1933, Chicago hosted a World's Fair and chose to emphasize A Century of Progress since its founding, not its Phoenix-like rise from the ashes of the Great Chicago Fire of 1871. The Field Museum benefited greatly from New Deal programs; this paper examines their impact on the institution, the city, and on museum anthropology in general.

Nassaney, Michael (Western Michigan University)

[170] *Public Involvement in the Fort St. Joseph Archaeological Project*

The Fort St. Joseph Archaeological Project was initiated in 1998 to locate and investigate an 18th century French mission, garrison, and trading post. Public education and outreach have been essential to the success of the project from the start. Various stakeholders are recognizing the potential benefits and consequences of site investigation, heritage tourism, and a partnership with a large state university. The future of public involvement in the project and the lessons to be learned are dependent upon our ability to identify common ground in which archaeology serves as a metaphor for the discovery and recovery of our collective past.

Nassaney, Michael [255] see Giordano, Brock A

Nauman, Alissa [185] see McNeill, Casey M.; [185] see Kuijt, Ian; [185] see Moore-Shay, Laura

Naumann, Aaron (University of Washington)

[194] *"Uncharted" Territory: Considering the Boundary*

The study of territory as a social phenomenon recognizes territoriality as a basic human behavioral characteristic. It has historically been considered a closed subject, in that, territory is often defined as a device for simplifying and clarifying something else, such as political authority, cultural identity, individual autonomy, or rights. Recently, it has become clear territories are a more complicated social phenomenon. By providing both a historical review of archaeological attempts to identify territories and direction for future studies this piece attempts to reposition, ever so slightly, research on territories as bounded spaces by emphasizing the study of borders.

Naunapper, Linda (University of Wisconsin-Madison), Jeffrey R. Ferguson (University of Missouri (MURR)) and Michael D. Glascock (University of Missouri (MURR))

[73] *Instrumental Neutron Activation Analysis of Midwestern Ceramics*
In Great Lakes' archaeology, Bell Type II pottery has been associated with, or proposed as representing the presence of, an historic tribe at archaeological sites dating to the contact through middle historic periods (A.D. 1610-1730). Recent systematic ceramic assemblage reviews identified far fewer specimens of Bell Type II pottery than previously proposed. Instrumental Neutron Activation Analysis (INAA) was performed on select associated ceramics and clays, defining six compositional groups. The groups differ in their affiliation with either Wisconsin or Michigan clays. Combined with more qualitative morphological analyses, INAA data suggest intriguing relationships amongst morphologically similar and dissimilar ceramics.

Navarro Farr, Olivia (Southern Methodist University), Ana Lucia Arroyave Prera (La Universidad de San Carlos de Guatemala) and Keith Eppich (Southern Methodist University)

[77] *Evidence for Non-Elite Ritual Activity at the Monumental Locale of Str. M13-1 at El Perú-Waka'*

Artifact analyses at Structure M13-1 reveal complex ritual activity spanning the end of the Late Classic to the early Terminal Classic. While investigations reveal some adherence to socio-political hierarchy, there is also considerable evidence for non-elite ritual participation rarely documented in an occupied site center. Given the transitional and precarious nature of the time period - both politically and economically - indications of non-elite ritual engagement at a principle public shrine provide tantalizing clues for how "ordinary" citizens of primary sites like Waka' may have been attempting to adapt and respond to events unfolding around them in ways not previously considered.

Nazaroff, Adam [148] see *Prufer, Keith M.*

Ndanga, Jean-Paul [53] see *Safi, Kristin N.*

Neal, Lynn (EnviroSystems Management, Inc.) and Jane Eva Baxter (DePaul University)

[51] *Women's Assets in the Pursuit of Archaeological Inquiry*
What do women uniquely bring to the field of archaeology? What are the particular contributions that women make to our field? In a session celebrating the lives of pioneering women in archaeology, this paper looks more generally at the particular and important contributions that women make and have made to the discipline of archaeology. Particularly, we will look at how women have initiated new types of questions and developed frameworks of inquiry in archaeological research, as well as exploring how women have changed the practice of archaeological work through differing perspectives on collaboration, pedagogy, and business.

Nedelcheva, Petranka [147] see *Gatsov, Ivan B.*

Neff, Hector (California State University-Long Beach)

[194] *Framing Hypotheses that Can Be Falsified: The Role of Physical Science Techniques*

Physical-science techniques have become increasingly common in archaeology over the past 30 years. Sometimes the analytical data play little more than a supporting role in the construction of stories about the past. There are some examples, however, in which statements about the past have been framed in such a way that they make clear predictions about patterning expected in analytical data. In these cases, the analyses lead to falsification, the sine qua non of scientific explanation.

[126] *Discussant*

Neff, Hector [251] see *Hill, Mark A.*

Neff, Margaret (Northern Arizona University)

[136] *3-D Modeling of Cerro Jazmín, Oaxaca*

GIS modeling is used to investigate the effects of spatial layout on movement within an extensively terraced hilltop urban center in the highlands of Mexico. Cerro Jazmín has an organic street pattern and no clear internal divisions. A modeling technique called Least-Cost

Path analysis is used to construct a network of probable movement, and principles of Space Syntax reveal restrictions on movement within the city. The path network, the options available for travel within the city, and patterns of access and connectivity are analyzed for evidence of social distinctions, including social and occupational differentiation.

Nehlich, Olaf (Max-Planck Institute for Evolutionary Anthropology) and Michael Richards (University of British Columbia)

[82] *Sulphur Isotope Analysis of Ancient Bone Collagen*

Increasing research interest in the analysis of sulphur isotopes of archaeological bone collagen has brought up the question of reliability of the obtained results. We present the results of experiments to determine the appropriate quality markers for assessing the integrity of sulphur isotope measurements, namely the amount of sulphur, C:S and N:S ratios. We also present a case study where we applied sulphur isotope analysis to address the issue of the magnitude freshwater fish consumption in the Danube Iron Gates gorge region (in Serbia). We found that freshwater fish from the Danube was the main protein source in the Mesolithic period but was not heavily exploited in the Neolithic. We use these results to demonstrate the effects of two different dietary sources on sulphur isotope values and the implications for our understanding of ancient diets.

Neill Cruz, Oscar [147] see *Jaime-Riveron, Olaf*

Neiman, Fraser (Monticello) and Jillian Galle (DAACS/Monticello)

[201] *Comparative Advantage, Internal Markets, and their Archaeological Consequences in Caribbean Slave Societies*.
Models of comparative advantage from economics suggest that participants in market transactions enjoy significant adaptive advantages over non-participants. We use this idea to examine variation in the importance of internal markets and its archaeological consequences among slave societies of the Caribbean in the eighteenth and early nineteenth-centuries. We compare artifact assemblages from slave village sites in Jamaica and Nevis, focusing on the extent to which historically documented variation in the scale of internal markets explains variation in the production and consumption of locally-made earthenware and levels of access to costly European consumer goods, especially ceramics.

Neiman, Fraser [201] see *Galle, Jillian E.*

Neiman, Fraser D. [166] see *Devlin, Sean*

Neitzel, Jill (University of Delaware)

[37] *Hohokam - Chacoan Connections in the Late Prehistoric U.S. Southwest*

For roughly three centuries, the Hohokam of south-central Arizona and the Chacoans of northwest New Mexico coexisted as the late prehistoric Southwest's major centers of cultural development, sociopolitical complexity, and regional influence. Legions of archaeologists have studied virtually all aspects of these societies, and the results have in turn been the basis for a series of Hohokam - Chacoan comparisons. One topic that has received relatively little attention is Hohokam - Chacoan interaction. This paper examines the evidence for connections between the two groups and the implications for understanding macro-regional interaction throughout the Southwest.

[37] *First Chair*

Neivens De Estrada, Nina (Tulane University)

[218] *Early Lowland Maya Ceramics: The Material from Holmul, Peten, Guatemala*

Recent excavations have increased our sample of early ceramics from Holmul, Guatemala which correlate stylistically with the early Eb, Xe, Cunil, and Ek complexes found elsewhere in the Maya lowlands. In 1990, Andrews suggested, "we have much to learn from examination and reanalysis of excavated collections. We neglect them at our peril." Following this advice I try to place these Holmul

ceramics in the context of the early settlement of the Maya Lowlands. Through stylistic analysis and comparison with other early complexes, both in the Maya lowlands and elsewhere, I comment upon the process of ceramic adoption at this site.

Nelson, Ben (Arizona State University), Johannes Neurath and Loni Kantor

[242] *Monumentality as a Social Product*

In some ancient contexts, small social units marked the landscape by venerating their ancestors' remains in sacred precincts, which over time and in aggregate grew into great monuments. La Quemada, Zacatecas, Mexico, affords opportunities to understand such materialization of social identity and memory; Wixárika (Huichol) people today still build tukipa groups, containing a temple plus other buildings related to its periodic use, as well as the associated patio. We argue that the prehispanic centers of the region were essentially collections of tukipa groups plus a higher-order, public component that does not exist today and represented a regional level of integration.

[57] *Discussant*

Nelson, Kit (Tulane University) [35] *Discussant* [119] *Discussant*; Davenport, James A.; [137] *see* Dunn, Stacy M.

Nelson, Margaret (Arizona State University)

[192] *The Diverse Social Landscape of the 13th-15th Century, southwest New Mexico*

The social landscape of the late prehistoric period in the southern Southwest is incredibly diverse, as indicated by the variety of community forms, architectural styles, and ceramic forms. That diversity in southwest New Mexico stands in stark contrast to the previous Mimbres tradition, dominated by a single ceramic and architectural form and village structure. How does such diversity develop at various scales -- village, local, and regional? What does it represent about movement, integration, and exchange? To begin addressing these questions, I explore the ceramic diversity evident at various scales throughout southwest New Mexico from the 13th through 15th centuries.

[12] *Discussant*; [192] *see* Ferguson, Jeffrey R.; [192] *see* Schollmeyer, Karen Gust; [192] *see* Swanson, Steve

Nelson, Zachary (ENTRIX, Inc.)

[50] *Toasting the Future of Archaeologists*

Futurity is Coming! The role that archaeologists will play in the coming decades will be determined by the continuum of their past and present activities. From CRM to the Ivory Tower, archaeologists mold the messages that media receive through new technology coupled with past experience. Preparing for the future by understanding the past is basic to archaeological interpretation, but not always incorporated into archaeological media presentations. How will archaeologists react to the future?

Neme, Gustavo [161] *see* Glascock, Michael D.

Neudorf, Christina [183] *see* Eren, Metin I.

Neurath, Johannes [242] *see* Nelson, Ben A.

Neusius, Phillip [162] *see* Neusius, Sarah W.

Neusius, Sarah (Indiana University of PA), John Kilmarx (Indiana University of Pennsylvania), and Phillip Neusius (Indiana University of Pennsylvania)

[162] *Teaching Archaeology and Preparing Students: Evaluating the Archaeology Track at Indiana University of Pennsylvania*

The current archaeology track at Indiana University of Pennsylvania was created as part of a major overhaul of the Anthropology curriculum in late 1980's designed around an Applied Anthropology focus. The archaeology track requires that students take a field school, a course in CRM, laboratory methods and courses in both anthropological and archaeological theory. Anecdotal evidence has

suggested that this popular track does a good job of preparing students both for field technician positions and for graduate school. This is supported by recent systematic assessment of the programs outcomes, but areas for improvement are also suggested.

Neusius, Sarah [162] *First Organizer*; [162] *First Chair*

Neuzil, Anna (EcoPlan Associates, Inc.) and Stephen Lekson (University of Colorado, Boulder)

[40] *Best of Kiva: A Selection of the Most Influential Contributions to Kiva*

Over 75 years, Kiva has published scores of seminal articles in all areas of Southwestern anthropology and history. Our poster highlights the most influential articles, and puts those articles and Kiva's contributions in context.

Neves, Eduardo (University of São Paulo) [142] *Discussant*

Neves, Walter [47] *see* Strauss, André

Newbold, Bradley (Washington State University)

[120] *Large Game Specialization v. Small Seed Processing: Are They Mutually Exclusive?*

Recent archaeological research within the American west has perpetuated the notion of enlarged diet breadth of hunter-gatherer groups during the Early Holocene, as evidenced by increased faunal diversity, especially of small game, and the incorporation of grinding stone technology. However, faunal and groundstone data from the earliest occupations at North Creek Shelter, a multi-component upland site on the Colorado Plateau of south-central Utah, suggest that small-seed processing flourished after ~9000 BP but not to compensate for a lack of or even reduction in high-rank resources, as Early Archaic occupants continued to focus predominately on large game hunting on par with their Paleoarchaic forbears.

Newbold, Bradley [118] *see* Yoder, David T.

Newby, Paige (Brown University)

[224] *Changing Conditions during the Younger Dryas Interval in Northeastern North America*

The Younger Dryas climate oscillation (12.9-11.6 ka; YD) impacted a widespread area that includes New England and Maritime Canada (NEM). Advances in knowledge about regional conditions during the YD indicate a dynamic post-glacial landscape. Detailed paleorecords from southern New England, which show intermittent drought and localized changes in vegetation, present information at scales of interaction most useful to archaeologists. In contrast to broad-scale evidence for human presence across diverse environments in North America at this time, ecosystem changes during the YD in NEM appear consequential to humans throughout the YD.

Newlander, Khorri (University of Michigan Museum of Anthropology)

[232] *The Role of Chert in Eastern Nevada Paleoarchaic Land-Use Strategies*

Preliminary results of an analysis of source provenance and preliminary organization of chert artifacts from Terminal Pleistocene/Early Holocene (TP/EH) assemblages in eastern Nevada are presented. TP/EH foragers generally used obsidian to make stemmed points (hunting gear) and chert for other tools (resource-processing gear). And while obsidian artifacts have seen decades of analyses, the location of chert sources and the organization of chert technology remain relatively unknown in the Great Basin. I argue that an analysis of source provenance and technological organization of chert artifacts may delineate complementary scales of mobility and modes of resource acquisition to that documented for obsidian.

Newsom, Lee (Penn State University) and Sarah Sherwood (Dickinson College)

[52] *Micromorphological, Microartifact, and Plant Anatomical Analysis of Berry Site (Joara and Fort San Juan) Structures.*

We combined different sampling strategies to conduct microstratigraphic (thin sections), microartifact and plant anatomical analyses of two burned structures at the Berry site. Structures 1 and 5 are intensively mapped and excavated to garner a more complete understanding of building construction, activity areas, and taphonomic processes. Oak was a preferred construction material but other woods appear to have been selected for secondary construction elements and as fuel. Food processing may explain the presence of certain microartifacts and fragmentary nutshell. Masses of graminoid stems likely represent original thatch and floor matting, whereas fern stems may relate to localized activities.

Newton, Cody (University of Colorado @ Boulder)

[111] *"Were those Bricks Possessed of Tongues": An Examination of the Unusual Trading Post Concentration on the South Platte River, 1837-1838*

This paper analyzes the unusual trading post concentration – Fort Vasquez, Fort Jackson, Fort Lupton, and Fort St. Vrain – that operated simultaneously along the South Platte River during the late 1830s. These posts traded almost exclusively in bison robes provided by Sioux, Cheyenne, and Arapaho hunters. Previous explanations have oversimplified the reasons for this concentration of trade by largely ignoring indigenous instrumentality and ecological factors. Heretofore unexamined environmental data combined with research into intertribal conflict provides a more holistic explanation for this unique conjuncture.

Nguyen, Diana [4] see *Tushingham, Shannon*

Nguyen, Jimmy [4] see *Tushingham, Shannon*

Nials, Fred (Desert Archaeology, Inc.; GeoArch)

[44] *The Geomorphic and Stratigraphic Setting of Agricultural Features in the Las Capas Site, Arizona*

Las Capas is situated on a relatively broad, flat floodplain, in a geomorphic setting that favored perennial streamflow. The location fostered early development of irrigation farming that has persisted in the area for more than 3,200 years. Multiple periods of differing flood regimes resulted in rapid deposition of floodplain sediments. Individual strata are distinct in texture, color, and mineralogy and are unusually consistent over a large area. These conditions and characteristics have allowed the identification of hundreds of individual fields and borders and more than 160 canals and water distribution features representing nearly a millenium of farming at the site.

[44] *First Chair*

Nicholas, George (Simon Fraser University)

[63] *Discussant*; [159] *Discussant*

Nicholls, Brian (University of Wisconsin-Milwaukee)

[124] *Searching through the Unknown: Geospatial Analysis of the Milwaukee County Grounds Cemetery*

Investigations undertaken at the Milwaukee County grounds produced a variety of datasets including a series of site maps created using a plane table and optical transit. Preliminary analysis using the spatial data was conducted using these sets of maps creating several distributional maps. Geospatial research conducted for this presentation will expand the initial spatial findings combining the digitized spatial data of the excavated burials with other relative datasets.

Nichols, Deborah (Dartmouth College) and Susan Evans (Penn State University)

[88] *Americanist Archaeology Explains the World: A View from the Region*

Formation of the SAA was part of a larger intellectual movement in U.S. archaeology, a new approach to ancient societies using basic anthropological principles, cultural ecology and cultural evolution, to develop methods to document and interpret the trajectory of civilizations. We argue that this is American archaeology's most

significant contribution to understanding global cultural heritage. From research like Steward's culture core analysis (Great Basin) and Willey's settlement survey (Virú Valley), developed landscape surveys that became standard in our field. Sander's Basin of Mexico project shows how the earliest research traditions of our tribe, the SAA, led to immensely valuable results.

Nicodemus, Amy (University of Michigan)

[149] *Animal Production Strategies and Exchange Networks in the Maros Region*

During the Early to Middle Bronze Age, communities along the Maros River developed different organizational systems, from small autonomous villages to larger tell-centered societies. These groups participated differentially in long distance trade networks, in part predicated by community size and location. However, equally important was the ability to produce sufficient and reliable quantities of surplus goods for exchange. In this region lacking mineral resources, agricultural goods, especially livestock and their products, were important export commodities. Comparison of the animal economies between autonomous villages and central tell settlements highlights the distinctive production strategies employed in these contrasting systems.

Nicolás Caretta, Miguel Angel [57] see *Nicolau Romero, Armando*

Nicolau Romero, Armando, Achim Legemann (Coordinación de Ciencias Sociales y Humanidades (Universidad Autónoma de San Luis Potosí)) and Miguel Angel Nicolás Caretta (Coordinación de Ciencias Sociales y Humanidades (Universidad Autónoma de San Luis Potosí))

[57] *Transformación del Espacio Arquitectónico y Medio Ambiente en la Región del Cañón de Juchipila: 1500 Años de Evolución Cultural*

Se presentan los resultados sobre los sistemas constructivos, transformación del espacio y relación con medio ambiente y paisajes a lo largo de 1,500 años de ocupación detectada en el cañón de Juchipila, sur de Zacatecas. Se discute posibles procesos de interacción cultural con otras esferas (Azatlán, Teotihuacán, Bolaños-Valparaíso, La Quemada, Chalchihuites) durante el desarrollo de su historia, donde se deriva la necesidad de replantear la interpretación analítica del modelo arquitectura y medio ambiente como indicador de datos para la conformación de nuevas hipótesis y construcción de nuevas herramientas teórico metodológicas ante esta problemática surgida de la propia investigación.

Nicolay, Scott (CARST), J. Judson Wynne (Northern Arizona University) and Sergio Rapu

[62] *The Underground Gardens of Easter Island: Cave Agriculture, Water Management, and Prehistoric Cave Use on Rapa Nui*

Although the famous stone statues have been the focus of much of the archaeological research on Rapa Nui, the island's hundreds of caves are important features which have yet to receive systematic study. Fieldwork conducted in the caves of the Maunga Roiho Hiva Hiva Quadrangle in 2009 revealed that underground water management occurred on a scale not previously documented, and that the Rapanui people also modified skylights and collapse pits to support subterranean agriculture. The proximity of these modified caves to surface settlements is not coincidental.

[62] *First Organizer*; [62] *First Chair*

Nicosia, Cristiano [259] see *Arroyo-Kalin, Manuel*

Nida, Brandon (UC Berkeley)

[167] *A Mountain Yarn: Archaeology of the West Virginia Coal Wars*

The collaborative work I am involved in at Blair Mountain draws from the 'emancipatory archaeology for the working class' model of political research developed at Ludlow and elsewhere. Community engagement, political activism, standpoint theory and collaborative methods are core aspects of this research. This presentation will discuss the archaeological investigations I am undertaking at Blair Mountain – public outreach efforts, initial data analysis, and future directions.

[167] *First Organizer*; [167] *Second Chair*

Nielsen, Colin (McGill University)

[60] *Identifying Interactions on Prehistoric Eastern James Bay through Ceramic Sourcing*

Distinguishing between types of interactions eludes a comprehensive methodology despite the substantial differences each interaction type entails for the interpretation of the archaeological record. FeGj-t2 on Eastern James Bay contained a ceramic sherd incised with a diagonal linear pattern similar to Huron types from south-western Ontario. Using INAA analysis we test whether these ceramics were of local or imported raw materials. Local materials with a Huron style indicates cultural diffusion or coincidental independent innovation. A non-local source indicates exchange or the movement of people. While INAA reduces the options, there still remains no unambiguous means of identifying specific interaction types.

Niemel, Karen (Gray & Pape, Inc.)

[179] *Middle Woodland Community Organization in the Whitewater River Basin*

Recent excavations at Site 12Fr310 in Franklin County, Indiana, have identified the structural remains of a Middle Woodland domestic habitation and yielded data on site activities and organization. Nearby contemporaneous sites include small artifact scatters or camps, larger artifact scatters interpreted to be domestic sites, and mounds—traditionally considered the focus of mortuary ceremonialism and ritual activity. Drawing on this settlement data, this paper explores Middle Woodland community organization in the Whitewater River Basin. Existing data and models of community organization from adjacent regions is also compared.

Niemel, Karen [252] First Organizer; [252] First Moderator

Nieves, Ana (Northeastern Illinois University)

[98] *The "Mythical Killer Whale" in Nasca Valley Rock Art and Nasca Ceramic Iconography*

The motif known as the "Mythical Killer Whale" is one of the most identifiable figures in the art of the Nasca culture. Although it has the body of a marine animal, this creature also has a human hand. This composite creature often holds a human head or a knife, demonstrating a clear association with decapitation rituals. The purpose of this paper is twofold: to examine the relationship between representations of the "Mythical Killer Whale" in ceramics and in the rock art of the Nasca Valley, and to explore this figure's shark attributes.

Nigra, Benjamin (University of Chicago), Hans Barnard (UCLA) and Rodolfo Talavera Zuniga

[188] *Structural Patterning at Millo II in the Southern Huari Periphery*
Millo II, located in the Vitor Valley south of Arequipa, Peru, presents a unique urban layout that sheds light on architectural patterning in the Huari periphery. Structural remains at this site display a variety of typical Huari features, including irregular stone and mud mortar construction and orthogonal planning. As has been proposed for sites in the nearby Cotahuasi Valley, however, the layout of Millo II does not appear to be directly comparable to other periphery sites such as Pikillacta or Viracochapampa (Jennings and Alvarez 2001). Architectural patterning at Millo II thus offers new insights into Huari influence south of Arequipa.

Nigst, Philip (Max-Planck-Institute for Evolutionary Anthropology)

[184] *Bladelet Technology in the Bohunician, Szeletian, and Early Aurignacian of the Middle Danube Region*

Bladelet technology is regarded by many as one of the traits of behavioural modernity and is listed among the Upper Palaeolithic innovations. One of the critical questions is when does bladelet technology occur in the archaeological record? The goal of this paper is to answer this question for the Middle Danube region. After defining criteria for the presence/absence of bladelet technology, the evidence from a lithic analysis of Bohunician, Szeletian, and Early Aurignacian

assemblages of key sites in the Middle Danube region is presented. Based on this evidence it is argued that bladelet technology does not appear before the Aurignacian.

Nigst, Philip [184] see Bosch, Marjolein D

Nitsch, Erika

[34] *Examining Dietary Change in Roman and Early Medieval Italy using Stable Isotope Analysis*

As Germanic populations moved into Italy following the collapse of the Roman empire, documentary evidence suggests a change in eating habits, away from the fish products of the Mediterranean, toward a diet high in animal protein. This paper discusses the stable isotope analysis of two rural Italian populations, from the Imperial Roman site of Casal del Dolce, and the early medieval cemetery at S. Pietro di Villamagna, investigating a possible change fish consumption patterns. We see how dietary information from stable isotope analysis can be used in a wider context to investigate social, economic and political changes in ancient populations.

Niziolek, Lisa (University of Illinois-Chicago)

[175] *A Geochemical Study of Earthenware Production and Distribution in the Protohistoric Philippines*

Over the past several decades, archaeologists have increasingly used geochemical analysis to examine past human lifeways. One method that is particularly well-suited for mining cultural material for information on provenance and exchange is laser ablation-inductively coupled plasma-mass spectrometry. Although LA-ICP-MS has seldom been used for research in Southeast Asia, it has provided promising results regarding the role of craft specialization in the political and economic expansion of the prehispanic trading polity of Tanjay (A.D. 500 to 1600) in the Philippines. Specifically, I have used LA-ICP-MS to analyze archaeological ceramics and clays to investigate changing production and distribution patterns in Tanjay.

Noack, Kelsey (Jamestown Rediscovery)

[154] *The Starving Time at Jamestown: A statistical analysis of Fauna consumed in early 17th Century Virginia*

A rich documentary record provides first-hand accounts of the conditions colonists endured during the Starving Time winter of 1609-1610. Recently, faunal identification and analysis has been conducted on some of the early archaeological remains at Jamestown, providing concrete data on the animals that were consumed during the provisioning crisis. Comparisons can now be made between the 1607-1610 time period and the second quarter of the 17th century regarding the diversity of meats consumed in order to demonstrate just how unusual the Starving Time meat diet may have been. Aside from the temporal comparison between periods at Jamestown, a locational comparison is made between Jamestown and the 1620-1635 settlement at Jordan's Journey, also located on the James River.

Noel, Stéphane (Memorial University of Newfoundland)

[25] *La Table du Capitaine: French Fishermen's Foodways and Expression of Social Status on the Petit Nord of Newfoundland*

Archaeological excavations at the Dos de Cheval site (EfAx-09), on the east coast of Newfoundland's Great Northern Peninsula, offer the opportunity to document the foodways of French migratory cod fishermen. Food supplies, both imported and procured from the local environment, played a predominant role in the outcomes of fishing ventures. Integration of zooarchaeological, archaeological and historical evidence will provide a more complete and broader portrait of fishermen's food consumption from the 17th to the 19th centuries. Historical and archaeological evidence also shows that food consumption was clearly delineated among the crewmembers of lower and higher status, both spatially and socially.

Nolan, Kevin (The Ohio State University)

[244] *Siteless Survey of the Reinhardt Three Kilometer Catchment*

As one of Bill's key contributions, siteless survey goes beyond simple site orientation to begin to understand prehistoric settlement-

subsistence systems and landuse. I summarize the siteless survey of just over 200 acres within 3 km of the Reinhardt village, a Middle Fort Ancient village in the middle Scioto Valley. Survey tracts were selected to provide coverage of a variety of soil associations, variable distance from large and small streams, and were limited by land owner permissions. My analysis focuses on variable density within and among tracts and by a series of environmental variables to discover typically under examined activity areas.

Noll, Christopher (Plateau Archaeological Investigations)

[147] *The Development of Lithic Extraction Areas in the Okanogan Highlands During the Late Holocene: Evidence From Curlew Lake, Washington*

Recent excavations in the Okanogan Highlands have identified an extraction area at a fine grained volcanic source associated with alluvial chert deposits. The development of this site occurred after approximately 3,500 BP, during a time when the use of high quality stone increased at sites in the region. High quality stone use has been interpreted as a sign of increased mobility and group interaction that resulted in access to these materials from other regions. The Curlew Lake lithics suggest that intensified foraging away from the Columbia River may have increased knowledge of, and access to, relatively local high quality stone.

Nomokonova, Tatiana [16] see Losey, Robert J.

Norder, John [174] *Discussant*; [225] *First Organizer*

Norman, Neil (William and Mary)

[64] *Pythons in Process: An Archaeology Animals and Socio-Political Dynamics in the Bight of Benin Region, 1650-1727 A.D.*

The international coastal trading entrepôt of Ouidah is infamous as the point of embarkation for hundreds of thousands of people spirited into the Middle Passage. Accordingly, scholars have looked to conflict between three kingdoms in the region—Allada, Dahomey, and Hueda—as a struggle over this economic outlet into the Atlantic World. This paper explores animals and animal metaphors imbedded within the socio-political dynamics that led to unprecedented warfare and consolidation in the early 18th century AD.

Norman, Vernal G. (ARCON, Inc.)

[99] *2012 End Date?--Izapa Stela 5 World Tree Ages*

Izapa Stela 5 World Tree history (Norman, Izapa Sculpture 1976:199-212, Fig. 4-12) has been decoded to a 6500 year time scale with features at 500-year increments. Stela 5's tree plus Stela 12 reveals Izapan pre-Mayan history and calendars. The time scale is composed geometrically with standard measure. It runs from a creation base path line at the roots, projected at 3114 B.C., up the tree trunk path line to the top broken trunk line at 2087 A.D. (solar calendar). Two Stela 12 dates, and the 5 World Ages, with scaled dates on the trunk, are fixed to their adjacent numbered signs with 4 Earthquake ending the 5th Age at 2087 A.D. rather than 2012 A.D.

Nott, BreAnne (Washington State University), Brian Kemp (Washington State University) and John Jones (Washington State University)

[84] *Palynological and Molecular Analysis of Ancient Turkey Coprolites from Turkey Pen Ruin*

Turkey domestication Genetic evidence of turkey coprolites from Turkey Pen Ruins site suggest that all tested coprolites were made by domestic birds. This study conducts a palynological analysis of turkey droppings found at a Basketmaker II site that were previously analyzed genetically in order to reconstruct the birds' diets and explore evidence for their domestication. Using additional palynological and molecular analysis of 11 coprolites, this study further explores turkey domestication during Basketmaker II at Turkey Pen Ruins. Preliminary results of palynological analysis display over 20 plant taxa with detectable differences in diet and seasonal occupation at the site.

Nott, BreAnne [19] see Bocinsky, R. Kyle

Novotny, Anna [176] see Carr, Christopher

Novotny, Michael [144] see Stehman, Kelly M.

Nowell, April (Univ of Victoria-Dept of Anth) and Melanie Chang [205] *Pornography is in the Eye of the Beholder: Presentism and the Interpretation of Upper Paleolithic Figures*

When the discovery of the Hohle Fels figurine was announced publicly it was described in popular media and in *Science and Nature* as "aggressively pornographic," "a 35,000 yr old sex object" and a "prehistoric pin-up." What does 'pornographic' mean in an Ice Age context and what is the place of this kind of labelling in scientific analysis? This paper examines the role of presentism in the analysis and interpretation of human figures in the visual cultures of the European Upper Paleolithic.

Nunez, Nelly (Universidad Nacional Autónoma de México)

[254] *Un Museo de la Cultura Olmeca*

Adentrado en la zona nuclear Olmeca, se encuentra el museo comunitario de San Lorenzo Tenochtitlán. Dicho espacio alberga las piezas recuperadas en las diferentes investigaciones arqueológicas realizadas en la zona, así como algunas encontradas por los pobladores; en esta ponencia les presento la historia de la formación de este espacio, su importancia dentro de esta comunidad y el catálogo de piezas que podemos encontrar.

Nyiri, Borbola [149] see Klehm, Carla E.

O'Brien, Lauren (Southern Methodist University), Albert Gonzalez (Southern Methodist University) and Brooke M. Morgan (Southern Methodist University)

[200] *Make it Hot, Hot, Hot: Experiments in Thermal Efficiency of Micaceous Clay Cookware*

Primary micaceous clay with super-abundant levels of mica is found in high-elevation Precambrian formations in northern New Mexico. This clay has remarkable thermal and physical properties that make it an excellent cookware, and it has been widely used for cooking in the Northern Rio Grande and elsewhere in New Mexico since AD 1300. According to traditional potters, important properties of mica clay include increased resistance to mechanical and thermal shock and enhanced heating efficiency due to high concentrations of mica. This poster examines the effects of surface treatment, wall thickness, and mica abundance on the thermal efficiency of experimental pots.

O'Brien, Matthew (University of New Mexico), Bruce B. Huckell (University of New Mexico) and Christopher Merriman (University of New Mexico)

[21] *Interstate 25 or 40? Variation in Folsom Mobility Patterns in the Middle Rio Grande Basin of New Mexico*

Recent University of New Mexico excavations explored Boca Negra Wash and Deann's Site—two single component Folsom sites located near Albuquerque, New Mexico. Based on identified raw material source locations, toolstone frequencies indicate that the Boca Negra Wash site is dominated by materials from the north (an "I-25" approach to the site) while the Deann's Site assemblage contains materials from the west (an "I-40" path to the site). These patterns suggest that regional mobility exhibits greater complexity than originally believed. We discuss these ideas in the context of existing models and weigh their significance for understanding Folsom land use.

O'Brien, Michael (University of Missouri) [208] *Discussant*

Ochoa-Winemiller, Virginia [65] *First Organizer*; [65] see Winemiller, Terance

Oconitrillo, Giancarlo (Giancarlo Oconitrillo) and Ronald Martínez (Museo Nacional de Costa Rica)

[196] *Comunidades en la Investigación de su Pasado: Herencia Precolombina e Historia Oral en San Vicente de Nicoya*

En San Vicente de Nicoya se ha generado un proceso de gestión participativa del patrimonio cultural a través del Ecomuseo de la Cerámica Chorotega. Mediante una propuesta educativa y de animación se ha facilitado la construcción de conocimientos, que permite a los pobladores generar una investigación de su pasado precolombino y de su memoria colectiva. Para ello se desarrolla una capacitación en temas arqueológicos paralela a un proyecto participativo de investigación en historia oral, que conlleva a un guión de exhibición museográfica. En esta ponencia se hace un balance de la experiencia metodológica y de los resultados obtenidos.

O'Day, Karen (University of Wisconsin-Eau Claire)

[260] *Reconstructing Jewelry Sets in the Isthmo-Colombian Area*
Ancient Paracas garments and contemporary powwow regalia: these are just two examples of cohesive sets of body ornamentation in the Americas. Despite the well-known examples, ornamentation tends to generate research that examines one type of ornamentation (e.g. pendants) or multiple types sharing a motif. Yet data exist about sets, even those created in antiquity. The paper raises the following question: what is possible in the reconstruction of sets documented by archaeological site reports? This question is investigated with data about jewelry excavated at the Sitio Conte necropolis in Panama.

O'Donovan, Maria (Public Archaeology Facility) and Nina Versaggi (Public Archaeology Facility)

[180] *Commemorating the Past through Visual Representations: A Case Study from Binghamton's Urban Core*
Public Archaeology Facility excavations on a historic-prehistoric site in the urban City of Binghamton offered opportunities for creative avenues of community outreach, including both educational and commemorative projects. Archaeologists worked with building designers, collaborated with Native American artists, joined with a major regional museum, and are proposing interpretive signage along an adjacent river walk as part of a suite of visual representations of the region's past. In this paper, we will discuss these efforts that go beyond the brochure, including the audiences they reach, and how we can encourage more community participation in the commemoration of the region's past.

O'Gorman, Jodie (Michigan State University)

[140] *After the Moment Passed*
The Moorehead Moment had implications for eastern North American societies well beyond Cahokia, and the dynamics of these relationships were not insignificant to stability of the chiefdom. Development and remarkable spread of Oneota societies around A.D. 1200 to 1300 are examined in light of environmental and political factors related to the end of the Moorehead Moment at Cahokia. Particular attention is given to Oneota interaction and non-interaction with Mississippian groups.

Ogundiran, Akin (UNC Charlotte) [227] Discussant

O'Halloran, Laura [71] see Short, Laura M.; [163] see Thomas, Sunshine

O'Hara, Michael (Arizona State University)

[253] *Theorizing and Materializing the Virgin Puebloan Frontier on the Arizona Strip*
The development of Virgin Puebloan culture has largely been viewed as peripheral and derivative of developments in a Puebloan core. These assumptions will be examined in the context of anthropological theories of frontiers, social boundaries, technological style, and the materialization of identity. Domestic and ritual architecture, projectile points and lithic technology, and decorated and plainware pottery are used to compare and contrast Virgin and Kayenta Puebloan material culture and social organization. Rather than peripheral and derivative, the unique trajectory of Virgin Puebloan culture is shown to have been creatively constructed by sharing, adapting, or re-defining material expressions and social ideas.

Ohnersorgen, Michael (University of Missouri-St. Louis),

Enrique Soruco Saenz (Instituto Nacional de Antropología e Historia), Mauricio Garduno Ambriz (Instituto Nacional de Antropología e Historia), Michael Mathiowetz (University of California, Riverside)

[199] *Solar Ceremonialism and Human Sacrifice: The Aztatlán Tradition at Chacalilla, Nayarit*
Since 2003, the Chacalilla Archaeological Project has been investigating political-economic organization and exchange associated with Mesoamerica's Aztatlán tradition. Through fieldwork and artifact analysis, patterns of craft production and trade are being reconstructed to help evaluate models of political and economic interaction associated with the wider spread of the Aztatlán phenomenon. Excavations in 2008 yielded data from offerings, architecture, and evidence of human sacrifice that provide an opportunity to explore aspects of religious ideology that were embodied not only at ancient Chacalilla, but that were manifested more widely throughout prehispanic Mesoamerica and persist among modern indigenous groups of west Mexico.
[199] *Second Chair [199] Second Organizer*

Ohnersorgen, Michael [162] see Corella, Elijah J.

Ohnstad, Arik (Vanderbilt University) and John Janusek (Vanderbilt University)

[222] *The Chronology and Iconography of the Stone Stelae of the Titicaca Basin Formative*
David Browman's work on the chronology and iconography of stone statuary in the Formative-period Titicaca Basin has had a lasting influence on interpretations of this period and these potent material media. In this paper, we assess Browman's approach to Formative-period stone-carving in light of recent data from the southern Titicaca Basin, including the stone stelae from the site of Khonkho Wankane. We find his analyses especially valuable for understanding chronological development, and focus particularly on his criteria for categorizing and serializing variation in the style of stelae throughout the period.

Oka, Rahul (University of Notre Dame), Chapurukha Kusimba (Field Museum of Natural History), and Vishwas Gogte (Deccan College Post-Graduate and Research Institute, Pune, India)

[121] *Using Chemical Analyses (LA-ICP-MS) of Ceramics to Investigate Ancient Commercial Behaviors: Trade Booms, Market Capture, and Competition in the Indian Ocean Trade*
We employed LA-ICP-MS chemical analysis to postulate changes in merchant behavior, practices and strategies in post-European contact Indian Ocean commerce. We used Chinese, Islamic, and Imitation trade ceramics to test broader socio-economic processes including trade booms, market-capture, outsourcing, and competition in the market place. The results enabled us to understand and place in proper context, how: (a) Indian Ocean merchants adapted to change, (b) Chinese merchants countered imitative production of Celadon and Blue-and-White, and (c) Indian merchants and producers in Western India successfully imitated and gradually took-over production and distribution of Middle Eastern and North African "Islamic" glazed ware.

Oksanen, Eric [231] see Tomka, Steve A.

Okun, Adam (University of New Mexico)

[131] *The Organization of Lithic Technology at Pueblo Bonito, Chaco Canyon, New Mexico*
Recent analysis of 23,000 lithic artifacts from the Pueblo Bonito mounds indicates that over 50 percent of the material originated from distant sources at least 75 km from Chaco Canyon. Analysis has identified specific patterns in the way materials were imported, used, and discarded, providing new information on systems of exchange and technological organization in Chaco Canyon.
[200] see Ramenofsky, Ann

Oland, Maxine (Keene State College)

[196] *"These Are Not My Ancestors, but Look What I Found In My Field": Engaging with Non-Descendant Communities in Northern Belize*

In Latin America archaeology is likely to take place where residents identify as mestizo, or as citizens of their nation-states, rather than any Indigenous ethnicity. While such residents may not identify with the people being excavated, they are nonetheless stakeholders in the archaeological process. In this paper I explore some challenges to public archaeology efforts in non-descendant communities, recounting my experiences working in northern Belize villages. Residents of these villages have no heritage connection to the Maya archaeological remains that our project has excavated. Moreover, academic archaeology is not historically structured to include non-descendant community members.

Oldroyd, Ann (University of Exeter)

[256] *Learning at the Gault Site, Texas: Studying Skill-Level in a Non-Refitted Bifacial Assemblage*

The Gault site has an incredible wealth of Clovis flaked stone artefacts, spanning all phases of manufacture. It seems an ideal site to study for evidence of learning and expertise in Clovis point production but attempts to refit the material have failed, meaning that established methodologies cannot be used. Comparing flakes and bifaces from the Gault site to an experimental analog, Ann is developing a methodology to distinguish between different levels of expertise within non-refitted material. Reducing reliance on refitting means many more sites can be investigated and will make it possible to study broad trends on an inter-site basis.

Olinger, Colleen (Otow Station Science Museum), Anastasia Steffen (Valles Caldera National Preserve)

[41] *A Fragile Union of Nature and Culture: Aspen Dendroglyphs in the Valles Caldera National Preserve*

Aspen carvings left by shepherd, logger, hunter, or passer-by contain an information payload. These dendroglyphs reveal family names, hometowns, and when the carver was there; they speak of the carver's occupation, religion, ethnicity, and sometimes their loneliness and dreams. These otherwise unreported narratives of early 20th century mountain communities allow the carvers to speak for themselves. Today, threats to this resource (weathering, elk, fire, disease, and aspen senescence) are steadily reducing the storied arbors. We report on the 1st two seasons of the VCNP volunteer dendroglyph inventory program, including both results to-date and future plans for this productive program.

Oliva, Fernando [138] see Barrientos, Gustavo

O'Mansky, Matt (Youngstown State University), Arthur A. Demarest (Vanderbilt University) and Marc Wolf (GWE Corp.)

[229] *The Classic Maya East-West "Transversal" Exchange Route in Lithics and Exotics: Patterns, Complexities, and Changes in Late Classic Interregional Political Economy*

One of the most important exchange routes of the PreColumbian Maya world, the "transversal" route, runs east to west along the northern base of the Maya highlands at the highland/Peten contact zone. It was a major direct exchange route from the Caribbean to Mexico and across Chiapas. Yet this route, its exchange system, and its many sites have never been studied. Ongoing projects at transversal sites such as Sebol, Raxruja Viejo, La Linterna, and others are beginning to explore this route and are revealing its importance in Classic Maya political economy and in the apogees and declines of Maya states.

O'Neil, John [185] see Moore-Shay, Laura

O'Neill, John [185] see Quinn, Colin P.; [185] see Lash, Ryan P.

Ordaz Gonzalez, Patricia

[169] *An Insight on Mesoamerican Glyptics: Seals and Merchants*

We still know very little about glyptics in Mesoamerican archaeology, an issue poorly treated by modern scholars and usually approached

only through the stylistic, iconographic point of view. Most of the existing seals lack archaeological context and the great majority has never been studied. This paper assumes that the ceramic seals are related to trade practices. Based on design studies and paste provenience analysis, the taxonomic groups of glyptic artifacts are able to reveal important data about cultural affiliation, gremial organizations and trade routes.

Oré, Gabriela [18] see Makowski, Krzysztof

Orr, Heather (Western State College of Colorado)

[260] *People of Many Spirits: Dress and Physicality in the Peg-Base Figural Sculptures of Costa Rica and Panama*

The peg-base figural sculptures from the Greater Chiriqui (southern Costa Rican and northern Panama) region of Central America are puzzling artworks. These highly stylized sculptures follow a sophisticated naturalistic tradition of figural sculpture in the region. Moreover, earlier figural sculptures clearly distinguish sex; while the peg-base statues blur sex and gender indicators, such as physical attributes and costuming. The individuals represented in the peg-base sculptures are also frequently shown with zoomorphic and other non-human traits. This paper explores these characteristics of dress and physicality in this group of artworks, and their ideological underpinnings.

[260] Second Chair

Ortman, Scott (ASU/Crow Canyon)

[19] *Population History and Population Movement Between the VEP Study Areas*

One of the primary goals of Phase II of the VEP is to evaluate the nature of the relationship between Pueblo societies of the Mesa Verde region and the Northern Rio Grande. In this paper I develop a preliminary population history for the Phase II Northern Rio Grande study area using data from the New Mexico Cultural Resource Information System (ARMS) and various other compilations in recent publications. I then compare this reconstruction with the population history produced for the Phase I Mesa Verde Region study area to evaluate possible migration scenarios linking the two regions.

[19] Second Organizer

Ortman, Scott [19] see Wolverton, Steve; [235] see Wilshusen, Richard H.

Ortmann, Anthony (Murray State University)

[251] *Comparative Analysis of Chipped Stone Assemblages from the Poverty Point and Jaketown Sites*

The Poverty Point culture of the lower Mississippi River Valley is well-known for the construction of monumental earthworks and the development of long-distance trade networks. One of the most distinctive characteristics of Poverty Point culture, however, is its stone tool tradition. This paper summarizes a preliminary comparative analysis of chipped stone assemblages from excavated contexts at the two largest Poverty Point culture sites, Poverty Point and Jaketown.

Ortmann, Anthony [251] see Arco, Lee J.

Orton, Jayson [182] see Steele, Teresa E.; [182] see Schwartz, Steve

Osborne, Glendee Ane (Lake Mead, NPS and University of Nevada, Las Vegas)

[253] *Settlement and Site Location: A Predictive Model for the Shivwits Plateau, Northwest Arizona*

The development of a predictive model of prehistoric site location and settlement on the Shivwits Plateau yielded new information important to the understanding of changing settlement patterns and land use on the Shivwits Plateau over time. A combination of previously recorded site locations and environmental variables were integrated to establish probable patterns of land use and settlement while focusing on the Virgin Branch of the Ancient Pueblo People (AD 800 to

~AD1225).

Ossa, Alanna

[254] *Economic Organization of a Postclassic Center and its Hinterlands in Veracruz, Mexico*

I analyze residential inventories from the center of Sauce and its hinterlands to address the possible appearance of markets and the structure of exchange during the Middle Postclassic period (AD 1200-1350) in south-central Veracruz, Mexico. Since ancient economies typically had multiple exchange mechanisms, I evaluate how market exchange fits with elite and kin reciprocities using items from 65 residential units. I apply an explicit analytical method to model the mix of social, political, and commercial factors that shape economic organization. This study addresses the extent of Postclassic commercialization in a region distant from the markets known for the larger states.

[254] *First Chair* [254] *Second Organizer*

Oster, Elizabeth (Jemez Mountains Research Center) [152]
Discussant

Ostovich, Marta (Boston University), Amalia Pérez-Juez (Boston University), James Wiseman (Boston University), Kevin Mullen (Boston University) and Ricardo Elia (Boston University)
[34] *Excavation of an Iron Age Talayotic House at Torre d'en Galmes, Menorca*

The site of Torre d'en Galmes is one of the largest Iron Age Talayotic settlements on the island of Menorca, Spain. Since 2002, Boston University has been excavating a domestic structure, Building 2, and the areas surrounding the house in an attempt to understand the house's function and its relation to other structures and the site as a whole. Our excavations have shed light on the changing use of the house, from the Iron Age to the medieval period, as well as on Talayotic architecture and site organization.

Ostovich, Marta [34] *see* *Perez-Juez, Amalia*

Oswald, Chris (University of Missouri), Christine VanPool (University of Missouri), Jeffrey Ferguson (University of Missouri) and Todd VanPool (University of Missouri)

[200] *Obsidian Source Use on the Northern Casas Grandes Frontier*
The 76 Draw site (located approximately 25 kilometers south of Deming, New Mexico) represents the northernmost expression of the Medio period (AD 1200-1450) Casas Grandes cultural complex. Numerous obsidian artifacts were collected that have been chemically analyzed using portable non-destructive X-ray fluorescence spectroscopy (XRF). This study was undertaken in order to determine whether obsidian procurement further confers the relationship between the 76 Draw site and the core Casas Grandes cultural region located further south in Chihuahua, Mexico.

Otarola-Castillo, Erik [123] *see* *Boehm, Andrew*

Outecho, André [206] *see* *Kahn, Jennifer G.*

Özbasaran, Mihriban [259] *see* *Mentzer, Susan M.*

Pace, Meghan (Indiana University of Pennsylvania)

[233] *Ground Penetrating Radar Investigations of Memorial Park, Indiana County*

Using geophysical survey methods, I investigated Memorial Park in Indiana County, Pennsylvania. According to county records, the land on which Memorial Park sits once belonged to a Lutheran Church, who first used the ground for burials in 1874 and continued to use it as a graveyard until 1875 when the county prohibited any further burials. During this time, burials were often reported as having been moved when, in fact, only tombstones were relocated. The survey I performed was conducted using ground penetrating radar. Through ground truthing I compared my results with magnetometer and electrical resistivity tests conducted in 2006.

[233] *First Chair*

Pacheco, Paul (SUNY-Geneseo)

[244] *Revising the General Model of Ohio Hopewell Settlement Patterns*

The model of Ohio Hopewell settlement patterns promoted by myself, William Dancey, and the late Olaf Prufer is referred to as the Dispersed Sedentary Community Model. This paper has three goals: 1) to briefly explore and discuss recent challenges to the general model, 2) to explore problems created by the imposition of a static spatial model on a dynamic settlement system, and, 3) to propose revisions to our general model that in the process reevaluates the meaning of the term "Ohio Hopewell". Settlement data from near the Liberty Earthworks in the Central Scioto Valley are used as a case study.

[244] *First Organizer*

Pacifico, David

[73] *Residential Architectural Patterns at El Purgatorio, Peru*

This poster presents the results of research carried out during the 2009 summer field season at El Purgatorio in the Casma Valley, Peru as part of the author's doctoral dissertation project. The goal of the research was to observe what kind of architecture is present at the site, to ground-truth patterns identified in satellite photos, and to record details about the architecture. Methodological techniques for studying and recording architecture are presented, as are preliminary interpretations about the meaning of the architectural patterns in El Purgatorio's residential sector. Further questions are raised about this architecture and future research plans are suggested.

Pagan-Jimenez, Jaime R. (EK Consultores en Arqueología)

[116] *The Domestication of the Precolonial Caribbean*

Through the time, the world of plants has been considered as one of the richest natural plots where humans gain caloric/protein benefits for subsistence. In this paper I'm going to show how some Neotropical plants and peoples in the Caribbean islands went beyond this restrictive "energetic input" to jointly create pre-colonial worlds in which plants were, like humans, cultural entities that produced life and established many of the rhythms' of socio-cultural continuity and change. Thus, this was one of the more effective ways used by ancient peoples to domesticate the Caribbean islands since the beginnings of humanity in the region, and also one of the ways that plants used to Caribbeanize people for thousands of years.

Paglione, Teresa (USDA Natural Resources Conservation Service)

[249] *In the Public Interest: Outreach and Partnerships*

Alabama NRCS frequently surpasses the legal requirements of Section 106 compliance with outreach activities and partnerships. Outreach activities include enlisting volunteers to aid in testing sites, co-sponsoring "Project Archaeology" workshops and including archaeology with environmental education workshops. Alabama NRCS has partnered with the Alabama Historical Commission (SHPO) to connect farmers who own historic properties with schools for hands-on learning opportunities and to facilitate the search for deSoto's Mabila on private lands. Most recently, Alabama NRCS has been researching and mapping a ceremonial stone complex recorded on private land in a partnership with the Poarch Creek Indians.

Pailles, Matthew (University of Arizona) and Natalia Martinez (University of Arizona)

[235] *A Discount Rate Approach to Hohokam Agave Cultivation*

The Early Classic (AD 1150-1300) Hohokam people of the Sonoran Desert made significant infrastructural investments to cultivate agave outside of the plant's natural range. Despite these investments, agave cultivation ceased in several sub-regions during the Late Classic (AD 1300-1450). This evaluation of kcal return rates indicates agave should be ranked above most other cultivated resources in Hohokam diets. However, due to the risk inherent to the long maturation period of agave, the resource may have been devalued. The perceived level of risk necessary to cause the cessation of agave cultivation is quantified here by the use of discount rates.

Paine, Richard (University of Utah)

[241] *Using Demographic Models to Test Archaeological Hypotheses: Two Examples from the Classic*

Considers uses of population models to test hypotheses about prehistoric population processes. Presents case examples, testing hypotheses in the literature of Classic Mesoamerica: 1) migration as a cause of skeletal age profile from Teotihuacan; 2) epidemic disease as a cause of the classic Maya collapse, using the skeletal age distribution from Copan as test. Demographic projections test hypotheses two ways: they help assess the ancient demographic setting (Could hypothesized cause create the proposed historical pattern?); and, they produce age-at-death patterns, which can be compared to skeletal series to test whether the hypothesized pattern could have produced observed age-at-death patterns.

Pajuelo-Flores, Eva (University of Illinois At Urbana-Champaign) and Paul Flores Escudero (Universidad Nacional Federico Villareal)

[67] *Nuevos Apuntes Sobre los Talleres Malacologicos en Tumbes, Peru*

Dos talleres malacologicos adicionales a los de Cabeza de Vaca y Ricaplaya han sido hallados en el Departamento de Tumbes, Peru, los cuales demuestran diversidad en la produccion de artefactos malacologicos de la region. El taller de San Francisco fecha al Periodo de Desarrollo Regionales mientras que el taller de Fernandez esta localizado fuera del valle de Tumbes. En esta presentacion se demostrara lo poco que sabemos sobre las tradiciones de produccion de Tumbes, y lo cerca que estamos a perder todo razgo de ellas.

Panich, Lee (University of California Berkeley)

[181] *Acculturation, Resistance, Ethnogenesis, Persistence: Rethinking the Legacies of Colonial Entanglements for Indigenous Peoples*

The growing interest of archaeologists in the entanglements between indigenous peoples and European colonialism encourages reflection on the implications of the scholarly interpretation of such encounters for native communities today. In many cases, indigenous identities have persisted despite dramatic changes in land base, social organization, and material culture. By taking a diachronic approach, archaeologists are well suited to situate the continuities and changes of the colonial period within the context of dynamic indigenous cultures and identities. This paper will explore the concept of persistence through the examination of a case study from Mission Santa Catalina, Baja California, Mexico.

Panizza, Cecilia [138] see Barrientos, Gustavo**Papalas, Christopher (Northland Research, Inc.)**

[149] *Bronze Age Metallurgy in the Eastern Carpathian Basin*
The Eastern Carpathian Basin is one of the earliest metallurgical centers in the world, and has produced spectacular examples of Bronze Age metal objects. However, it has not generated evidence for the hierarchical control of metal production analogous to Bronze Age contexts in the Near East. This general pattern was first noted by Childe. An increasing body of evidence suggests that metalworking in the region was local, small scale, widespread and extremely ad hoc. Here, the technological sequence of Bronze Age metal production will be modeled using data from Maros (EBA), Ottomány (EBA/MBA) and Gyulavarsánd (MBA) contexts. It is hypothesized that the very widespread but small scale nature of prehistoric metallurgy in this region led to wide experimentation and relatively rapid technological change. This general model fits available data, the long antiquity of metalworking in the basin, and the numerous and diverse ore sources found locally.

Pape, W. Kevin (Gray & Pape, Inc.)

[252] *The Millennium Pipeline Project – A Model for Interdisciplinary Partnerships and Integrated Archaeological Data Management*
The Millennium Pipeline Project began in 1997 as a 420-mile corridor

which originated in Canada, crossed Lake Erie, and traversed New York's southern tier. Over 700 marine and terrestrial archaeological resources were identified by multidisciplinary teams linked together through an integrated data management plan. This project serves as a model for how the collaboration between CRM professionals, project managers and agency representatives can culminate in effective resource management, advances in archaeological scholarship, and public benefit through web-based tools for teaching archaeology.

[252] First Chair**Pare, Jason (Indiana University of Pennsylvania)**

[233] *Ground Penetrating Radar Investigations at the Dividing Ridge Site*

GPR data was collected in Western Pennsylvania at an archaeological site named the Dividing Ridge Site (36WM477). The objective was to try to remotely detect archaeological features by creating maps of the subsurface and then using these maps as a guide to conduct ground truthing investigations to look for Late Woodland features like postmolds, hearths and stockades.

Paris, Elizabeth (University at Albany-SUNY)

[20] *Molding Identity at Mayapan: The Multifaceted Uses of Metal at an Urban Center*

This paper reviews various ways that metal objects were manipulated in economic, social, and ritual contexts. Metal items were local products and were valued consumer goods. Locally produced and imported metal artifacts also played important roles in displaying and reinforcing social status and wealth. Metals were selectively incorporated in offerings and burials at the city, where they were important offerings to the gods and to the deceased. Patterns of use and acquisition of metals at Mayapan are explored in the context of the city's significant political and economic functions.

[20] see France, Elizabeth L.**Parish, Ryan (University of Memphis)**

[236] *Exploring the Application of Fourier Transform Infrared (FT-IR) Spectroscopy to the Detection of Thermal Alteration in Chert*

It is a well established phenomenon that prehistoric people often heat treated specific varieties of chert in order to alter the mechanical aspects and or coloration of the material. Traditionally researchers identify the use of this technique by the pink to reddish hues that develop on the surficial aspects of the chert debitage. The macroscopic identification of thermal alteration maybe in error as not all chert types display a reddish hue or can occur naturally in these color variations. The following study explores a non-destructive method of detecting the thermal alteration of chert artifacts using Fourier Transform Infrared (FT-IR) spectroscopy.

Parker, Kathryn (Kathryn Parker Archaeobotany)

[140] *The Cultural Context of Plant Materials from a Mound 34 Moorehead Phase Structure*

Evidence of the structural elements and contents from the burned building associated with the summit of Mound 34's primary platform were found redeposited at the junction of the primary mound and surrounding terrace. Initially identified by Perino as "ceremonial fires", this paper discusses the carbonized materials recovered from excavations and flotation samples. The analyses indicate that carbonized plant remains from these areas were dominated by bald cypress, red cedar, white oak and hickory, accompanied by low frequencies of robust grass culms. The material identified clearly reflect burned structural debris with little food-related plant remains present.

Parker Pearson, Mike (University of Sheffield)

[15] *The Stonehenge Factor: Monumental Comparisons and Heritage Concerns*

Prehistoric monuments are a favorite of archaeology's widening public, whose interest ranges from orthodox science to the far reaches of the 'fringe'. The mystery of such edifices is at the heart of their attraction, for public and practitioners alike. Consequently,

access and interpretation, as well as heritage management initiatives, may be hotly contested. This isn't a question of indigenous groups laying claim to heritage but rather the broadest example of people's connectedness with, and quest for meaning in the ancient past. This paper examines some of the heritage management issues surrounding Stonehenge, Monks Mound, and similarly iconic monuments around the world today.

Parkinson, William (Field Museum of Natural History), Attila Gyucha (Field Service for Cultural Heritage, Hungary), Richard Yerkes (Ohio State University)

[61] *The Social Dynamics of Emerging Complexity: A Long-Term Perspective on Middle Range Societies in the Prehistoric Carpathian Basin and the Eastern Woodlands*

While much recent research has emphasized the transition from subsistence systems based on hunting and gathering to more settled agriculture, we examine the long-term social dynamics of emerging complexity in middle-range societies. Using a multi-scalar perspective, we compare the trajectories of Neolithic and Bronze Age societies in the Carpathian Basin with those of Woodland and Late Prehistoric societies in the Eastern Woodlands. By comparing the emergence of social institutions with the organization of households, villages, and regional systems of integration and interaction, we hope to identify patterns of similarity and difference in the emergence of complexity in Temperate Woodland environments.

Parks, Shoshaunna (University of North Carolina - Chapel Hill)

[196] *Public Archaeology: Ethnocentric Conservation or Equitable Promotion of Local Relationships to Heritage?*

Public archaeologies have become a basic measure of ethical practice. The integration of local and descendent communities into archaeological interpretation and management signals its expansion from past-centric to present-centric approaches. Archaeology's true ethical impact, however, remains up for interpretation. What is the purpose of public outreach: to provide local communities with knowledge to form their own conclusions about heritage or to encourage them to value ancient places from Western perspectives? Who benefits from archaeological stewardship in ancient landscapes otherwise ideal for subsistence and extant cultural activities? This paper problematizes the ethical implications of public outreach in the Maya region.

[159] *First Organizer*, [159] *Discussant*

Parr, Christopher (Panamerican Consultants, Inc.)

[24] *Keeping Things Simple: Archaeology, the Army, and "Lil'Benny2.0"*

Since 2006, Fort Benning's cultural resource management staff has been developing a database to administer the installation's archaeological collection. Lacking permanently dedicated staff, Fort Benning requires a system that will easily and with minimal training allow both interns and term employees (contracted on a yearly basis) to accession and track material within the collection. Opting to utilize already-available software rather than purchasing specialized programs (i.e. PastPerfect), this Access-based system, named "Lil'Benny2.0", will allow not only for these necessary operations but also for user-defined queries of the artifacts themselves to better facilitate research of Fort Benning's cultural resources.

Parsons, Timothy (Florida State University)

[149] *Contact and Change: Economic and Social Trajectories on the Great Hungarian Plain ca. 4000-3000 BC*

Economic relationships within and beyond the Carpathian Basin helped shape the cultural tapestry of the Great Hungarian Plain throughout the region's prehistory. Throughout the Copper Age, increasing focus was placed on relationships beyond the Plain and is reflected in shifts in settlement organization and material culture. This paper addresses changes during the Middle and Late Copper Age (ca. 4000-3000 BC) through spatial analysis of settlements and a technological approach to ceramic analysis. The relationships between local and foreign players on the Plain were part of a wider economic system, and set the stage for economic relationships during

the Bronze Age.

Pasacreta, Laura [120] see Gardner, A. Dudley

Pasquariello, Raymond (Gray & Pape, Inc.) [252] Discussant

Pastrana, Alejandro (INAH)

[221] *La Obsidiana en el Mundo Prehispánico Mesoamericano*

En esta ponencia se presentan diversas concepciones de la obsidiana en el mundo prehispánico de la Mesoamérica Central, como una materia prima multifuncional, que participó en todos los ámbitos de la sociedad, en la producción, la guerra y la religión. También se recuperan algunos relatos míticos de su origen, transformación y su relación con importantes deidades.

Patalano, Marisa and Heather Trigg (UMass Boston)

[246] *Paleoethnobotany of Viking-Age Sites in Skagafjörður, Iceland*

The SASS project's extensive sampling for botanical materials has recovered numerous macrobotanicals, including crop, weed, and fruit seeds, from Viking-aged sites in Iceland. Seeds from archaeological deposits are commonly interpreted as food, but some seeds recovered here were found in animal dung, probably burnt for fuel. In this paper we analyze the seeds recovered from the dung and compare them to botanical assemblages from house floors and middens to tease apart various activities that contributed the seeds to the archaeological record. Determining sources helps us understand the Viking's practices including livestock management, building construction, fuel use, and food procurement.

Patch, Shawn (New South Associates, Inc.) and Danny Gregory (New South Associates, Inc.)

[85] *Refining Middle Woodland Site Structure: Ground Penetrating Radar Investigations at Site 40Mi70, Marion County, Tennessee*

This paper discusses the application of GPR technology to archaeological questions related to the Middle Woodland period in Tennessee. GPR data from a 5.1 acre survey at site 40Mi70 indicate a large number of anomalies. Detailed analysis of 2D reflection traces and 3D cubes, coupled with contextual information about Woodland sites, led to the classification of broad feature classes, including possible burials, hearths, pits, house clusters, and shell middens. Based on the spatial distribution of these anomalies, both horizontally and vertically, interpretations were possible regarding Woodland site structure, land use, and subsistence. These interpretations were subsequently tested through field excavations.

Patel, Shankari (University of California Riverside)

[107] *Geography of Belief: The Iconography of Mesoamerican Cave Pilgrimage*

Caves and cenotes comprise the religious topography of many Mesoamerican pilgrimage locales. This paper investigates the iconography associated with pilgrimage and caves as depicted in the International art style which flourished throughout Mesoamerica during the Postclassic. Cave denotations were often metaphors for religious transformation legitimating elites' political or economic power and symbolizing commoners' connection to earth and ancestors. Representation of caves also subverted gender ideologies when combined with portrayals of pilgrimage practices. Through an examination of the religious codices, murals, and artifacts associated with this style, this paper highlights the importance of cave imagery to Mesoamerican Postclassic pilgrimage and religion.

Patton, Paul (The Ohio State University)

[46] *Ceramics in Transition: An evolutionary Appraisal of Food Production, Ceramics, and Sedentism in the Hocking Valley, Ohio*

Throughout the Ohio Valley, archaeologists have used macro-characteristics of pottery (e.g. vessel wall thickness, temper, surface treatment, surface decoration, etc.) to construct typologies for the purpose of seriation sequencing. The focus on stylistic classification has often obscured the functional aspects of pottery, which were produced to meet requirements of food processing, storage, and transport. This paper utilizes an evolutionary approach to explore

variables and their correlation with diet, degrees of sedentism, and other food processing technology. I specifically examine the fitness-related payoffs that resulted in the selection of different pottery attributes throughout the Woodland Period in Ohio's Hocking Valley.

Patton, Paul [30] *see Weaver, Sarah A.*

Pauketat, Timothy (University of Illinois)

[15] *What's the Big Idea? Cahokia's City Plan and Beyond*
Cahokia was redesigned as a city around AD 1050, carrying one important pre-Mississippian element into that design but expanding the design field to encompass a region. Cahokia's plan is cardinal, with variation revealing of formal politico-religious complexities if not also shifting allegiances. Intra-regional complementarities suggest that a large-scale order remains to be fully understood. Sectors of the central complex were probably reserved for religious, secular and elite purposes. At least two outlier complexes built at the same time reveal centrally organized and regionally specialized religious practices that reference solar and lunar events, linked to Cahokia via likely processional avenues.

[15] *First Organizer*, [61] *Discussant*

Pauketat, Timothy [15] *see Emerson, Thomas E.* [15] *see Peterson, Staffan*; [70] *see Boszhardt, Ernie*; [239] *see Richards, John D.*

Paulsen, Brian (Nebraska Wesleyan University)

[168] *Landfill Searches for Human Remains - A Case Study*
A study on landfill searches for human remains in forensic cases was conducted with forty-six cases from throughout the country. Variables investigated were the search length; the time between the crime and the start of the search; time between the crime and the time the body was placed in the landfill. The study also included success rate, target size, search method, and body condition. A successful recovery correlates to search length and a shorter timeframe between the crime and the search start. The targets size whether an adult, child or an object of evidence does not correlate to the search's success.

[69] *Discussant*

Pavao-Zuckerman, Barnet (University of Arizona)

[154] *Missionization and the Transformation of Dietary Practices in the Pimeria Alta*

The introduction of Eurasian livestock to the Pimeria Alta in the 17th-18th centuries transformed the landscape and labor practices of missionized Native peoples, but the impact on Native diet is less clear. In contrast, the diet of Spanish missionaries was dependent on the labor of Native converts. Zooarchaeological remains from Missions San Agustín and Cocóspera indicate that wild game contributed significantly to the diet of Spanish missionaries, despite official negative attitudes toward hunting and the consumption of wild game. In many ways, the transformation of the diet of missionaries may have been more profound than that of the missionized.

Payne, Claudine (Arkansas Archeological Survey)

[115] *The Disposal of Heirlooms and the End of Memory at the Lake Jackson Site*

On the edge of the Mississippian world, at the Lake Jackson site in northwest Florida, copper items appear in abundance in burials from the 13th century into the 15th century. Embossed copper plates were apparently treasured over time and sometimes carefully repaired, only to be disposed of ultimately in burials. Examination of these heirlooms requires careful consideration, buried as they are far distant in time from their manufacture. Burial of heirlooms at Lake Jackson, along with other clues, suggests desperate attempts by their owners to hold onto power and authority in a time of waning connections to the greater Southeast.

Paynter, Robert (UMass Amherst)

[181] *Turning Things into Names and Names into Things: Archaeology and Consequential Entanglements*

The practice of archaeology is the art and science of naming material

processes, then using intricate logical and emotional connections to construct representations of the past. Our namings, and the imagined social worlds of which they are apart, have consequences for the conduct of archaeology and for our entanglements with other social processes. It is this latter situation where our practice of turning things into names engages the insights of Fricker, the task of this symposium. Two cases, the identification of African American sites and the repatriation of human remains, illustrate some of the social consequences of our archaeological practices.

Payton, Susan [166] *see Devlin, Sean*

Peacock, Evan (Mississippi State University) and Barrett Burnworth (Mississippi State University)

[88] *What are We Saving? A Nationwide Review of Phase I Survey Reports*

Arguably the most important principle underlying Cultural Resource Management is that of the representative sample. Although most archaeologists agree that the full range of archaeological phenomena must be investigated/preserved, apparent biases exist in what kinds of phenomena are considered significant. We investigate this disconnect between theory and practice by reviewing a random selection of survey reports from several states. We find a ubiquitous bias against small sites with low artifact density in favor of large, high-artifact-density sites with "intact deposits." The rationales offered for these practices are indefensible in terms of scientific theory, and we offer some suggestions for improvement.

[88] *First Chair*

Peacock, Evan [251] *see Greenlee, Diana M.*

Pearsall, Deborah (University of Missouri) [132] *Discussant*; [97] *see Jones, John G.*

Pechenkina, Ekaterina (Queens College of CUNY) and Wenquan Fan (Henan Provincial Institute of Cultural Relics and Archaeology)

[189] *Health Heterogeneity and Social Stratification during the Eastern Zhou*

The heterogeneity of the funerary contexts of more than 150 Eastern Zhou burials from Henan offers an opportunity to examine the interplay between an individual's social status at death and their health status during life. In a funerary assemblage from Xiyasi (476BC-221BC), the number and quality of grave goods varied considerably, as did the scale of the entombments. Testing for correspondence between a number of standard health markers and selected characteristics of the pertinent funerary contexts, we found that individuals from a few ostentatious burials exhibited greater robusticity and lesser development of DJD than expectable for their age.

Pederson Weinberger, Jennifer (Hopewell Culture NHP) and Kathleen Brady (National Park Service)

[244] *An Examination of Settlement Patterns at Two Sites in the Scioto Valley*

Archaeological research in the Eastern Woodlands, such as conducted by our advisor William Dancey, is greatly focused on the nature of settlement through time. Where and how people lived in Ohio's Scioto Valley changed significantly from the Woodland to Late Prehistoric periods. This presentation examines this shift by comparing data collected from the Hopewell Mound Group and the Voss Mound and Village Site. Both sites were studied using traditional and geophysical techniques to determine the nature and extent of settlement activity with the primary focus on the utility of magnetometry in addressing prehistoric settlement patterns.

[176] *Discussant*

Pederson Weinberger, Jennifer [176] *see Brady, Kathleen*

Pedler, David (Mercyhurst Archaeological Institute), Allen Quinn (Mercyhurst Archaeological Institute), Curtis McCoy

(Mercyhurst Archaeological Institute) and Todd Grote (Allegheny College)

[29] *Distribution of Prehistoric Archaeological Sites in the Pennsylvania Lake Erie Watershed*

Pennsylvania's Lake Erie watershed contains 209 prehistoric archaeological sites registered by the Pennsylvania Historical and Museum Commission. A crucial determinant in site location appears to be proximity to the well-drained, gravelly and sandy soils developed on former Pleistocene beach ridges—predominantly the Whittlesey and Warren III strands. Geographic information systems software was employed to determine the locations of those geologic features in relation to archaeological site locations. Analysis indicates that an overwhelming majority of the watershed's archaeological sites occur within 1 km (0.6 mi) of these features, which collectively account for only about 15 percent of the watershed's total area.

Pedler, David [247] see Byrnes, Allison M.

Pedrick, Kathryn (Bureau of Land Management), Connie Stone (Bureau of Land Management)

[75] *Preservation with Partners - the Agua Fria National Monument*

The Agua Fria National Monument celebrates its 10 year anniversary this year. Partnerships have been invaluable in meeting objectives for protection, preservation and understanding of the rich cultural and natural resources of the monument. Learn about partnerships that have enhanced our knowledge of the prehistoric and historic past of this truly wonderful landscape.

Pedrick, Kathy [223] see Stone, Connie L.

Peebles, Christopher (Indiana University)

[257] *A Precious Bequest: Version 2.0*

Angel site offers a large, coherent collection of material from more than 15,000m² of excavated area. Over the last two decades these collections have provided the foundation for an open-ended series of new questions about the Angel phase polity. Recent research has begun to address the shortcomings of this collection as an incomplete sample of the site and as an incomplete sample of the archaeological remains as they actually exist in the ground. The goal of this work is to create a more complete representation of the archaeological remains at Angel site and thereby write a more complete prehistory. [115] *Discussant*

Peebles, Giovanna (State of Vermont)

[180] *Vermont's New Internet-Based Archeology "Museum":*

Archeologists as Curators, with Information for Everyone
Vermont's new prototype Internet-based archeology "museum" transforms archeologists into museum "curators," allowing them to quickly build exhibits with various digital data sets now lying in hard drives and technical reports through the Drupal content management system. The Vermont Division for Historic Preservation was awarded a National Endowment for the Humanities Digital Start-up Grant to create a prototype for a sustainable virtual archeology "museum" to pave the way for other states and organizations to develop similar models. The museum invites contributions by all scholars, Indigenous people, and others; social networking tools provide opportunities to share information, to comment and participate.

Peelo, Sarah (University of California Davis)

[6] *(Sometimes) Low Fired Earthenwares, Daily Practice, and Identity: The Production and Reproduction of Indigenous Social Identities in Spanish California*

Archaeological studies of a ceramic type, commonly termed Colonoware, are frequently used to make interpretations about ethnic identity in the colonial New World. This body of research could benefit from a practice theory approach. Archaeological studies of patterned artifact style, described broadly as that seen at all stages of production (termed chaîne opératoire), including use, has the potential to illuminate how social identities were produced and reproduced through daily social practice. An example from the other side of the New World, from Spanish California, far away from

academic circles in which this pottery is usually discussed, may illustrate this argument.

[6] *First Chair*

Peebles, Matt (Arizona State University)

[200] *Social Boundaries and Ceramic Technology across the Cibola Region: AD 1150-1325*

The Cibola region of Arizona and New Mexico spans the gap between two traditionally defined archaeological cultures; Ancestral Pueblo and Mogollon. One distinction used to attribute sites to either of these archaeological constructs is the presence of either grayware or brownware ceramics typically interpreted as Ancestral Pueblo and Mogollon respectively. Recent research in the region has demonstrated that the distinction is not always so clear cut. In this poster, I use methods developed by quantitative morphologists for defining clusters among closely related biological species to explore variation in the technology of ceramic production across the Cibola region from AD 1150 to 1325.

Peles, Ashley (UMass Boston/Gray & Pape, Inc.) and Heather Trigg (UMass Boston)

[154] *Spanish New Mexican Foodways: Making Do in an Often Harsh Environment*

Since the late-16th century, New Mexico was the site of intense interactions among Spanish colonists and Pueblo and Apache peoples. Examinations of artifacts, documents, and archaeobotanical and zooarchaeological remains from 17th- through 19th-century Hispano sites provide an understanding of Hispano foodways and the basis of interactions among the communities in this ethnically diverse region. The 17th-century Hispano cuisine maintained Spanish practices, foods and preparation methods from Mexico, and the incorporation of Puebloan practices. Nineteenth-century Hispano foodways remained much the same. Knowledge of Native peoples' cuisines and relationships with their communities were necessities that provided security in an often harsh environment.

Penny, Dan [153] see Buckley, Brendan M

Perales Munguia, Manuel [114] see Authier, Martin T.; [138] see Rutherford, Allen

Peraza, Carlos [20] see Milbrath, Susan

Peraza Lope, Carlos [20] see Delgado Kú, Pedro

Pereira, David (Museo Arqueológico de Cochabamba)

[94] *Morris in Cochabamba: In Search of the Economic Foundations of the Inca Empire*

In this session I will present archaeological data pertinent to the Proyecto Arqueológico Cotapachi, directed by Craig Morris and me in the early 90s. The research in Central Valley of Cochabamba was aimed at further understanding the economic infrastructure of Inca economy as this polity settled in a very rich area of the valley. Witness to the grandiose land and ethnic management skills of the Empire is the storage site of Cotapachi, one of the largest complexes in the Inca-dominated Andean region. I will conclude by stressing the fundamental contributions of Craig Morris to our understanding of Inca political economy.

Pereira, Telmo (Universidade do Algarve)

[184] *The Quartzite Technology during the Portuguese Upper Paleolithic*

Flint, quartz and quartzite were the three main raw materials used during the Portuguese Upper Paleolithic of Portugal. Their quantities are usually balanced but several researchers considered quartzite as a secondary choice. It is however present in almost every site from Gravettian to Mesolithic reaching 90% of the collection (average around 35%). This means quartzite was of major importance to Paleolithic communities but, so far, its study has been very limited. This paper will focus on the study of quartzite technology based on attribute analysis and refitting, from a serious of Upper Paleolithic

sites from central and southern Portugal.

Peres, Tanya (Middle Tenn State Univ) and Nicholas Dixon (Scottish Trust for Underwater Archaeology)

[34] *Rethinking Iron Age Subsistence at Oakbank Crannog, Loch Tay, Scotland*

Since 1980, archaeologists with the Scottish Trust for Underwater Archaeology have conducted underwater investigations at the Iron Age site of Oakbank Crannog, Loch Tay, Scotland. The cold waters and peat silt of the loch floor are responsible for the unprecedented preservation of organic remains. Recovery of these remains has resulted in a catalogue of specimens and samples that number in the cubic tons and provide valuable information about past lifeways of the crannog inhabitants. Recent analysis of the faunal remains from Oakbank suggest that the inhabitants were raising domestic livestock and hunting wild animals from the nearby Highlands.

[34] *First Chair*

Pérez Arias, Adolfo [47] *see Smith, Scott C.*

Perez Rodriguez, Veronica (Northern Arizona University)

[103] *Sustainability and Agricultural Production in Highland Urban Centers: The Case of Cerro Jazmín, Oaxaca*

I present the results of a survey and mapping project of Cerro Jazmín, an early urban center in the Mixteca Alta, Oaxaca. The results are contextualized in a broader discussion of highland urbanism and urban structure and function through time. I investigate the integration of agricultural areas within the ancient city to assess its agricultural potential and how it compares with estimated population figures. This comparison, along with the results of stratigraphic and soil studies of the surrounding area, are used as proxies to investigate the urban center's overall sustainability and immediate environmental impact throughout the Prehispanic sequence. In Spanish.

[174] *Discussant*

Perez-Juez, Amalia (Boston University) and Marta Ostovich (Boston University)

[34] *Medieval Archaeology in Al-Andalus: The Balearic Island of Menorca under the Muslim Rule*

A wealthy and sophisticated civilization developed on the Iberian Peninsula during the Middle Ages: Al-Andalus. In addition to its rich urban settlements, like Cordoba and Granada, Al-Andalus is famous for its agricultural technology and the exploitation of lands never before cultivated. Associated with these newly irrigated lands, farmers founded new settlements and reoccupied old ruins, as seen on the island of Menorca, Spain. This paper presents the current state of research on the Muslim period of Menorca, as well as our own research at the site of Torre d'en Galmès, where Boston University has excavated Muslim levels from the 13th century.

Perez-Juez, Amalia [34] *see Ostovich, Marta E.;* [82] *see Elia, Ricardo J.*

Perkins, Stephen [171] *see Drass, Richard*

Perlmutter, Ben [72] *see Bender, Susan J.*

Perry, Jennifer (Pomona College)

[127] *The Power of Place: Perspectives from California's Santa Barbara Channel*

The Chumash of the Santa Barbara Channel are best known for their coastal lifestyles, exchange networks, and organizational complexity. Far less attention has been given to interior spaces, terrestrial resources, and ceremonialism. Interweaving archaeological data sets, ethnography, and landscape theory, I consider the significance of place with respect to subsistence, economy, and ritual. Specifically, I compare evidence from the interiors of the mainland and Channel Islands to coastal contexts. I argue that holistic perspectives of the Chumash and other maritime societies require looking beyond coastal settlements and marine subsistence to community margins and

interfaces, interiors, and geographic sources of power.

[127] *First Organizer;* [127] *Second Chair*

Perry, Jennifer [56] *see Hoppa, Kristin M.*

Perry, Laureen (Bureau of Reclamation, Lower Colorado Region)

[211] *Connections Across the River Mountains: From the Colorado River*

Seemingly sparse on cultural, subsistence, and other resources, the River Mountains are smattered with a wide variety of site types that present a view of the cultural diversity moving to and from the lower Colorado River and the Las Vegas Valley. Middle Archaic projectile points, a cached pot, Puebloan, Paiute, and Lower Colorado pottery, rock shelters, a worked bedrock outcrop, a geoglyph, tales of bootlegging trips during Prohibition, and 1930s transmission lines indicate long periods of use by various people. Evaluating the evidence in a broader context provides an understanding of the cultural and periodic links provided by these mountains.

[211] *see Slaughter, Mark C.*

Perry, Michael (University of Notre Dame) and Donna Glowacki (University of Notre Dame)

[200] *Developing Methods for the Application of PIXE Analysis on Mesa Verde Black-on-white Paints at Aztec Ruin, New Mexico*

Using the nondestructive technique of Particle-Induced X-ray Emission (PIXE), we analyze the composition of the paints used on Mesa Verde Black-on-white bowls to examine pottery production and exchange at Aztec Ruin. Previous analysis has shown this technique to be effective in identifying distinct paint recipes, but further refinement of the application is necessary. Here, we use multiple shots per sample to account for compositional variation, which affects the interpretability of the defined compositional groups. We also analyze Beeweed samples in order to link the identified recipes with a specific constituent.

Persons, A. Brooke (University of Alabama)

[116] *Prehistoric Politics and Interaction in Eastern Cuba: A GIS-Based Approach*

Chiefly societies existed in eastern Cuba prior to Contact, yet little is known about the political, social, and economic factors that integrated late Ceramic Age societies in Banes. While settlement patterns are key indicators of such integration, the relationship between chiefly centers and hinterland sites has never been empirically demonstrated in eastern Cuba. Using survey and site file data, this study models polity boundaries and regional integration through a GIS-based cost-distance analysis and proposes a revised site hierarchy. The end result is a more informed rendering of prehistoric settlement and interaction, specifically as reflections of the operation of political economy.

Pertermann, Dana (Texas A&M University)

[144] *The Why and How of Battlefields: Conflict Event Theory, Site Formation Processes, and Geophysical Investigations of the San Jacinto Battleground and Washington-on-the-Brazos, Texas*

Conflict event theory has the potential to completely change how archaeologists investigate battlefield sites. Our methodology incorporates two phases: we develop a classification model of battlefield-related artifacts based on target identification work with the EM63 electromagnetic system at the San Jacinto Battleground, and then test the model at Washington-on-the-Brazos, due to the potential for large quantities of artifacts of similar time-frame as SJB. This data allows us to focus on conflict event theory and site formation processes occurring at SJB.

Pestle, William (Univ. of Illinois Chicago)

[97] *Intra-societal Dietary Variation in Pre-historic Puerto Rico*

Stable isotope analysis provides one of the only means of reconstructing ancient dietary variation at the scale of the individual. Given that dietary differences often inform, and are informed by, a variety of socio-cultural processes, the reconstruction of intra-societal dietary variation provides otherwise unattainable insights into the

inner-workings of past societies. The results of an ongoing stable isotope study of paleodiet at three prehistoric Puerto Rican sites (Paso del Indio, Punta Candelerio, and Tibes) are presented, with dietary variation related to age, sex, and social status as a special focus. Dietary changes related to nascent political intensification are also examined.

[122] *see Torres-Rouff, Christina*

Peter, Duane (Geo-Marine, Inc.)

[180] *Recreating the Box - Thinking from the Inside Out*

Our profession has long realized that its work needs to be of public benefit. While significant progress has been made, we continue the production of dry tomes for our own profession. It is time to rethink what constitutes proper reporting of archaeological investigations. After all, how is a technical report that is never read relevant to the public benefit? Reporting of our work needs to be re-crafted in a manner that provides public benefit. Therefore, I propose a new approach to reporting that involves databases (technical audience), a compliance document (for regulators), and a story format that the public appreciates.

[231] *First Chair*

Peter, Duane [235] *see* Beasley, Virgil; [231] *see* Fullerton, Ben L.;

[231] *see* Wurtz, Michelle D.

Peterson, Christian (University of Hawai'i at Manoa), Robert D. Drennan (University of Pittsburgh) and Xueming Lu (Liaoning Province Institute of Archaeology)

[155] *Hongshan Chiefly Communities in Neolithic NE China*

NE China's Hongshan societies are known for their jade-yielding burials and ceremonial architecture. The most monumental remains are concentrated into a "core zone." Only in regions peripheral to the core zone have residential remains been much investigated. Recent regional settlement survey around the Dongshanzui ceremonial site has begun to document the communities that built and used core zone monuments. Both the core zone and the periphery were organized into several small politically-independent chiefly districts within which ceremonial activities were important integrative forces. District populations were similar in both areas and thus the core zone's greater monumentality is not attributable to greater demographic scale.

Peterson, David and John Dudgeon (Idaho State University)

[175] *The Promise of Social Archaeometry: Building an Anthropologically-Relevant Archaeological Science*

The ongoing expansion of archaeological science benefits archaeology as a whole, but the lack of adequate research funding and scientific preparation of archaeologists in North American anthropology departments is extremely troubling. While some attribute this to the antipathy of many anthropologists to the physical and natural sciences, the solution lies in the formulation of new approaches to questions of anthropological significance, especially those that are unresolved from a traditional anthropological perspective. As this session's papers demonstrate, researchers continue to find innovative applications of scientific technique and method, and new and more compelling understandings of the social.

Peterson, David [175] *First Organizer*; [175] *First Chair*; [175] *see* Dudgeon, John V.

Peterson, Staffan (Indiana University – Bloomington) and Timothy Pauketat (University of Illinois - Urbana Champaign)

[15] *Archaeoastronomy and the Angel-Cahokia Connection*
Detailed geophysical survey at the Angel site, in southwestern Indiana, and excavations at upland settlements in the greater Cahokia region, in southwestern Illinois, have produced a windfall of feature orientation data that point toward an 11th century Angel-Cahokia connection. Important monumental and domestic feature alignments at all of these sites seem to violate Cahokia's cardinal, or solar, grid system. However, we argue from multiple lines of evidence that Cahokia's plan, as laid out in AD 1050, extended beyond the city

into the hinterlands and involved lunar and stellar alignments. In practice, such alignments belie promulgations of specific ancestral narratives that probably also played out as pilgrimages between Cahokia, a series of upland lunar shrines, and far-off Angel.

Peterson, Steven [160] *see* Balzotti, Chris

Peuramaki-Brown, Meaghan (University of Calgary)

[54] *Characterizing the Life Trajectory of a Maya Centre: Three Seasons of Community and Household Archaeology at Buenavista, Belize*

This paper presents initial findings from three seasons of household/community archaeology at the Maya centre of Buenavista, Belize. Work conducted by the Mopan Valley Archaeological Project has focussed on a block of settlement within the site core and aims to characterize the life trajectory of a potential community of daily interaction, as it is reflected through group agency/household identity. While research is ongoing, significant observations can be made at this time and compared with similar community-focussed studies within the region to understand the complex processes of centre and regional development and eventual abandonment through a more intimate lens of perspective.

Pevny, Charlotte (Texas A&M University), Daniel Welch (Texas A&M University), James Wiederhold (Texas A&M University) and Tim Riley (Texas A&M University)

[4] *Usewear and Residue Analyses on Tools from the Lower Pecos Canyonlands: Exploring Tool Function through Experimental Comparison*

Usewear and microscopic residue analyses were conducted on experimental replicates of tools recovered from rockshelters in the Lower Pecos Canyonlands of Texas. In prior studies, analysis of well-preserved, visible residue on unifacial tools was successful in determining which subsistence resources were processed. Building on these studies, as well as ethnohistoric literature from the region, several processing activities were evaluated for usewear patterns and residue buildup. These congruent lines of evidence add strength to inferences regarding tool type and use. Experimental results were compared with archaeological specimens from the Lower Pecos to evaluate correlations between tool form and function.

Pevny, Charlotte [21] *see* Jennings, Thomas A.

Pezzarossi, Guido (Stanford University), Heather Law (University of California-Berkeley) and Ryan Kennedy

[48] *Hoe Cakes and Pickerel: Cooking, Eating, and Entertaining at the Sarah Boston Farmstead*

A synthesis of multiple data sets facilitates the study of cuisine and the overtly social meaning and role of food and entertaining at the Sarah Boston Farmstead; an important 18th-19th century gathering place for the Nipmuc community in Grafton, MA. Ceramics, glass, cutlery, iron kettles, faunal remains, and documentary evidence serve as the disparate datasets for this paper from which a multi-scalar perspective is used to approach cuisine and the meaning of food at the site. Ultimately, archaeology allows the exploration of mediating qualities of food and food's relation to Indigenous community persistence and "residence" in a colonial context.

[48] *Second Chair* [48] *Second Organizer*

Pezzutti, Florencia (Colorado State University), Christopher Fisher (Colorado State University)

[135] *The Steps of Kings: Terraced Landscapes in the Lake Pátzcuaro Basin, Michoacán, México*

Agricultural landscapes are a critical, and often overlooked, component of Mesoamerican statecraft. Recent archaeological investigation within the Lake Pátzcuaro Basin, Mexico, has documented an extensive terraced landscape. Here I explore the function, development, and socio-political implications of this recent work using data derived from full-coverage survey, geoarchaeology, and remote sensing/ARC GIS.

[135] *Third Organizer*

Phillips, Shaun [87] *see Ward, Christine G.*

Phillips, Stephen (University of Washington) and Erik Gjesfeld [113] *Exploring Raw Material Procurement and Network Relationships in the Kuril Islands of Far Eastern Russia*
Social networks created from source provenance studies often trace the movements of artifacts and raw materials across the landscape and among groups of people, but lack depth as explanatory frameworks for human relationships in the past. This paper focuses on using provenance data and other archaeological data sets in conjunction with social network analysis methodologies to explore procurement of key raw materials in an ecologically constrained environment. This research combines quantitative and qualitative network analysis approaches for modeling the evolution of social and economic network relationships in the Kuril Islands of Far Eastern Russia.

Picard, John [255] *see Levine, Mary Ann*

Picha, Paul (State Hist Soc of North Dakota)
[28] *Negotiating North Dakota Archaeology: Agenda, Assent, and Action, 1930-2010*
The National Research Council Archaeological Conference of 1929 set the national agenda (O'Brien and Lyman 2001). At the state level, State Historical Society of North Dakota council member George F. Will aimed to carry out the interdisciplinary agenda in accord with his Harvard University mentor Roland B. Dixon's address in St. Louis. Avocation and archaeology were negotiated over the next seven decades in North Dakota. In retrospect, these twin interdisciplinary pillars--archaeology and ethnohistory--remain the foundational legacy in North Dakota.

Pickering, Robert (Gilcrease Museum/University of Tulsa)
[173] *The Kampsville Model of Public Archaeology*
Kampsville archaeology and education programs in the late 1960's and early 70's, were characterized by creative thinking, resourcefulness, and risk-taking. Education programs reached thousands of people of all ages and very diverse backgrounds by incorporating aspects of numerous learning theories. The personal experiences in archaeology and related scientific fields over five decades are the long-term successes of CAA's education programs. Kampsville alumni are today's supporters of archaeology in its many forms. If archaeology as a discipline is going to thrive, not just survive in the future, it is critical to create passionate and engaged supporters in each new generation.

Picklesimer, John (Gray & Pape, Inc.) and Ruth Myers (Gray & Pape, Inc.)
[252] *Phase I Investigations of the Millennium Pipeline Project: An Archaeological Cross-Section of New York's Southern Tier*
Survey investigations for the Millennium Pipeline provided a linear archaeological cross-section of New York's Southern Tier. The survey extended across 12 counties moving west to east, covering a distance of approximately 676 kilometers, and crossing 5 drainage basins and 5 major physiographic provinces. Now, using GIS technologies, the information garnered during the survey can be analyzed. This paper addresses the success of the predictive model, and summarizes the quality of data obtained during the survey. Finally, information concerning the positioning of human occupations both through time and space will be addressed.

Piehl, Jennifer [77] *see Rich, Michelle E.; [77] see Marken, Damien Bernard*

Pike-Tay, Anne (Vassar College) [157] *Discussant*

Pillsbury, Joanne (Dumbarton Oaks) [67] *Discussant*

Pinhasi, Ron [82] *see von Cramon-Taubadel, Noreen*

Pinson, Ariane (University of New Mexico & Central New Mexico CC)

[118] *Diet Breadth, Risk, and the Early Holocene Landscape*
Early Holocene environments in the West transformed rapidly in response to post-glacial changes in climate and hydrology. These changes were spatially and temporally variable, affecting the abundance and permanence of surface water and associated habitats. For some human foragers, this spatio-temporal variation in landscape change may have increased foraging risk and uncertainty that, in turn, would have impacted both diet breadth and patch choice. This paper explores the role of risk and uncertainty in shaping regional subsistence strategies among early Holocene foragers in the Western U.S.

[41] *see Jarman, Nicholas L.*

Piperno, Dolores [151] *see Henry, Amanda G.*

Pirkil, Mary (Center for American Archeology), Beth Shea (Illinois State Museum), and Carey E Tisdal (Tisdal Consulting)
[215] *Evaluating Archeological Education: A Case Study from Kampsville*

The Center for American Archeology's education and public outreach programs introduce students to archeological concepts and the prehistoric cultures and environment of the lower Illinois River valley. Though we reach wide audiences, how much of a lasting impact do their experiences in Kampsville have on their educational and career choices, and their appreciation of prehistory as well as science? This presentation will highlight some of the CAA's efforts and specifically explore the role of professional evaluation and evaluative tools in crafting and improving programs geared for teenage audiences.

Pitblado, Bonnie (Utah State University)

[118] *Seeds of Change or More of the Same? The Early Holocene of Southeastern Idaho*

Of all regions of the American West, southeastern Idaho has among the least-known Pleistocene and Early Holocene archaeological records. Yet of all western regions, it is ecologically unique as a land of fluvial, faunal and floral plenty amidst the true "desert west," and we should not necessarily expect to see evidence for the "seeds of change" of this symposium's title. Because the archaeological record is depauperate, this paper explores the paleoecological record of southeastern Idaho and offers predictions and what few conclusions are possible about the expression of Early Holocene human adaptations in the region.

Pitezal, Todd (University of Arizona)

[40] *Reflections of Northern Mexico from the Journal Kiva*
Kiva: The Journal of Southwestern Anthropology and History is the flagship publication of the Arizona Archaeological and Historical Society. Not only is it the premier regional journal for scholarly publications from the southwest United States it is one of the only English language venues for publishing the archaeology and ethnography of northern Mexico. Our most popular issue of the past two decades was devoted to a contemporary potting community in Chihuahua, Mexico. This poster presentation reflects upon general interests and scholarly contributions made by Kiva authors to the anthropology, ethnography, ethnohistory, history, and archaeology of northern Mexico.

Pitluga, Phyllis

[89] *Andean Milky Way Model Tested on Nasca Zones 6-7-8*
Published conclusions so far on the huge Peruvian ground drawings include Zones 1-5 as a homogenous group of thirty identifiable contour-line figures etched into the landscape. By contrast, the figures at Zones 6 and 8 are created from heaps of stones shaped as two llamas (Zone 6) and an octopus (Zone 8). Zone 7 has contour-line figures but they are not readily identifiable because of car tracks upon them. The hypothesis now tested is that data from Zones 1-5 can predict the celestial associations for Zones 6, 7 and 8 and the identities of the damaged Zone 7 figures.

Pitter, Sharmini (Stanford University) and Richard Evershed (University of Bristol)

[48] *Fatty Acid Residue Analysis of Pottery of Çatalhöyük, Turkey: Understanding the Relationships Between Animal Domestication, Ceramic Technology, Environmental Variation and Changes in Subsistence Practices*

A recent study performed by Evershed et al. (2008) seems to indicate that milking may have taken place in the Near East as early as the seventh millennium BC, a date that pre-dates previous estimates of the secondary products revolution (Sherrat, 1983) by several millennia. By following the methodology utilized in the study performed by Evershed et al. (2008) we hope to contribute a greater understanding of the beginnings of the use of milk products at Çatalhöyük and the cultural and/or technological factors, including the development of pottery on site, that lead to the development of secondary product utilization.

Plager, Sharon [43] see Sayer, Camille

Plimpton, Christine

[92] *Determining Domestic Space Use Continuity Through Syntactic Analysis*

Culture influences the built environment and determines how people utilize the space. If a culture is subjugated by another, would the dominating culture influence the cognition of domestic space use? Egyptian culture is ideal for investigating this question because of its long cultural history consisting of periods of political stability, disintegration, and subjugation by other cultures. This paper presents syntactic analysis performed on house layouts from the Old Kingdom through the twentieth century. Initial analysis suggests that overall spatial configuration of Egyptian dwellings remained consistent, regardless of political dominance.

[92] *First Chair*

Plisson, Hughes [216] see Dubreuil, Laure

Plog, Stephen (University of Virginia) [93] *Discussant* [208] *Discussant*

Plourde, Aimee (CECD, Institute Archaeology UCL) and Elizabeth Arkush (University of Virginia, Charlottesville)

[127] *Landscape and Social Transformation in the Late Intermediate Period, Titicaca Basin*

The Late Intermediate Period (1000-1432 AD) in the south-central Andes saw intense social upheaval and transformation in the wake of the Tiwanaku state's collapse. In Tiwanaku's former heartland, the Titicaca Basin, this period was one of violent competition, environmental hardship, and increasing pastoralism. The landscape was claimed politically in new ways through prominent tombs and shifts in settlement to fortified outposts with strategic viewsheds. Here we interpret transformations in the use and meaning of landscape in the western Titicaca Basin, based on systematic survey surrounding Machu Llaqta, a major Late Intermediate Period center.

Pluckhahn, Thomas [217] see Cordell, Ann S.; [85] see Thompson, Victor D.

Plunger, Elizabeth (University of California, San Diego), Paul Goldstein (University of California, San Diego) and Sarah Baitzel (University of California, San Diego)

[226] *Clothing and Subgroup Identity in Moquegua Tiwanaku: The Burial Garments of the Chen Chen Style M43 and Omo Style M70 Cemeteries at Rio Muerto*

Clothing is often referred to as the "social skin" of humans, and therefore is a critical medium for the expression of social identity. Studies of Omo and Chen Chen style Tiwanaku occupations in the Moquegua valley have shown that these groups were characterized by different socioeconomic lifeways and used slight variations of the Tiwanaku corporate art style in their material culture to define themselves as separate subgroups. The research presented in this paper shows that these communities also used distinct types of

clothing and decorative techniques as means of expressing their unique identities within the Tiwanaku diasporic population.

Plunket, Patricia [136] see Robles-Salmerón, Amparo; [156] see Urunuela, Gabriela

Pocklington, Katy [193] see Eiselt, B. Sunday

Podrug, Emil [9] see Mendusic, Marko; [9] see Tykot, Robert H.; [9] see McClure, Sarah B.

Poister, Nicolas [232] see Marty, Johanna V.

Pokrant, Marie

[179] *The Pride of Red Lion: Abner Crane and the Early Settlement of Warren County, Ohio*

Abner Crane was an early settler in Warren County, Ohio. He founded a village in Clear Creek Township today known as Red Lion. His homestead, Site 33Wa823, is located southeast of the village. Although three generations of the Crane family lived on the site for nearly 143 years, this paper will focus on the occupation of Abner Crane (1812-1848). Features and deposits dating from the time of Abner's tenure reveal how an established New Jersey family adapted to life on the Ohio frontier.

Polanyi, Tamas (Northwestern University)

[149] *Ashes to Ashes, Dust to Dust: Cemeteries, Communities and Socioeconomic Organization in Bronze Age Hungary*

Practices surrounding death and burial are important means of social production and reproduction in human societies. Beyond exposing aspects of religion and cosmologies, mortuary practices help structure and reveal social order of living. My presentation investigates how mortuary practices articulate with socioeconomic and political institutions in emerging complex societies. I examine how ritual and symbolic aspects of mortuary practice were incorporated in the power-building strategies of prestige goods exchange and staple finance. By employing a contextual, regional and diachronic investigation of burial remains, this study focuses on social changes triggered by political and economic transformations in a broader, regional context.

Pollack, David (Kentucky Archaeological Survey) and A. Gwynn Henderson (Kentucky Archaeological Survey)

[105] *Return to Fox Farm: A Unique Middle Ohio Valley Fort Ancient Village*

Encompassing over 40 acres, Fox Farm is the largest Fort Ancient site in the middle Ohio valley. Fieldwork conducted in 2009 documented two plazas, and thick middle (A.D. 1200-1400) and late Fort Ancient (A.D. 1400-1750) midden deposits. This paper explores the possibility that these plazas do not represent temporally distinct villages, but instead, a single very large village. The internal organization of this community and its long occupational history reflect Fox Farm's importance within the regional Fort Ancient settlement system and possibly, the ability of its leaders to overcome the destabilizing nature of tribal factionalism.

[105] *First Chair*

Pool, Christopher (University of Kentucky) [133] *Discussant*

Pool, Michael (Austin Community College)

[235] *Is it or Isn't it?: Evaluating Prehistoric and Recent Rock Alignments*

Dating rock alignments in the American Southwest is notoriously difficult. Evaluating the age of such features is inherently subjective. Doolittle et al. (1993) proposed 13 objective criteria that help evaluate whether rock alignments are recent or prehistoric in age. These criteria provide objective data for the subjective evaluation of the age of rock alignments. This poster uses these characteristics to evaluate the age of a number rock alignments located by a survey of Upper Cameron Creek, southwestern New Mexico.

Pope, Melody and Rex Garniewicz Garniewicz (Indiana State Museum)

[239] *Archaeological Investigations at an Upland Mississippian Village in the White River Valley, East Fork, Dubois County, Indiana*

Upland Mississippian sites located outside of major alluvial valleys in the Midwest and Southeast are considered to be indicators of warfare or other social processes such as factionalism. The different views of upland settlements are considered in this paper in light of a recently documented upland Mississippian Angel Phase site located in the East Fork of the White River in south-central Indiana.

[239] *First Chair*

Popenoe Hatch, Marion (Univ. del Valle, Guate.), Carlos Alvarado (Universidad del Valle Guatemala) and Tomas Barrientos (Universidad del Valle Guatemala)

[229] *New Evidence on Northern Quiche and Western Verapaz Trade Relations*

In 2009 we outlined Preclassic trade routes in Guatemala that connected the South Coast, the Central Highlands, Motagua and Salama valleys and the Rio Negro/Chixoy drainage system, showing they were dominated by Kaminaljuyu and El Porton. In the Early Classic this control was seized by the Solano (Quichean) population. Recent excavations at El Soch indicate that trade routes during the Postclassic led from the northern Quiche area of Nebaj, El Soch and Alta Verapaz northward to the Peten and Mexico and that these were politically separate from those managed by the Quicheans in the Central Highlands of Guatemala.

Popova, Laura (Arizona State University)

[11] *Political Ecology and Pastoral Pasts*

Poverty and famine have often impacted mobile or semi-mobile pastoral groups, especially in Africa, more than other people in society. As development agencies have struggled to understand why these particular groups are so vulnerable, they have looked to political ecology for answers. With its focus on ecological, economic, social and political issues, studies that took this particular theoretical stance often lead to more effective development strategies. In this paper, I will look at the way in which the discoveries development agencies have made about pastoralists in the last 5 years can be used to better illuminate pastoral pasts.

Popper, Virginia (UMass Boston & MIT)

[154] *Comparing Colonial and Mission Neophyte Subsistence Systems in California*

Analyses of plant remains from several Mission period sites in California provide information on the dietary choices made by the colonial settlers and on changes in the subsistence practices of Native populations. This paper examines how the establishment and provisioning of missions and presidios, the introduction of domesticated plant foods, and colonial use of the local environment significantly altered Native foodways while providing a fairly uniform diet for the colonists.

Porcasi, Judith (Cotsen Institute of Archaeology at UCLA)

[31] *Trans-Holocene Exploitation of Cervidae and Leporidae on the California Coast*

Two families of prey animals--the cervidae and the leporidae--provided the majority of terrestrial mammal protein for prehistoric coastal Californians. However, exploitation of the highly-ranked cervidae differed markedly over time and distance, prompting on-going debate as to underlying causes. Here, nine coastal archaeofaunas are combined into coarse-grained patterns of trans-Holocene cervid and comparative small mammal (i.e., leporid) exploitation and flesh yield. While providing new images for the deer-hunting debate, these data reveal that the combined biomass of both these prey families declined linearly over time, marking a conspicuous reduction in nutritional contribution from these keystone resources.

Porraz, Guillaume (University of Tuebingen)

[157] *The Early Upper Palaeolithic in the Mediterranean Arc and the*

Question of the First Modern Human Dispersal into Europe: A Parallel with the Danube Corridor Hypothesis

This paper addresses the issue of the Early Upper Palaeolithic in the Mediterranean Arc and presents a comparison with recent data from the Swabian Jura. The approach taken is to draw a parallel between the Mediterranean Arc and the Danube corridor, the two alternative ways of the diffusion of the first modern humans into Europe. This paper presents new results from the study of the Grotte de l'Observatoire (Principauté de Monaco) and emphasizes the processes of colonisation in that region. Finally, the importance of integrating this perspective during interpretation of the EUP archaeological record is emphasized.

Porter, Benjamin [92] see *Fatkin, Danielle S*

Porter, Benjamin W. [259] see *Adelsberger, Katherine A.*

Potter, Ben (University of Alaska Fairbanks), Barbara Crass (University of Wisconsin Oshkosh), Charles Holmes (University of Alaska Anchorage) and Phoebe Gilbert (University of Alaska Fairbanks)

[27] *Recent Excavations at the Mead Site, a Late Pleistocene Multi-component Site in Central Alaska*

We report on extensive 2009 excavations at the Mead site, a multi-component site in central Alaska. This is the first year of a multi-year project at this site, one of the oldest in Northwest North America (dating to ~16000 RCYBP). Geoarchaeological context is described, including inferences on site formation and site disturbance. Well preserved faunal remains and distinct activity areas are also evaluated.

Potter, Ben A. [27] see *Coffman, Sam*

Powell, Gina (Missouri State University, Springfield, Missouri)

[38] *Missouri Avocational Archaeologists: A Small Sample of Great Work*

Like most other states, Missouri owes a debt to its avocational archaeologists for providing time, research, data, and support for furthering the knowledge of the state's past. In this poster, the author will present and honor the work of several avocational researchers, including one of the co-founders of the Council of Affiliated Societies, the late Earl Lubensky. The work of other individuals will be recognized, especially the tireless officers of local chapters of the Missouri Archaeological Society.

[172] see *Lopinot, Neal H.*

Powers, James [215] see *Berg Vogel, Michelle A.*

Powis, Terry (Kennesaw State University), Gyles Iannone (Trent University), Jaime Awe (Belize Institute of Archaeology), James Garber (Texas State University) and Paul Healy (Trent University)

[54] *The Function of Middle Preclassic Maya Greenstone Triangulates: A Unique Mesoamerican Groundstone Artifact Type*

Over the past twenty years our understanding of the Middle Preclassic period has become much clearer through archaeological investigations at a number of sites located in the Upper Belize River Valley region of the eastern Maya Lowlands. While the picture of Middle Preclassic Maya life, including their material culture, has sharpened, there are aspects that remain uninvestigated. One artifact type, identified as greenstone triangulates, has been found at several Belize Valley sites and in a variety of contexts. Although very few of these multi-faceted, polished groundstone items have been recovered, little research has focused on their distribution and function in the archaeological record. An evaluation of these items from primary contexts provides data for determining how they were used in daily social and/or ritual activities throughout the lowlands. Comparative data from other regions of Mesoamerica are also discussed.

[54] *First Chair*

Pozorski, Shelia and Thomas Pozorski (University of Texas-Pan

American)

[114] *Insult to Reverence: The Evolution of Prehistoric Intrusiveness within the Casma Valley of Peru*

When the powerful Sechin Polity dominated the Casma Valley during the Initial Period, the probable administrative center was the immense Sechin Alto main mound which measures 300 x 250 x 35 m tall. When the polity declined at 1400 B.C., a rival culture built an administrative structure on the mound to demonstrate its newly-achieved dominance. Subsequent Early Horizon inhabitants of the mound more deliberately destroyed friezes, leveled the mound top, and recycled construction materials to build a small village there. Later reoccupations through the Late Intermediate Period consisted of small structures and intrusive burials that reflect reverence for the mound's former importance.

Pozorski, Shelia [96] *see* Pozorski, Thomas

Pozorski, Thomas (University of Texas-Pan American) and Shelia Pozorski (University of Texas-Pan American)

[96] *New World Bureaucracy at 1500 B.C.: Evidence from the Casma Valley of Peru*

During the Initial Period (2100-1000 B.C.), the Sechin Polity built large, planned settlements, including the largest structure in the New World. A powerful bureaucracy was critical to the establishment and perpetuation of this polity over a 500-year span. A special modular architectural form with rounded corners, wall niches, and bar closures functioned as an emblem of authority. This "square-room unit" occurs repeatedly in administrative contexts that monitored craft production, intersite movement, and food production. A recurrent element in the local iconography shows this power symbol, and stamp and cylinder seals from Sechin Polity sites may also reflect bureaucratic activities.

Pozorski, Thomas [114] *see* Pozorski, Shelia

Prange, Erica (College of Wooster)

[73] *Learners in Clay: Experimental Studies in Eastern Woodland Ceramic Manufacture*

American archaeological studies, primarily in the southwest, provide evidence of child potters through quantitative data derived from ridge breadth measurements of fingerprints. Others attribute specific aesthetic values to products of child potters, associating lesser quality vessels with psychologically defined steps of cognitive development. I relate these studies to the archaeological record of Woodland ceramics from Ohio and Pennsylvania. I assess these methods and speculate how prehistoric learning of ceramic production may have taken place based on experimental recreating of the manufacturing process, archaeological data from several sites, and historical learning behaviors.

Pratt, Darrin (University Press of Colorado) [93] *Discussant*

Prentice, Andrea (University of Western Ontario), Christine White (University of Western Ontario), Elizabeth Graham (University College London) and Elizabeth Webb (University of Western Ontario)

[5] *Stable Isotope Dendroclimatology using Tropical Trees and Wooden Artefacts from Lamanai, Belize*

In this paper, we investigate the potential use of tropical wood to reconstruct short term climate change using variations in the oxygen-isotope composition of cellulose from modern trees at Lamanai, Belize, and a 5th century wooden object from the same site. Although many trees in tropical regions do not produce visible rings, the maximum isotope-values of cellulose were sensitive to rainfall amount in the dry season and correlated with maximum oxygen-isotope values of precipitation each year. Isotopic ring-widths were correlated with temperature, rainfall amount and annual variations in oxygen-isotope values of cellulose.

Prentiss, Anna (University of Montana) and Thomas Foor (The University of Montana)

[39] *Defining Emergent Inequality at the Bridge River Site, British*

Columbia: A Multivariate Statistical Approach

The development of status inequality is a fundamental topic of research in Pacific Northwest archaeology. Ethnographic house-groups relied upon production of surplus goods with which to compete socially through establishment of debt relationships within and between villages. Reconstruction of the history of this system has often proved illusory given the complexities of household archaeology in the region. Research at the Bridge River site offers the region's best opportunity to date for the study of social evolution. In this paper we develop a multivariate statistical analysis of data drawn from features, artifacts and faunal remains to test alternative models of emergent inequality.

[39] First Organizer; [39] First Chair

Prentiss, Anna [39] *see* Cail, Hannah S.; **[39]** *see* Smith, Lisa M **[203]** *see* Yang, Dongya

Pretola, John (Gray & Pape, Inc.), Donald Miller (Gray & Pape, Inc.) and Jacob Freedman (Gray & Pape, Inc.)

[252] *Four Orange County Phase III Sites: New Prehistoric and Contact Period Insights from the Wallkill Valley, New York*

This investigation provides new data concerning ancient Native American utilization, from Late Archaic through Contact Period, of the Black Dirt region, Wallkill Valley, New York. Four sites (ORA-9931, 9936, 9942, and 0550) yielded over 13,575 artifacts and 131 cultural features. Analysis of lithic, ecofactual, seriological, geoarchaeological and AMS dating results enable conclusions about site distributions, function, material culture and human adaptations for cultures in this region. This evidence demonstrates the importance to ancient Native Americans of these wetlands, ecotones, and upland forests where a diverse flora and fauna could sustain human groups living and moving through the Wallkill Valley.

Price, Gypsy (University of Florida), John Krigbaum (University of Florida) and Paul Thacker (Wake Forest University)

[214] *Inferring Sociopolitics Using Faunal Stable Isotope Data from the Late Woodland Donnaha Site*

The Donnaha site is a Late Woodland settlement located in the north central piedmont region of North Carolina. Here we report bone collagen and bone apatite light stable isotope values derived from a sample of recovered fauna. Bone collagen values for d13C and d15N range from -23.6 to -13.9‰ and 2.1 to 9.5‰ respectively, while bone apatite values range for d13C range from -6.9 to -0.9‰. Results contribute to taxon-specific regional paleoecology and offer a requisite baseline for planned human paleodiet studies. Specifically, our data inform on the distribution and management of exploited foodstuffs in the central piedmont.

Price, T Douglas (University of Wisconsin-Madison) [61]

Discussant [126] Discussant [9] Discussant; [214] see Burton, James H.

Priewe, Sascha (The British Museum / Oxford University) [95]

Discussant

Procopiou, Haris (University of Paris I (Panthéon-Sorbonne))

[216] *Grinding Tools in Bronze Age Crete: Raw Material, Manufacture, and Use*

This paper aims to reconstruct production and use of grinding tools during the 2nd millennium in Bronze Age Crete. During this period of emergence of the Minoan palaces, the raw materials employed and techniques of manufacture and use are diversified. In order to interpret this diversity we will apply an interdisciplinary approach which combines petrographical and use-wear analysis. The macroscopic analysis will be completed by a multi-scale quantitative analysis of surfaces by interferometry. By interpreting different technical choices, this methodology allows evaluation of the cognitive processes of prehistoric craftsmen.

[216] *see* Roux, Valentine

Procter, Rebecca (NM State Parks/RedVine Consalts.)

[222] *What Are We Saying and Who is Listening? Archaeology's Public Audience and the Impact of Social Change*
Agency archaeologists spend at least some part of each day conveying the message of what they do and why they do it to a non-specialist audience. Politics, regulatory changes, and theoretical changes in academic disciplines have significant effects on the message. It has long been acknowledged that telling about the past is affected by recent history, but there has not been much explicit examination of how this occurs. This paper examines recent history and social change as they have affected communication about archaeology to a variety of audiences in New Mexico and beyond in the last thirty years.

Proebsting, Eric (Thomas Jefferson's Poplar Forest), Jack Gary (Thomas Jefferson's Poplar Forest) and Lori Lee (Thomas Jefferson's Poplar Forest)

[26] *Presenting Historical Archaeology with Digital Technologies at Thomas Jefferson's Poplar Forest*
Recent efforts are conveying the results of archaeological research at Thomas Jefferson's Poplar Forest through a variety of new digital technologies. These include an interactive web based exhibit; podcasts that help explain the process of archaeological discovery; and collaborations with universities to create other archaeologically-based online and onsite interpretive aids. A new GPS-based self-guided tour has also been developed for visitors to use as they walk the Poplar Forest grounds. These handheld receivers are able to display a wide variety of audio and visual information about the written, archaeological, and environmental history of the property.

Proue, Molly (Northern Land Use Research, Inc.), Chris Wooley (Chumis Cultural Resource Services), Jason Rogers (Alaska Maritima), Joshua Reuther (Northern Land Use Research, Inc.) and Justin Hays (Northern Land Use Research, Inc.)

[27] *The Aangearwak Site: Recent Excavations Along the Kuskokwim River, Southwest Alaska*
The Aangearwak site is a 2000-year-old site located along the middle Kuskokwim River near the village of Crooked Creek. The site is unique for the time period and location due to its large areal extent with several housepits and well-dated occupations spanning a period of at least 500 years. During the 2009 field season, Chumis Cultural Resource Services and Northern Land Use Research, funded by Donlin Creek, LLC, worked with community members to excavate one housepit. Over 300 artifacts were uncovered, including lithics and well-preserved organic materials. Work also included extensive three-dimensional mapping of intra-site microtopography and landform morphology.

Prufer, Keith (University of New Mexico) and Adam Nazaroff (Stanford University)

[148] *Applications of PXRF Spectrometry in Cave Research*
Innovations in Portable Energy Dispersive X-ray Fluorescence (PXRF) spectrometry have increased the applications of PXRF for archaeological and geological research into the chemical characterization of geologic materials. We report on potential uses of PXRF in cave research for mineralogical characterization of speleothems. PXRF is a nondestructive technique for in-situ analysis, potentially allowing for sampling multiple speleothem surfaces without damaging fragile cave contexts. Our infield study of strontium values of stalagmites was done to test PXRF for differentiating calcite and aragonite used in paleoclimate reconstruction. Discerning these minerals on surfaces of stalagmites allows for targeted sampling of speleothems, maximizing cave conservation.

Prufer, Keith [230] see McCoy, Mark D.; [148] see Moyes, Holley

Pruitt, Tera (University of Cambridge)

[106] *Knowledge Production and Local Communities: Socio-politics and Alternative Accounts of the Past*
In the field of archaeology, the production of knowledge is a particularly contested space when local community needs mix with standards of archaeological practice. This paper presents an unusual

and very contested case of archaeological practice in Visoko, Bosnia. It addresses how a case of alternative archaeology, popularly called The Bosnian Pyramids, is satisfying very important socio-political needs in a small community, and it addresses very important concerns and issues this situation raises about professional archaeological practice—both in our own excavation and publicity practices, as well as how we engage with local communities and worldwide alternative archaeological communities.

Pugh, Daniel (University of Michigan)

[111] *Plains Oneota Ceramics - The Swantek Collection*
Excavations at the Swantek Site in central Nebraska produced an unexpected collection of ceramics with obvious affinities to Oneota wares from the Midwest. Plains Oneota sites are known elsewhere, particularly the White Rock sites of northern Kansas. The ceramics from the Swantek site provide an interesting point of comparison between Midwestern Oneota and White Rock collections. This paper provides a brief description of this new collection and some thoughts on the implications for Late Prehistoric social interaction between Midwestern and Plains peoples.

Puleston, Cedric [197] see Culleton, Brendan J.

Pullen, Daniel (Florida State University) and Thomas Tartaron (The University of Pennsylvania)

[101] *Enlarging Small Worlds: The Saronic Gulf and Mycenaean State Expansion*
The "small world" of the Saronic Gulf in southern Greece, dominated by Kolonna during the Aegean Middle Bronze Age (c. 2000–1600 BC), effectively prevented development of hierarchical social-political systems in the surrounding coastal regions. During the Late Bronze Age (c. 1600–1070 BC) Mycenae expanded its power, when it came into conflict with Kolonna in the coastal regions. The Saronic Harbors Archaeological Research Project is documenting this contested periphery through fieldwork at the walled harbor town of Korphos: Kalamianos and its surrounding region. Kalamianos represents a substantial investment by Mycenae in its bid to control the Saronic Gulf.

[101] First Chair

Pullins, Stevan (Cultural Resource Analysts, Inc.)

[150] *Ceramics, Chronology, and Cultural Affiliation at a Late Woodland Site in the Southern Sny Bottom, Illinois*
Site 11PK1791/1792 is located in west-central Illinois, situated in an agricultural field that is part of a system of low-gradient coalescing alluvial fans against the eastern bluffs of the Mississippi River in south-central Pike County. Three geographically distinct subsets of cultural phases have been identified in the vicinity, including the Sny Bottom along the Mississippi river, the lower Illinois river valley, and the Salt River valley in northeast Missouri. Ceramic fragments recovered from a Late Woodland activity area, including some with adhering residue, were examined using multiple analytical approaches to address issues of cultural affiliation and chronology in the region.

Punke, Michele

[108] *Geoarchaeological Investigations of Repeated Site Occupation in the Uplands of the Portland Basin following the Catastrophic Late Pleistocene Missoula Floods*
Archaeological deposits discovered at three sites near Vancouver, Washington, challenge the accepted view of the depositional history of the Portland Basin since the late Pleistocene. Deep, intact archaeological features and deposits dating to as early as ca. 8,000 cal yr BP were discovered during archaeological excavations and construction monitoring. The archaeological and stratigraphic records found at the sites suggest that sediment accumulation in some upland areas of the region did not cease after the deposition of late Pleistocene catastrophic flood sediments, but continued well into the Holocene in the form of eolian deposition.

Punzo, Jose (Instituto Nacional de Antropología e Historia) and David Arturo Muñiz García (INAH)

[242] *Mountains, Caves and Rivers as Social Agents in the Rituals of the Chalchihuitan People, in the Guadiana Valley, Durango, Mexico*
The construction of the prehispanic town of La Ferrería/Schroeder, toward the year 600 AD, was executed in a planned way, guiding their main buildings toward relating important landscape markers, as the sunrise, rivers, caves or outstanding mountains in the landscape that surrounded it. It was from that way, like the chalchihuitan people with the orientation of their buildings integrated, the elements of the landscape into their rituals in an active way, making the lively and inanimate beings participated of their social world, structuring them mutually.

Punzo, Jose [242] First Organizer

Punzo Díaz, José Luis [57] see Muñiz, David A.

Purcell, David (Logan Simpson Design, Inc)

[253] *The Past Through Tomorrow: Results of the 1962-1964 Arizona State Route 213 Highway Salvage Project*

The Museum of Northern Arizona excavated 16 prehistoric sites along Arizona State Route 213 (now 389) between Fredonia and Colorado City in 1962-1964. Representing nearly one-third of the sites excavated on the Arizona Strip, the sites exhibit nearly the complete Basketmaker-Virgin Anasazi culture history for the region. Previously available only in a Bureau of Land Management overview, the project results were finally published last year. The basic patterns of settlement, architecture, and ceramic production are described, with data gaps identified that could be addressed by a new project along the same route - the Lake Powell Pipeline.

Purdy, Barbara [26] see Church, Krista

Puseman, Kathryn (Paleo Research Institute), Linda Scott Cummings (PaleoResearch Institute) and Melissa Logan (PaleoResearch Institute)

[4] *Organic Residues: Prehistoric Signatures and Curation Contamination*

Organic cooking residues are, by their very nature, complex. Experiments cooking individual and mixed foods provide greater understanding of these signatures using FTIR. Identifying bonds between molecules identifies compounds (fats/lipids, protein, carbohydrates) present. Comparing signatures from prehistoric/historic objects to reference material (single plants or animals) helps to identify elements of diet. Our modern technology also introduces potential for contamination of various forms. Curation labeling (essential for identification) and storage can both add signatures. White out, fingernail polish, PVA, plastics, adhesive labels, paper, aluminum foil, and especially petroleum-based compounds, are reviewed for their potential to mask original food signatures.

[10] Discussant

Pye, Jeremy (University of Florida)

[232] *Faithful To Their Trust, Even Unto Death: Expressions of Identity and Change in an Oklahoma Cemetery Landscape*
In March of 2007, a documentation survey was conducted at Diamond Cemetery, Stephens County, Oklahoma. One hundred and fifty-seven grave markers and monuments were recorded during this survey, ranging from formal stone monuments to homemade markers. Individual grave markers often reflect temporal stylistic variation. Furthermore, size differences may directly relate to supposed economic wealth. Beyond these traditional concerns, however, analysis of gravestone symbolism and epitaphs shed light on belief systems, backgrounds and social identities of individuals and families through time. More importantly, analyses of this type allow for inquiry into the cultural structure of the community as a whole.

Qin, Ling (Peking University), Guoping Sun (Zhejiang Provincial Institute of Archaeology, Hangzhou, China), Hui Zhao (School of Archaeology and Museology, Peking University, Beijing, China) and Shin'ichi Nakamura (Kanazawa University, Japan)

[155] *From Foragers to Farmers: Current Results from Tianluoshan project in Zhejiang Province*
Tianluoshan is a Neolithic site of the local Hemudu-culture (4900-3800BC) in Zhejiang Province. The site has a high water table that has preserved water-logged remains in most of the early contexts. Peking University collaborated with the Zhejiang Institute and various specialists from the UK, Japan, and China to investigate the eco-remains from this site for the past three years (2005-2008). The current results include data from fauna, plants, geoarchaeological studies and isotope analysis. This project provides the new evidence for understanding the subsistence of mid Neolithic in south China, especially for Hemudu culture.

Quesenberry, Melisa

[99] *The Virgin of the Cenote: Yucatán's Goddess in the Well*
Since the early Colonial period the Christian Virgin has been an important part of religious culture in Mexico's Yucatán. Often the Virgin retains conceptual vestiges of an association with pre-Hispanic Maya female deities. This paper surveys colonial structures dedicated to the Virgin which are uniquely situated adjacent to cenotes. Conceived as portals to the underworld, the dwelling place of the rain gods and the moon goddess, the cenote also became a locus of power for the Christian Virgin as well. Ethnohistoric sources and modern folklore reveal that the association of the Virgin with the cenote is both pervasive and persistent.

Quinlan, Angus (Nevada Rock Art Foundation)

[211] *Southern Nevada Rock Art as Symbolic Culture*
Rock art is perhaps the most visible record of the social and economic lives of southern Nevada's prehistoric and ethnohistoric peoples. Rock art's enduring cultural resonance is a property of the social memories expressed and reproduced through its visual imagery and associated actions performed at rock art locales. This paper explores a social archaeology of identity through southern Nevada rock art and the role that its rock art can play in the study of the ideological presentation of past social and cultural identities.

Quinn, Allen [29] see Pedler, David

Quinn, Colin (University of Michigan), Benjamin Thebaudeau (Trinity College Dublin), David Harrison, Ian Kuijt (University of Notre Dame) and Ian Kuijt (University College Dublin)

[185] *Hunting Down Huts: Multi-Scalar Approaches to Residential Sites on Inis Airc, Co. Galway, Ireland*
Features observed during pedestrian survey are not always what they seem, and this is problematic for archaeologists on the west coast of Ireland where systematic subsurface survey and testing has been significantly underutilized and existing chronological and typological classifications are often held as fact, not as testable hypotheses. Using a combination of aerial photography, surface survey, GPS mapping, subsurface geophysical survey, and test excavations, this project has explored an exposed residential landscape with a multiplicity of approaches and a level of resolution that is often not utilized in an Irish context. Based on the case study of Inis Airc, Co. Galway, it is possible to evaluate archaeological techniques and challenge existing assumptions about landscape use on the west coast of Ireland.

Quinn, Rhonda (Loyola University Chicago), Sharyn Jones (University of Alabama at Birmingham) and Susan C. Antón (New York University)

[206] *Detecting Cannibalism with Stable Isotopes?*
Stable isotopic (d13C, d15N) analysis has been used extensively to infer aspects of past human diet from skeletal material in archaeological contexts. Few studies have applied the methods to questions of cannibalism, and of those, all have focused on potentially cannibalized individuals. Clearly, very few modern analogs

of known cannibals are available to test the sensitivity of stable isotopic systems. However, by reconstructing diet categories from known food resources in a specific environment, a cannibalistic isotopic signature may be constrained. In this study, we model a cannibalistic diet category for Holocene Pacific Islanders and identify specific conditions of isotopic equifinality.

Quiroz Ennis, Rossana (Posgrado del IIA / FFyL / UNAM)

[89] *Eclipses and the Southern Cross at Cañada de la Virgen*
Cañada de la Virgen Archaeological site belongs to the Sunken Patio Tradition of El Bajío cultural region and presents an orientation of 80° - 85°. No sites along the basin of Rio Laja, such like this, have been reported with pyramids at the south of the platforms. The pattern suggests an alignment with the Southern Cross and an eclipse cycle count. Ethnohistoric records describe the importance of the Southern Cross and eclipse phenomena for the Otomi peoples.

Quitmyer, Irvy (Florida Museum of Natural History) and Douglas S. Jones (Florida Museum of Natural History - University of Florida)

[250] *Annual Incremental Shell Growth Patterns in Hard Clams (Mercenaria spp.) from St. Catherines Island, Georgia: A Record of Seasonal and Anthropogenic Impact on Zooarchaeological Resources*

Hard clams grow by mantle mediated precipitation of calcium carbonate forming a predictable alternating pattern of light (white) and dark (gray) shell increments that correspond to seasonal changes in water temperature. This research applies sclerochronological techniques to document the annual periodicity of shell formation in modern populations of hard clams from St. Catherines Island and applies this model to Archaic period zooarchaeological assemblages. The data show that hard clams were intensively harvested during the late winter and spring seasons at the St. Catherines Island Shell Ring and the McQueens Shell Ring.

[250] *Third Organizer*

Quitmyer, Irvy R. [250] see Jones, Douglas S.

Raab, Annabel (University of Denver)

[99] *Evidence of a pan-Mesoamerican Oracle/Priestess Complex*
This paper offers evidence of a gender-specific, pan-Mesoamerican oracle/priestess complex among mature, elite women using Classic/Postclassic period evidence. Archaeological and textual data reveals that these women were elaborately interred with grave goods marking them as weavers, as well as connecting them with both bloodletting and cosmological events. The evidence used varies both temporally and geographically; however the methodology used will both uncover and link the patterns of this pan-Mesoamerican complex. Glyphic and figural representations of Lady K'ab'al Xook from the Maya site of Yaxchilán will serve as a basis for the argument.

Raczek, Teresa (University of New Hampshire)

[189] *Chai and Collaboration: Making Agreements in Northwest India*
Collaboration with local and descendent communities has been an important aspect of archaeological research for the past few decades. The benefits and challenges of such work have been well discussed and debated in New World contexts; however, such conversations in the Old World have taken place on a more limited scale. Just as the impact of colonialism and the history of archaeology has differed between the New and Old worlds, so too has the method and meaning of archaeological collaboration. This paper will evaluate some of the unique factors that influence collaborative excavation in South Asia, focusing on recent work at the site of Chatrikhera in Rajasthan, India.

Raff, Jennifer [239] see Kaestle, Frederika A.

Rafferty, Janet (Mississippi State University)

[219] *Protohistoric to Historic in a Part of the Choctaw Homeland:*

Settlement Continuity or Replacement?

Archaeological survey of ca. 20,000 acres in central Mississippi has recorded about 55 sites with Protohistoric components, marked by aboriginal ceramics tempered with shell, mixed shell-and-grog and grog. Some have combed or incised decorations associated with Choctaw populations. About 50 early-to-mid nineteenth century components also have been found, identified by mostly English-made transfer-printed and edge-decorated pearlware (four assemblages) and whiteware. Only five sites show evidence of both Protohistoric and early Historic occupation. Hypotheses postulating rapid technological change among the Choctaws or replacement of their settlements by those of incomers are tested.

[219] *First Chair*

Rafferty, Kevin (College of Southern Nevada)

[211] *The Valley of Fire in Southern Nevada Prehistory*

Known locally as an incredibly rich archaeological region, Valley of Fire has received only limited archaeological attention since Mark Harrington first examined the area in the 1930s. Since 2003 the College of Southern Nevada has conducted four intensive block surveys in the area. Cultural resources recorded by the surveys include lithic scatters, rockshelters and overhangs, campsites with associated petroglyph panels, and historic remains including one of the earliest historic roads in southern Nevada. The research has extended our knowledge concerning both the time depth and the intensity of occupation of the region.

Rafferty, Sean (University At Albany, SUNY)

[55] *Analysis of Tobacco Pipe Residues through GC/MS and Raman Microscopy*

This paper presents ongoing research into the identification of tobacco residues in ancient smoking pipes. Two techniques have been used so far: gas chromatography/mass spectroscopy (GC/MS), and Raman microscopy. GC/MS has been used successfully in the past by the author to identify ancient tobacco residues, and the results of this round of analysis support prior research. Raman microscopy, which has the advantage of working on dry samples without solvents, was not successful. It appears that combustion products overwhelm any useful signal that would identify the substance smoked. We are pursuing the use of Raman in non-combusted samples.

Railey, Jim (SWCA - Albuquerque) and Matthew Bandy (SWCA Environmental Consultants)

[87] *Demography and Subsistence-Settlement Trends in the Permian Basin Study Area, Southeastern New Mexico*

Radiocarbon dates from the BLM's Permian Basin study area (southeastern New Mexico) show a dramatic spike beginning in very late pre-ceramic times, peaking in the Early Formative period, and then dropping off again in the Late Formative. The trend line is consistent with numbers and distributions of diagnostic artifacts. These data suggest settlement and subsistence patterns may be similar to those evidenced in the Fort Bliss area to the west, where extensive land use by mobile hunter-gatherers was followed by a shift to farming and more concentrated occupation in better-watered riverine areas and alluvial-fan margins of the desert floor.

[87] *First Chair [87] Second Organizer*

Railey, Jim A. [87] see Turnbow, Christopher A.

Raina, Shagun [163] see Troccoli, Ruth

Rakita, Gordon (University of North Florida)

[158] *Mortuary Rituals, Performance, and Social Identity in the Post-Chacoan World of the Middle San Juan Region*

In the past, archaeologically recovered mortuary remains were viewed as statically reflecting the deceased's social identity. Recent approaches have emphasized the dynamic aspect of mortuary rituals as venues for social negotiations by the living. From this perspective, mortuary practices constitute a performative arena for the adjudication of power and identity. In this paper, I examine burials

from Middle San Juan Region that date to the post-Chacoan period. These mortuary remains have the potential to shed light on migrations, identity and ethnicity, and social re-organization in the aftermath of the Chaco phenomena.

Rakita, Gordon [235] *see Van Pool, Todd L.*

Ramenofsky, Ann (University of New Mexico) and Adam Okun (University of New Mexico)

[200] *OHD and Glaze-Paint Ceramics: Multiple Chronologies, One Solution*

Because of the criticisms of obsidian hydration dating (OHD) as inexact and unreliable especially at an interval scale, it tends to be under-utilized, especially where other temporally sensitive materials are available. This study evaluates the validity of this assumption, exploring the use of multiple relative chronologies to establish temporal patterns of discard across different artifact classes. Over 500 pieces of obsidian from surface middens at San Marcos Pueblo were sourced by Jeff Ferguson of the University of Missouri Research Reactor (MURR) and hydration values calculated for 320. The resulting relative OHD chronology of midden use is compared to that of glaze-paint ceramics.

Ramirez, Jose-Miguel [68] *see Matisoo-Smith, Lisa*

Ramirez, Nicole (California State University, Chico) and Frank Bayham (California State University, Chico)

[120] *Human Impacts on Prehistoric Fauna in the Great Basin: an Evaluation of the Lagomorph Index*

Species of Lagomorphs, rabbits (*Sylvilagus* spp.) and hares (*Lepus* spp.), occupy specific niches in an environment. The Lagomorph Index has been used to examine changes in Lagomorph species in xeric environments such as the Southwestern United States. A change in the proportionate representation of these species may serve as a barometer for environmental change due to human impacts which can result in resource depression. In this paper we evaluate the Lagomorph Index from the Karlo Site (CA-LAS-7) in the Great Basin in order to evaluate the validity of Lagomorph species as an indicator of resource depression in the local environment.

Ramirez, Roberto [258] *see Kittel, Michelle*

Ramirez-Aliaga, Jose (Universidad de Valparaiso, Chile)

[68] *Transpacific contact between Polynesia and southern Chile: More than Chicken Bones*

A transpacific contact between Polynesia and the prehispanic Mapuche people has been sustained over a list of artefactual and linguistic data, for 200 years. Polynesian DNA on chicken bones from southern Chile has become the first hard evidence for a real contact, but the old hypothesis has new and better support. Some human osteological data suggest the contact was more than a brief encounter, the only way to explain some oral history, linguistics and material culture, since adoption and adaptation by a local population requires a long term relationship. An assessment of the old and new data involves a reconsideration of the diffusion process and contact situations, which supports a new hypothesis for the transportation of Southamerican products back to Polynesia.

Ramon, Gabriel [18] *see McEwan, Colin*

Randall, Asa (University of Florida) and Kenneth E. Sassaman (University of Florida)

[61] *Monumental Transformations on Both Sides of the Atlantic*
Hunter-gatherers of the eastern United States and farmers in northern Europe are credited with some of the earliest monumental constructions in the world. Underwritten by fundamentally different subsistence economies, monuments in both cases emerged as transformations in root metaphors of community in which habitation spaces were converted to commemorative landmarks. Our examination of the long-term histories of capping and renewal events at Archaic shell mounds in northeast Florida suggests that they

provided a means to interfere with the reorganization of regional populations. We explore how similar histories on both sides of the Atlantic register contingent social and cultural change.

Randklev, Charles (University of North Texas), Benjamin Lundeen (University of North Texas), James Kennedy (University of North Texas) and Steve Wolverton (University of North Texas)

[235] *A Late Holocene Freshwater Mussel (Family Unionidae)*

Assemblage from the West Fork of the Trinity River, Texas

A recent excavation of an archeological site near the West Fork (41TR198) of the Trinity River in North Texas has produced freshwater bivalve (Family Unionidae) remains that date to the late Holocene. In total, 2,500 valves representing a minimum of 15 species were identified, including several species thought not to have occurred in the upper Trinity River drainage in modern times. A comparison of the West Fork late Holocene mussel fauna with historical and modern survey data documents dramatic changes in community composition corresponding to modern human impacts in this drainage.

Ranere, Anthony (Temple University) and Patricia Hansell (Temple University)

[136] *Landscape Management in Prehistoric Central Pacific Panama: the First 12,000 years*

Archaeological and paleoenvironmental data from Central Panama document an increased focus on cultivation coinciding with the introduction of maize into the region 7600 years ago. This initiated a process of deforestation and erosion that ultimately created a landscape no longer capable of sustaining the shifting cultivation strategy that produced it. The abrupt shift in land use patterns beginning around 2200 BP was accompanied by the establishment of large agricultural villages and increased social complexity—indicated by status differentiation, craft specialization and long-distance exchange—a sharp contrast to the small-scale self-sufficient hamlets that characterized the region for the previous 5000 years.

Rankin, Adrienne (Goldwater Range East, Luke AFB), Joseph Joaquin (Tohono O'odham Nation) and Lorraine Eiler (Hia C'ed O'odham)

[164] *Landscapes of Knowledge: Native American Perspectives and Integrated Natural-Cultural Resource Management on the Barry M Goldwater Range East*

Management and stewardship of the environment on the Barry M Goldwater Range East is essential to sustaining military training. Various Native American tribes have a living connection to this landscape; their cultural and spiritual values are based on the interwoven nature of plants, animals, physical aspects of the landscape, and people. Natural water sources, important for the management of game animals, are sacred places. Likewise, some "Endangered Species" may be good to eat and "common species" may be culturally significant as indicated by oral histories. Identification and incorporation of this knowledge is critical for research and integrated natural-cultural resource management.

Rapp Py-Daniel, Anne (Universidade de Sao Paulo)

[142] *What do the burials belonging to the Paredão phase tell us about the Hatahara site?*

The Hatahara site, in Iranduba, Amazonas/Brazil, has been studied since 1999 and was at the heart of many papers (Machado, 2005; Neves & Petersen, 2006; Tamanaha, 2006; Rebellato, 2007; Lima, 2008). This is an exceptional site because of: size, content, number of occupations, earth mounds and conservation of organic material. In the last few years an analysis has been conducted on the burials belonging to the Paredão phase (7th to 13th century) found in this site with the purpose of obtaining information on the life of past societies, funerary rituals and the context in which they were inserted.

Rapu, Sergio [62] *see Nicolay, Scott*

Rasic, Jeff [79] *see Shirar, Scott*

Rasmussen, Barbara (Preservation Alliance of West Virginia)[167] *The Blair Mountain Task Force*

The Battle of Blair Mountain was the largest and most serious civil insurrection in the United States' history, besides the Civil War. The preservation community needs to embrace sites of historic conflict to fully interpret all of America's history. Archaeology is a critical tool in advancing this cause. Politics has played a major role in the mountain's future. Listed as one of the National Trust's Eleven Most Endangered Places in 2006, the site was finally listed on the National Register in March of 2009, only to face an immediate challenge from the coal industry.

Rauch, Rebecca (The University of Utah Press) [93] Discussant**Rautman, Alison (Michigan State University) [174] Discussant**[110] *First Organizer*; [110] *First Chair*; [110] see Chamberlin, Matthew A.**Raviele, Maria (Michigan State University)**[4] *The Implications for Maize Microbotanical Taphonomy via Experimental and Archaeological Residues*

A series of experimental residues utilizing various forms of maize (*Zea mays*) were created to assess the presence/absence of maize microbotanical indicators, primarily starch and phytoliths. The results of these analyses are presented here in conjunction with preliminary data derived from archaeological ceramic residues from sites located within the Saginaw River valley of Michigan. The results from these experimental residues have implications for the interpretation of archaeological residues in regards to how people were utilizing maize over the past two millennia.

[4] *First Organizer*; [55] *First Chair***Ray, Jack (Missouri State University), Neal Lopinot (Missouri State University) and Rolfe Mandel (University of Kansas)**[146] *Late Paleoindian Occupations at the Big Eddy and Alley Mill sites in Southern Missouri*

Recent investigations at the Big Eddy site in southwest Missouri and the Alley Mill site in southeast Missouri have provided new insights into Late Paleoindian occupations in the northern Ozarks region. Dalton and San Patrice points from buried horizons at each site indicate contemporaneity of Dalton and San Patrice occupations. Most tools were made from local Ozarks cherts. However, several tools and preforms made from exotic cherts from multiple regions, but primarily to the south, suggest frequent contact and perhaps exchange of material goods and ideas between groups considered native (Dalton) and extralocal (San Patrice) to the northern Ozarks.

Ray, Molly [235] see Tyson, Erin R.

Read, Dwight [6] see Merrill, Michael L.

Reber, Eleanora (UNC Wilmington)[55] *Absorbed Residue Analysis from the George Reeves site (11S650), an Emergent Mississippian Blufftop Settlement*

Absorbed residue analysis was performed on a variety of forms of pottery from the early Emergent Mississippian component at the George Reeves site. The results of this analysis are compared in terms of vessel form and function and similarity to residues at neighboring sites. The increasing depth of data on absorbed pottery residue analysis allows a more thorough understanding of the relationship between pottery form and function in the Emergent Mississippian of the American Bottom, and of a pattern of what might be termed 'consistent changes' in the Emergent Mississippian diet.

Reckner, Paul (Binghamton University (SUNY))[167] *Why We Dig, Why We Remember, Why We Struggle (And Who is This "We" Anyway?): Reflections on the Encounter Between Archaeologists and the Local Labor Community of Southern Colorado*

The Colorado Coal Field War Archaeology Project was conceived as an effort to place archaeological research at the service of working class interests while producing meaningful historical interpretations

regarding the little known coal miners' strike of 1913-14. The project spanned five field seasons, numerous public programs, and continues through ongoing research. In the course of this work, project staff and members of the local community encountered a wide array of conflicts, successes, and disappointments. This paper reflects on the challenges of doing engaged archaeology within a working-class community, and assesses the project in terms of contributing meaningfully to local labor struggles.

Reddy, Seetha (Statistical Research, Inc)[154] *Feeding the Ancestors: Insights into Native American Mortuary Offerings during Spanish Contact in coastal Southern California*

Mortuary contexts offer unique insights into the cultural perceptions of the relationship between food, ritual and ideology. Well-preserved macrobotanical remains from recent excavations along Santa Monica Bay in coastal Southern California have provided an extraordinary opportunity to study the role of food in Mission period Native American mourning practices. Analysis has revealed valuable insight into the selective use of wild and domesticated plants in ritual contexts, and how offering size varied between species and which plants were offered together in baskets. This research is paving a path to address ritualization of foods and cultural food preferences among complex hunter-gatherer populations.

[154] *Second Chair* [154] *Second Organizer*; [154] see Douglass, John G.**Redmond, Brian (Cleveland Mus Nat History)**[46] *Long-Distance Acquisition of Marine Shell and Cotton Fiber by Late Woodland Societies of Northern Ohio: New Evidence from the Danbury Site*

Recent salvage excavations at the Danbury site (33OT16), a Late Woodland (ca. A.D. 700-1100) warm-season base camp on the south shore of Lake Erie, document the intensive exploitation of aquatic faunas, incipient maize horticulture, and the creation of a large corporate cemetery. Whelk shell ornaments accompanying certain burials indicate long-distance interaction with southeastern societies as well as the development of elite social statuses. Preserved fibers of cotton (*Gossypium* spp.) in the dental calculus of several elite individuals appear to represent previously unrecognized social or economic linkages with distant societies of the Southwest or northern Mexico.

[46] *First Chair***Reed, Charles, Kyle Bocinsky (Washington State University) and Ryan Lash (University of Notre Dame)**[235] *The Archaeology of Morefield Canyon: An Ancestral Puebloan "Community Center"*

Combining in-field ceramic analysis with GPS mobile mapping technology, survey conducted in Mesa Verde National Park during the Village Ecodynamics Project II (VEPII) has allowed for the most detailed reconstruction of the occupational history of the Ancestral Puebloan community at Morefield Canyon yet possible. Evidence for a central locus of social life focused on a concentration of public architecture (including a plaza and two great kivas) on a finger ridge on the canyon's eastern slope, when combined with the new evidence for extensive communal investment in hydrological control, suggests that Morefield was a locale of considerable significance within the canyon.

Reed, Charles [19] see Glowacki, Donna M.

Reed, Denné N. [129] see Barr, W. Andrew

Reed, Kelly [9] see Moore, Andrew M T

Reed, Paul (Center for Desert Arch.) and James Snead (George Mason University)[110] *Explaining the Burn at Salmon Pueblo: Warfare or Ritual??*

Like many late Puebloan sites across the San Juan Basin, Salmon Pueblo in the Middle San Juan region was burned coincident with its abandonment in the AD 1280s. Prior explanations of burning at

Salmon have focused on warfare and other conflict-related behaviors. Ritual destruction by fleeing inhabitants has also been considered. Missing from this equation, however, is a comprehensive review of burning at Salmon across its 200-year history. In this paper, we undertake such a review in the course of exploring Salmon's complicated relationship with fire.

Reed, William (USDA - Forest Service) [130] Discussant

Reeder, Leslie (Southern Methodist University), Jon Erlandson (University of Oregon) and Torben Rick (National Museum of Natural History, Smithsonian Institution)

[224] *Archaeology of the Younger Dryas on the Pacific Coast of North America*

From coastal Alaska to Baja California, the Younger Dryas was one component of dynamic Late Pleistocene environmental changes. Sea level rise, alpine glaciation, isostatic uplift, and tectonism created rapid ecological shifts for ancient coastal peoples, and pose significant challenges to archaeologists. We examine how the Younger Dryas fits into these larger-scale environmental changes, including its differential impact on marine and terrestrial ecosystems and the adaptations of people foraging or living in those environments. We also explore some innovative approaches to finding early coastal archaeological sites, and consider the impact of a fragmentary archaeological record on interpretations of Younger Dryas adaptations.

Reeder, Robert

[172] *Missouri's Avenue of the Saints Archaeological Project and Tribal Consultation*

The fifteen years of archaeological investigations associated with Missouri's Avenue of the Saints project witnessed substantial changes in the Missouri Department of Transportation's approach to tribal consultation. While initial archaeological surveys were conducted without tribal input, final archaeological excavations began only after extensive consultation with several Tribes. By the completion of all archaeological fieldwork, tribal consultation included project visits by tribal representatives, development of a protocol for the discovery of human remains that resulted in some remains being avoided by highway redesigns, some preserved in place, and others excavated and removed, and agreement on a plan to rebury excavated remains.

Regnier, Amanda (University of Oklahoma), Patrick Livingood (University of Oklahoma) and Scott Hammerstedt (University of Oklahoma)

[59] *WPA Archaeology in Southeastern Oklahoma: The Clement and McDonald Sites*

The WPA maintained an active archaeology program in Oklahoma, primarily in the eastern half of the state. A portion of these investigations were focused on Caddo sites in southeastern Oklahoma, particularly in McCurtain County. However, except for river basin salvage work in the 1960s, little other work has been done and basic archaeological issues remain unresolved. In this paper we discuss 1940-1941 WPA excavations at two Caddo mound sites, Clement and McDonald, that have the potential to refine Caddo archaeology as it is known in eastern Oklahoma.

Reichardt, Stephen (Maya Research Program), Samantha Krause (Florida State University)

[91] *A GIS Approach to Managing Data from the Ancient Maya Civilization of Blue Creek*

Investigations at Blue Creek have resulted in large amounts of data in multiple repositories. To manage these data sets, we are developing a Geographic Information System using the ERSI ArcView platform. GIS consists of computer-based, spatially oriented systems that link locations and attributes to locations so they can be displayed on maps and allow users to archive, access, and analyze data and will become the archival standard for MRP. The first phase will involve the design, construction, and implementation of the database. The second phase involves on-line 'user friendly' interfaces to disseminate

information to scholars, researchers, teaching and informal learners.

Reid, J (University of Arizona) and Stephanie Whittlesey

[158] *Mortuary Ritual at Grasshopper Pueblo*

Grasshopper Pueblo was a large, 14th century pueblo with a multiethnic, coresident population consisting of Mogollon peoples from several areas of east-central Arizona and an enclave of Anasazi residents. Mortuary rituals at Grasshopper therefore provide a unique opportunity to examine treatment of the dead in a multiethnic setting. Differences between ethnic groups in mortuary ritual hint at ideological and cosmological distinctions, and the special treatment accorded ritual practitioners underscores the importance of belief systems in structuring daily life as well as mortuary ritual.

[50] Discussant [208] Second Organizer

Reifschneider, Meredith (University of Arizona)

[101] *Storage and Exchange in Bronze Age Greece*

This paper provides a quantitative comparison between storage facilities at Late Bronze Age Mycenaean sites. Total storage areas and volumetric capacities of storage containers indicate that centralization of agricultural resources at political centers was limited and that generally they were not financed solely on the basis of accumulation and distribution of staple goods. Textual and archaeological data indicate that besides supplying dependent and semi-dependent workers with payments, Mycenaean elites were largely concerned with conspicuous consumption and feasting involving certain kinds and quantities of agricultural commodities. Thus, agricultural commodities were utilized in a variety of manners dependent on varying social contexts.

Reilly, Frank (Texas State University)

[15] *Visualizing Primordial Creation: Art and Ideology at the Mississippian Site of Cahokia*

In the last two decades many scholars have investigated artistic production at the archaeological site of Cahokia. These investigations have demonstrated that Cahokia was the point of origin for a major pre-Columbian art style as well as for a crafting tradition that remains unequaled in eastern North America. Cahokia's craftsmen created objects ritually animated to embodied specific aspects of the sacred while visualizing several episodes of creation narratives. These objects not only portrayed specific cosmological viewpoints, but also served to define Cahokia as the center of a physical realm and the locus of extraphysical reality.

[115] First Chair [115] Second Organizer

Reilly, Kent [115] see Freidel, David A; [260] see Lytle, Whitney C.

Reinhardt, Eduard [29] see Sonnenburg, Elizabeth P.

Reinhart, David [24] see Cannon, Mike

Reininghaus, Lee (University of Montana)

[39] *An Inter-household Analysis of the Proto-historic Occupation at the Bridge River Site*

Recent investigations at the Bridge River site in British Columbia have yielded data ideal for testing the correlation between housepit size and household wealth. Household size has been suggested as a means for interpretation of status and wealth, implied from the ethnographies of the early 1900's, and utilized in recent research. To test the validity of this assumption I propose an analysis of the late component of the site emphasizing variability in several data sets between small and large house pits. This study provides a foundation for the testing of ethnographic claims and their implications for site analysis.

Reitz, Elizabeth (University of Georgia), Bruce M. Saul (Augusta State University), G. Denise Carroll (Georgia Southern University) and Jason W. Moak (Southeastern Natural Sciences Academy)

[250] *Interpreting Seasonality from Modern and Archaeology Fishes on the Georgia Coast*

Estuarine fishes are a mixture of endemic, marine, and freshwater species attracted to estuaries as nursery grounds and feeding areas. The potential of estuaries to fill these roles varies seasonally, raising the possibility that fishes can serve as proxies for seasonal patterning in human fishing strategies. In this study, the spatial and seasonal habits of modern and archaeological fishes are evaluated for evidence of seasonal fishing strategies. We find that fishing was highly selective and that some fish taxa in the archaeological record are not markedly seasonal, limiting the value of simple fish identifications to provide seasonal fishing information.

Reitz, Elizabeth [250] First Organizer; [250] First Chair

Reitze, William (University of Arizona)

[72] *Paleoindian Archaeology of the Estancia Basin, New Mexico*
This study presents initial results of reanalysis of surface collections made during the 1950s in the Estancia Basin, New Mexico. The Estancia Basin contained the eastern most pluvial lake in the Southwest, presenting a unique opportunity for Paleoindian foraging groups during the Pleistocene/Holocene transition. The suite of resources available in the Basin likely differed from those encountered elsewhere on the Southern Plains. Reinvestigation in the Estancia Basin allows for the reassessment of models of Paleoindian mobility, landscape use, and site distributions in a poorly understood region between the Southern High Plains and Middle Rio Grande Valley.

Renaud, Susan [3] Discussant

Reuther, Joshua [27] see Proue, Molly

Reynolds, Cerisa R. [234] see Hill, Matthew E.

Rhode, David (Desert Research Institute)

[118] *Early Holocene Subsistence Change in the Bonneville Basin, western North America*

During the early Holocene in the Bonneville Basin, hunter-gatherer subsistence practices underwent substantial diversification, as documented by changes in land use patterns, subsistence-oriented technology including groundstone and certain forms of basketry and stone tools, and archaeofloral and archaeofaunal evidence. Bonneville Estates Rockshelter, on the western margin of the Great Salt Lake Desert, provides a long sequence of episodic occupations that document subsistence change across the Early Holocene. Major trends in subsistence diversification are illustrated using results of archaeofloral analyses from Bonneville Estates, and from the archaeology of other localities in the Bonneville Basin.

Rhudy, Chelsey [258] see Hall, Lauren

Riccio, Jordan (American University) and Daniel Sayers (American University)

[225] *Discursive Murmurs, Diaphanous Past, and the Archaeological: Indigenous Americans and the Coming to Be of the Diasporic World of the Great Dismal Swamp after 1550*

The Great Dismal Swamp of Virginia and North Carolina has a Diasporic past that has only recently been explored through archaeological fieldwork. The social and political-economic histories of the swamp are poorly understood in contemporary discourses. Archaeological work has shown that the swamp was home to Indigenous Americans, African American maroons, and African American enslaved canal company workers who formed thriving communities. We will discuss and explore what archaeology can do to develop a more specific knowledge of the Indigenous contributions to that Diasporic world and inform the broader, often semi-muted, discourses on Indigenous histories in the Tidewater.

Rice, Erin (University of Illinois at Chicago) and Adam M. Longman

[186] *New Perceptions of Near Eastern Trade and Social Interaction for the Pre-Pottery Neolithic Using GIS*

There has been much discussion recently of the interaction between groups of the PPN in the Near East; however, while we understood that the topography of a region will influence the movement of peoples and goods, there has not been much exploration of this topic. This research uses GIS technology to map potential trade routes using topographic data of the Near East, with a particular focus on the South-Central Levant. The analysis tests a least-cost path model and examines the implications in terms of social exchange over subsequent temporal periods of the PPN.

Rice, Glen (Rio Salado Archaeology) [100] Discussant

Rich, Kelley (University of Alabama) and C. Fred T. Andrus (University of Alabama)

[5] *Oxygen Isotope Geochemistry of the Freshwater "Jute" Snail (*Pachychilus* sp.): A Potential Ultra-local Seasonal Paleoclimate Proxy for Tropical Mesoamerica*

This paper will present preliminary results of an oxygen isotope study of the freshwater gastropod *Pachychilus* sp., a fully aquatic gastropod from Mesoamerica. In areas where there is minimal seasonal temperature variation, such as Mesoamerica, it would be expected that $\delta^{18}\text{O}$ variation observed in shell carbonate would be a reflection of seasonal variation in rainfall and evaporation, rather than seasonal temperature variation. It is hoped that this snail may serve as a proxy to assess past drought in direct archaeological context, thus giving insight into the role of drought in Maya prehistory.

Rich, Michelle (Southern Methodist University) and Jennifer Piehl

[77] *The Unknown Ruler: Burial 39 at El Peru-Waka', Peten, Guatemala*

The tomb of an epigraphically-unidentified early Late Classic ruler of El Peru-Waka' was discovered and excavated in 2006, and data presented at the 2009 SAA addressed evidence for ancient re-entry of the chamber. This complementary presentation highlights the wide array of scientific material analyses carried out thus far on the rich and varied remains that are considered components of the original mortuary assemblage. Results will be briefly reviewed, synthesized and interpreted to tease out meaning embedded in the contents of the burial chamber, thus providing a glimpse into the life history and treatment at death of this unknown royal personage.

Richards, John (University of Wisconsin – Milwaukee), Seth Schneider (University of Wisconsin- Milwaukee) and Timothy Pauketat (University of Illinois at Champaign-Urbana)
[239] *Comparative Analysis of Red-and-White Pottery from Cahokia and Aztalan*

Excavations into the sub-Mound 51 borrow pit at Cahokia by Charles Baeris produced a treasure trove of floral and faunal remains, fossil insects, tools, magicoreligious items, and ceramics including a collection of red-and-white seed jars and bowls. Although red-and-white pottery is well known from the lower Mississippi River valley, such pottery is rare at Cahokia or elsewhere in the region. Currently, the only examples of red-and-white Mississippian pottery in the upper Mississippi River Valley come from the southeast Wisconsin site of Aztalan. This paper provides a morphometric and compositional analysis of the Aztalan and Cahokian assemblages.

Richards, John [70] see Jeske, Robert J.

Richards, Julian (University of York Archaeology Data Service)

[24] *Digging into Data: Text Mining of Archaeological Grey Literature*
On both sides of the Atlantic field projects undertaken in the course of commercial development generates vast numbers of reports that together constitute the unpublished 'grey literature' whose inaccessibility has long been an issue of major concern. Indexing this corpus by hand would be an expensive and time consuming process. The Archaeotools project has used Natural Language Processing to index the grey literature against standardised word lists for place names, period names, monument and artefact types. This paper will discuss the issues raised and the potential of NLP to automate the

process of archaeological information extraction.

[93] *Discussant* [12] *Discussant*

Richards, Michael [82] *see* *Nehlich, Olaf*

Richards, Michael P. [39] *see* *Cail, Hannah S.*

Richards, Patricia (Univ of Wisconsin-Milwaukee)

[124] *The Milwaukee County Institution Grounds Cemetery collection at University of Wisconsin-Milwaukee*

In May of 2008, volunteer staff and students from the University of Wisconsin-Milwaukee's Archaeological Research Laboratory moved close to 1600 individual human remains and associated artifacts to UWM. Subsequent efforts have focused on identification and purchase of archivally sound containers and bags in order to stabilize and permanently curate the collection. This poster documents the effort to identify, stabilize, inventory and curate the collection by involving interested graduate students and undergraduates participating in various UWM sponsored undergraduate research initiatives.

[124] *First Organizer*, [124] *First Chair*

Richards-Rissetto, Heather [24] *see* *Van Der Elst, Judith*

Richbow, Linsey (New Mexico State University) and Jordan Comanche (Mescalero Apache Reservation)

[42] *Voice and Vestige: The Record and Perspectives of the Inhabitants of the Black Range in the Late 1880's*

In 2009 students from different parts of the U.S. participated in the investigation of Hermosa, NM, a historic town established in the 1880's, and its surrounding environments. Of ongoing interest has been locating camp and battle sites pertaining to the Apache Wars that only ended in 1886 with Geronimo's surrender. Using information from historical documents, the archaeological record, and oral history, this poster will explore the attitudes of the Apache, the displaced occupants of the Black Range, as well as those of the Buffalo Soldiers and others who engaged the Apaches in order to protect this and other frontier settlements.

Richerson, Peter (UC Davis), Charles Efferson (University of Zurich) and Robert Boyd (University of California--Los Angeles)

[197] *Using a Lotka-Volterra Approach to Modeling Socioeconomic Change*

The Lotka-Volterra equations are an extension of logistic population growth to multi-species dynamics. We consider a system in which humans subsist on a renewable resource using a particular technology. The technology evolves in a density dependent fashion. Large populations accumulate technology and small ones lose it. Simple mathematical realizations of this system exhibit a great variety of behavior. The technology-population size feedback contains the potential for both slow and explosive growth of human populations, their resource, and technology ("intensification"). If the human population can invest in their biotic resource ("agriculture"), slow or rapid growth can be sustained for a substantial period. On the other hand, when human populations are large, and investments in the resource are limited or impossible ("foraging"), boom and bust dynamics occur. We argue that the Lotka-Volterra approach to modeling human systems is a promising approach to human ecology and evolution.

Richman, Rebecca [122] *see* *Kuzminsky, Susan C.*

Richter, Daniel (Max Planck Institute)

[157] *The Chronostratigraphy of the Swabian early Upper Palaeolithic*

The Swabian early Upper Palaeolithic is represented by several well defined stratigraphies, which were shown to be intact by micromorphological analysis. However, radiocarbon dating fails to show a coherent pattern. The data indicates the presence of problems in radiocarbon dating beyond simple contamination, which is especially evident for samples from Middle Palaeolithic layers which are clearly separated from the Upper Palaeolithic by sterile clay

sediments. Other chronometric dating methods are therefore required for historical interpretation. As a consequence the chronostratigraphy of the Swabian Alb is still mainly based on the stratigraphical succession of sediments and industries.

Rick, Torben (Smithsonian Institution) and Todd Braje (Humboldt State University)

[16] *What is Natural and What is Anthropogenic in the Historical Ecology of California's Channel Islands?*

Archaeologists have long dealt with equifinality, when fragmentary archaeological data provide patterns that seemingly result from multiple processes. With the rise of historical ecology and investigations into ancient human environmental impacts, zooarchaeologists, paleobotanists, and other researchers are again confronting issues of equifinality when interpreting changes in faunal, floral, and other data in light of human subsistence activities, climate change, and other events. Here we provide archaeological examples from our recent work on California's Channel Islands, demonstrating some challenges in interpreting long-term environmental and archaeological data, and strategies for delineating patterns which result from natural and/or anthropogenic processes.

Rick, Torben [224] *see* *Reeder, Leslie A.*; [56] *see* *Braje, Todd J.*

Riddle, Andrew (University of Toronto) and Michael Chazan (University of Toronto)

[230] *Three Dimensional Analysis of Handaxe Shape*

Morphological analyses of handaxes are based on the proportions of measurements of the artifact in plan view as well as ratios between the thickness of the artifact and measures of the plan view. These analyses are highly developed and include approaches that examine allometry and symmetry. The widespread availability of 3D scanning devices opens up the potential for three-dimensional analysis of these artifacts. This paper presents the results of a new method for analyzing and representing the three dimensional shape of handaxes and compares these results with the results generated by 2 dimensional analysis of shape. It is proposed that the strength of 3D analysis is that it provides insight into the distribution of mass that would have been relevant to the functioning of the tool and thus is a useful counterbalance to methods that emphasize the plan view.

Riederer, Josef [184] *see* *Wagner, Ursel*

Riehl, Simone (Tubingen University), Elena Marinova-Wolff (Center of Archaeological Sciences, Leuven), Katleen Deckers (Institute of Prehistory and Quaternary Ecology, Tubingen University), and Nicholas Conard (Institute of Prehistory and Quaternary Ecology, Tubingen University)

[157] *Vegetation and Plant Diet during the Upper Pleniglacial in southwestern Germany*

Results from macro- and microbotanical analyses at Hohle Fels Cave are presented, demonstrating local vegetation development and plant use during the Upper Palaeolithic. Palynological data of the cave sediments reflect the general development of vegetation during the late Pleniglacial. Phytoliths, vegetative remains and seeds document extensive use of the surrounding flora by the ancient hunter and gatherer groups. Of particular interest are bark fragments of *Arctostaphylos* cf. *uva-ursi* (bearberry), a medicinal plant, which compliments other activities related to cultural complexity, including the production of figurative art.

Rieth, Christina (New York State Museum)

[180] *Cultural Resource Management and Museum Archaeology: Stewardship and Public Outreach in a Museum Setting*

The New York State Museum's Cultural Resource Survey program has been completing cultural resource investigations for state and federal agencies since 1959. Since this time, the stewardship of archaeological data from threatened sites has been a key tenant guiding the program and afforded unique opportunities to integrate non-traditional avenues for educational outreach into archaeological projects through exhibits, behind the scenes tours, teacher

workshops, and undergraduate internships. This paper discusses how cultural resource management and public outreach can be integrated to create successful stewardship and public education programs and the challenges of integrating these in a museum setting.

Riggs, Casey (Texas A&M University) and Tim Riley

[55] *Resource Processing in the Chihuahuan Desert: A Microbotanical Analysis of Stone Tools from West Texas*

This paper presents initial results from a microbotanical study of stone tools recovered in excavations from both the Lower Pecos Canyonlands and the Trans-Pecos of Texas. The current study presents a starch grain analysis of groundstone implements recovered from a number of sites across the Eastern Trans-Pecos. There is a lack of understanding of the use of groundstone tools recovered from hunter-gatherer sites. This is complemented by a microscopic analysis of visible adhering residue present on flake stone tools recovered from the canyonlands of the Lower Pecos.

Riggs, John (Natural Resources Conservation Service, Arkansas)

[249] *Tracking Pennies: Experimental Archeology on the Movement of Artifacts by Cultivation*

Artifacts are disturbed by cultivation. However, the extent of that disturbance is virtually unknown. By placing coins with identifiable reference numbers on them in the plowzone of an ordinary farm field and tracking the movement with a metal detector, some general ideas regarding artifact movement over time, as well as basic recovery rates, can be recorded.

Richter, Elizabeth [23] see Farnum, Julie F.

Riley, Tim [55] see Riggs, Casey W.; [123] see Riley, Timothy E.; [4] see Pevny, Charlotte D.

Riley, Timothy (Palynology Laboratory Texas A&M University)

[123] *Coprolite Research in the Lower Pecos Canyonlands: A Record of Individual Dietary Decisions*

Coprolites present an unparalleled opportunity to study individual dietary decisions in the archaeological record. This poster combines data from a number of studies to evaluate patterns of diet breadth, seasonality, and forager mobility in the Lower Pecos Canyonlands. Models derived from behavioral ecology are used to explore the paleo-nutrition and ecology of the human populations utilizing Hinds Cave (41VV456). The congruent lines of dietary evidence from each biologically complex specimen are evaluated with Cluster Analysis. The poster will also highlight some current research and future directions for coprolite studies in the Lower Pecos Canyonlands.

Ringle, William (Davidson College)

[178] *Form and Function of Las Monjas, Uxmal*

Although one of the iconic examples of Maya architecture, the function of the Monjas Complex of Uxmal continues to be debated. This paper argues for its role as the central court of Uxmal, following our earlier identification, but proposes specific functions for each of the structures. Supporting this are parallels with Chichen Itza and with colonial descriptions of palaces. The implications of this interpretation for our understanding of Uxmal's political organization and its external relations with Chichen and the Puuc Hills are discussed.

Rink, W. Jack [90] see Dunbar, James S.

Riordan, Jennifer (US Army Corps of Engineers) and Michael Trimble (U.S. Army Corps of Engineers, St. Louis District)

[163] *Contributions to Archaeological and Forensic Sciences of the U.S. Army Corps of Engineers' Center of Expertise for Curation*

The Center of Expertise for Curation has provided leadership in Government Archaeology for 15+ years. In archaeological collections management, the Center has conducted first-ever curation assessments rehabilitation, archival processing, and NAGPRA compliance for many Federal agencies. The Center's work has

included treatment of human remains from the now-famous 17th century cemetery for enslaved Africans in New York City, the excavation of mass graves in Iraq, and the development of evidence for special tribunals prosecuting crimes against humanity by members of the former Iraqi regime. The poster will demonstrate the Center's leadership in curation, collections management, archival data research and preservation.

Riordan, Robert (Wright State University)

[176] *Within Fort Ancient*

Until recently, very few internal features had been located at Ohio Hopewell enclosures that might help to elucidate the nature of the activities or gatherings that occurred within them. The application of remote sensing technologies has, however, begun to change this picture. At Fort Ancient, magnetometry detected a 60m diameter circular feature labeled the Moorehead Circle in 2005, which has been under excavation since 2006. This paper discusses the features revealed to date, including wooden posts set around the perimeter, a central pit containing burned soil, and bands of embedded stones, and offers interpretive suggestions concerning their import.

Rios, Jorge (Zona Arqueologica de Monte Alban)

[103] *Sector Suroeste de Lambityeco: Nuevas Perspectivas Sobre su Contexto Urbano*

La plaza norte de la zona arqueológica de Lambityeco ha sido considerada durante la época prehispánica como un espacio de mercado debido a la ausencia de objetos rituales (Lind: 182 en Blomster, 2008), así mismo infiere que en el montículo 134 ubicado en el sector SW de la zona arqueológica, pudo ser un mercado (ibidem: 181). A partir de los rescates arqueológicos del 2007 al 2009 realizados en el área SW de dicho sitio se excavaron tres contextos funerarios complejos que muestran este sector tuvo una sola ocupación diferente al propuesto durante el Clásico Tardío.

Rios Ortega, Maria del Roble (UASLP)

[57] *Magistral del Oro: A Seventeenth Century Mining Town in Northern Durango*

The Spanish originally settled in northern Durango because of the rich mines they discovered in the area, modifying the cultural and natural setting. One such place is the mining town of Magistral del Oro in full use until 1968. Over the years, several foreign companies have been in charge of mineral extraction and this is reflected in the remains of the mining activity, including large machinery imported from Holland. My analysis describes the material record of the company town and I link this with issues of identity and industrial patrimony.

Rissetto, John (University of New Mexico)

[147] *Establishing an Inventory of Middle and Upper Paleolithic Chert Quarries across North-Central Spain*

This paper presents an inventory and discussion of chert quarries utilized in north-central Spain by Middle and Upper Paleolithic cultures. Even though northern Spain has a long history of Paleolithic investigation, only recently has the direct identification and characterization of utilized chert quarries become integrated into the research. Data collected from chert quarries in north-central Spain will be presented using a geographic information system through which synchronic and diachronic observations are discussed. The continued survey, characterization and dissemination of quarry data from this region will produce an increased understanding of these Paleolithic cultures.

Rissolo, Dominique (Waitt Institute)

[148] *Of Postclassic Temples and Cave Shrines: Connections and Continuities in Northern Quintana Roo*

The relationship between caves and surface architecture has received considerable attention over the past decade. Both the physical coassociation between cave and structure and its symbolic significance have gone largely unrecognized at a number of recorded and reported sites. A reassessment of this broadly shared pattern in northern Quintana Roo, including the consideration of more recently

identified examples, emphasizes a complementary or parallel tradition involving the incorporation of East Coast Style architectural elements characteristic of Postclassic temples into the construction of cave shrines. Such spatial and stylistic interrelationships reaffirm the integral role of caves in site configuration and ritual practice.

Rissolo, Dominique [212] see *Glover, Jeffrey B.*; **[109]** see *Amador, Fabio E.*

Ritter, Eric W. [255] see *Fenn, Thomas*

Rivera, Claudia (Universidad Mayor de San Andrés, La Paz, Bolivia)

[94] *Middle Horizon Trajectories in the Eastern Valleys of Bolivia*
This paper presents comparative data from several valley regions in eastern Bolivia. Particularly, my analysis will concentrate in comparing the nature of Tiwanaku influence in La Paz, Cochabamba and Chuquisaca regions. This approach will show how these regions, with different historical trajectories of development, interacted with Tiwanaku and formed part of its sphere of influence in very singular and varied ways, although sharing some elements basic to Tiwanaku religious ideology. This comparative approach is a result of my field research in all three regions of the South-Central Andes.

Rivera, Mario (Beloit College), Daniel E. Shea (Beloit College) and Jorge Moya

[23] *Dendroarchaeology in the Atacama Desert, Northern Chile*
This report represents a specific stage within the study on paleoenvironmental conditions of the Ramaditas village site (600 B.C.E.) located in the area of Guatacondo in the Atacama Desert, Northern Chile. Our goal is that by applying tree-ring analysis, we would learn more about the timing and seasonal patterns that characterized the region at the time of settlement. Using samples of *Prosopis tamarugo* Phil. (*tamarugo*), and *Prosopis alba* Griseb (*algarrobo*) we were able to develop three floating chronologies that will help us One for the Ramaditas archaeological site (already radiocarbon dated to 600 B.C.), and two additional ones based on the samples coming from living trees, and taken from elsewhere in the Atacama Desert. Overall, they correspond with similar dendrochronological studies from NW Argentina and the Bolivian Altiplano.

[94] *Discussant*

Rivera Estrada, Araceli (M.C.G.)

[242] *Loma el Muerto: Paisaje Ritual Prehistórico Construido por Grupos Cazadores Recolectores Avanzados del Semidesierto Neoleonés*

En el presente documento se analiza e interpreta el proceso por el que el "espacio sagrado" (de especial significación simbólica) fuera apropiado, ocupado y dominado (simbólica y culturalmente) durante la época prehistórica en la región central de Nuevo León, por grupos cazadores-recolectores ("avanzados" o "complejos") en forma cíclica, durante un largo período de tiempo, en vista de asegurar su reproducción y satisfacer sus necesidades vitales, que eran a la vez materiales y también simbólicas (correspondientes a su realidad material e imaginaria).

Rivera Guzman, Ivan (Instituto Nacional de Antropología e Historia)

[103] *Las vasijas efígie ñuiñe: iconografía, poder y jerarquía social durante el Clásico en la Mixteca Baja.*

Las vasijas efígie son un elemento diagnóstico del estilo ñuiñe de la Mixteca Baja, identificado por primera vez por Paddock en los 1960s. Los estudios de estos objetos se han concentrado en la imagerie, estilo y poca atención han tenido como referente a la organización social y religiosa. Aunque son pocos los ejemplares excavados en la región, como Cerro de las Minas y Cerro de la Codorniz, existe evidencia que ayuda a entender cómo estos objetos fueron indicadores del estatus social mostrando valores relacionados con la ideología y religión.

Rivers, Ray (Imperial College London), Carl Knappett (University of Toronto), and Tim Evans (Imperial College London)

[113] *Resilience and (In)stability in Social Networks: The Eruption of Thera and the Burning of the Palaces.*

In constructing social networks we need to distinguish between resilience and stability. A network is resilient if it is able to survive a shock to the system that damages it, in one way or another. A network is stable if, on changing it slightly, it will tend to revert to its original state. Equally, a network is unstable if a small change nudges it past its tipping point. We shall argue that the maritime network of the MBA S.Aegean is both resilient, in that it survives the loss of Thera and the immediate consequences of the eruption that destroyed Thera, and unstable, in that an aggregation of small changes following the eruption plausibly lead to a collapse of the system. Further, this collapse occurs because the development of strong ties weakens the system (the complement to Granovetter's strength of weak ties).

[113] *First Chair*

Rizvi, Uzma (Pratt Institute)

[181] *Archaeology of Time and Title: Labeling "Primitive" and "Tribal" and its effects in Contemporary Indigenous Communities in India*

Through the establishment of disciplines such as archaeology, a significant part of the colonial agenda included the control of time and categorization of human populations. Categories of time became synonymous with technological traits, which in turn defined human characteristics. The use of 'primitive' to define populations, and chronological markers such as 'Stone Age,' create an indelible link between time, technology, and human subjectivity. This paper examines how time was used to categorize people in colonial India, how those categorizations continue to haunt archaeological practice, and will query the role of indigenous politics in contemporary archaeology in India.

Rizzo, Florencia [22] see *Scheinsohn, Vivian G.*

Roache-Fedchenko, Amy (Syracuse University)

[255] *Adaptations of a Blacksmith: Maintaining European Expansion and Economic Growth on the North American Fur Trade Frontier*

The once-common idea of the one-sided effects of the intrusion of European goods to native communities has become antiquated, replaced by concepts that new and sustained interactions created cultural and material interdependencies between peoples. The presence of a blacksmith was necessary for European expansion and sustainability within the frontier environment, but how did blacksmithing change with time as Europeans adapted to the frontier and the various demands from the diverse populations of the fur trade? Using x-ray fluorescence technology to examine metal artifacts from Fort Michilimackinac serves as a case study for understanding the nature of European adaptations while balancing political agendas and maintaining social relationships on which they were dependent for survival.

Robart, Jessica [36] see *Holt, Julie Zimmermann*

Roberts, Heidi (HRA Inc., Conservation Archaeology) and Richard Ahlstrom (HRA Inc., Conservation Archaeology)

[248] *Farmers on the Go: A Forager-Farming Model for the Las Vegas Valley, Nevada*

Formative period sites in Nevada's Las Vegas Valley offer some unique contradictions. A pithouse occupied circa AD 500 lacks evidence of maize, yet two miles away maize (and mesquite) was stored in hundreds of pits between 200 BC and AD 1500. Las Vegas farmers adopted some Virgin Branch puebloan traditions, such as gray ware pottery, but not others, like slab-lined storage rooms. Did Las Vegas farmers remain highly mobile, farming only when foraging alternatives were poor? This paper examines Las Vegas' archaeological and ethnographic subsistence record using Renee Barlow's 2006 formal model for predicting agriculture among the Great Basin Fremont.

Roberts, Heidi [144] *see Eskenazi, Suzanne*

Robinson, Eugenia (Montgomery College)

[218] *The Other Late Classic Maya: Regionalization and Defense in the Guatemalan Highlands*

Following in the footsteps of Will Andrews, his students have carried out research outside of the Maya lowlands. Recent work indicates that the Late Classic Guatemalan Highlands had interregional cultural variation and territoriality expressed by defensive features. This paper will examine the settlement data from the Classic period in the Central highlands. It will consider the elite religious and political influence on residential and sacred sites, and consider the climatic evidence for the decline in populations at the end of the period. The paper will highlight the regionalization of highland cultures and contribute to the ongoing discussion of the Late Classic Maya.

Robinson, Francis (University at Albany (SUNY))

[60] *Early Woodland Mortuary Ceremonialism and Interaction Spheres: A View from three Middlesex Mortuary sites in Vermont*
Ongoing analyses of the environmental contexts, artifact assemblages, and extant documentation from three Middlesex sites in Vermont have provided evidence of significant variability despite the common presence of a small number of "diagnostic traits". While the interpretations of this variability are preliminary, the evidence thus far suggests that each site, in part, represents participation in overlapping, but semi-discrete inter-regional exchange networks. The geographic extent of these networks and the implications of the materials exchanged for aggrandizement and social differentiation within and between the groups studied are briefly explored.

Robinson, Kenneth [85] *see Pereira, Carlos M.*

Robinson, Lynn [87] *see MacDonell, George H.*

Robinson, William [40] *see Hartmann, Gayle*

Robles Garcia, Nelly (Instituto Nacional de Antropología e Historia) and Jack Corbett (Portland State University)

[103] *Manejo de Recursos Arqueológicos en Oaxaca*
Esta ponencia aborda los nuevos proyectos de investigación arqueológica realizados en sitios de Oaxaca como Atzompa, Mitla, registro de cuevas prehistóricas de Yagul y el pueblo viejo de Teposcolula, Yucundaa con un enfoque en los beneficios sociales que resultan a partir de la interfase generada entre sitio y comunidad. En especial se discute un análisis de los trabajos arqueológicos sociales y los beneficios que obtienen las comunidades a partir de los mismos.

Robles Garcia, Nelly [103] *see Tuross, Noreen C.; [103] First Organizer; [103] First Chair*

Robles-Salmerón, Amparo (Universidad de las Américas, Puebla), Gabriela Uruñuela and Patricia Plunket

[136] *Constructing Cholula's Great Pyramid: Production Costs of its First Monumental Stage and their Implications*

Towards the end of the first century, Cholula emerges as the political center of the Puebla-Tlaxcala Valley, materializing its power with the erection of the first monumental stage of its Great Pyramid, which required a significant mobilization of resources and manpower. Using a regional physiographic appraisal to identify raw material deposits and ethnographic data to estimate the human labor/effort invested, the chaîne opératoire and the specific tasks involved are reconstructed in order to quantify the energy input of the building process, thus contributing to our understanding of the local socioeconomic system for this poorly-known period of Cholula's history.

Rocek, Thomas (University of Delaware)

[87] *Jornada Huts and Houses: Implications of Formative Architectural Diversity in the Jornada Mogollon*

While researchers recognize substantial Formative architectural

variation within the Jornada Mogollon of southeastern New Mexico and extreme western Texas, much of the literature has focused on the Tularosa Basin and adjoining low-lying areas and has emphasized a single linear scale from small, shallow, ephemeral to large, deep, substantial pit structures to surface pueblos. In this paper I consider architectural diversity over a broader range of Jornada environmental contexts to examine economic, social, temporal, and possible ethnic differences underlying this diversity. I suggest that rather than a single continuum, architectural data imply multiple patterns of variation along these multiple cultural dimensions.

[87] *First Organizer; [87] Second Chair; [87] see Lynch, Shaun M.*

Rochette, Erick (Penn State University)

[156] *"Not All Wealth Goods are Made Alike": Examining Assumptions about Jade Artifacts among the Classic Maya*

In a 1992 article, Ken Hirth argued that archaeologists must "begin to examine the more specific ways in which primitive valuables are used in the formation of status hierarchies." In this paper, I follow Hirth's lead by examining the varied contexts of jade wealth goods and the implications these patterns have for their function within Classic Maya society. Using data from the Middle Motagua Valley, Guatemala and elsewhere, I argue that current models of Classic Maya wealth goods production and use remain incomplete by failing to recognize the diverse ways in which particular artifact forms were employed.

Rockwell, Heather (University of Tulsa)

[25] *Use-Wear Analysis of the Potter Site: A Paleoindian Site in New Hampshire*

This poster will present the results of a use-wear analysis of 1000 artifacts from the Potter site, a paleoindian site in New Hampshire. The results of this analysis will help illuminate activities undertaken at this site and may help interpretations of paleoindian settlement patterns within New England and the Canadian Maritimes.

Rockwell, Tom [122] *see Erlandson, Jon McVey*

Roddick, Andrew (University of Victoria)

[47] *Formative Period Taskscapes on the Taraco Peninsula, Bolivia*

Andean archaeologists working in the Lake Titicaca Basin have long focused on social boundaries. Researchers have drawn on a wide array of material culture to define political, religious and ethnic boundaries. In this paper I consider the role of daily tasks in the creation of social boundaries and constituting regional prehistories. I explore the applicability of Timothy Ingold's notion of the "taskscape" for studying the palimpsest of practices that defined Titicaca Basin landscapes and social relations. I then develop Ingold's approach with Formative Period data from the Taraco Peninsula, Bolivia.

[47] *First Chair*

Rodell, Roland (University of Wisconsin Rock County)

[105] *Oneota Ceramics: Jar Size and Settlement Patterns in the Northern Mississippi Valley*

Oneota culture in the northern Mississippi Valley is identified with settlements concentrated in two localities: Red Wing-Pepin (AD 1000-1300) and La Crosse-Trempealeau (AD 1250-1600). Manifest in the temporal separation of these localities are variations in ceramic motifs and a significant expansion in house size. Ceramic data from nine sites reveal that another sequential disparity between the localities is an increase in the size of jars along with a reduction in stylistic variability. It is inferred that the ceramic data correlate with the social restructuring of Oneota communities within the northern valley.

Rodman, Julie-anna (Salmon-Challis National Forest)

[43] *Fire Protection for Heritage Resources in the Frank Church River of No Return Wilderness*

The management of heritage resources during a fire event presents a host of unique challenges in the Frank Church River of No Return Wilderness. Fire protection methods for historic properties have included fuel reductions surrounding structures, wrapping with fire resistant materials and installation of sprinklers. Compounding the

challenges are federal policies, fire management concerns and heritage issues. To be active participants in the fire protection of heritage resources managers need to be involved in fire planning before, during and after an event. Fire management will continue to influence the management of heritage resources on the Salmon-Challis National Forest.

Rodning, Chris [52] *see Beck, Robin A.*

Rodning, Christopher (Tulane University), David Moore (Warren Wilson College) and Robin Beck (University of Michigan)
[52] *Spanish Entradas in the Southeast, the Juan Pardo Expeditions, and Spanish Contact in the Western North Carolina Piedmont*
The Juan Pardo expeditions (1566-1568) were the last major Spanish entradas in the interior of La Florida, in what is now the southeastern U.S. Compared with preceding entradas, the Pardo expeditions devoted more effort towards diplomacy, gift giving, and prospecting, and they were more successful at establishing settlements. One of those settlements was Fort San Juan, built beside the Native American town of Joara, at the Berry site, in the upper Catawba River Valley in western North Carolina. This paper reviews sixteenth-century Spanish expeditions in the Southeast and the assemblage of sixteenth-century Spanish artifacts from the Berry site.
[52] *Second Chair*

Rodning, Christopher [52] *see Moore, David G.*; [52] *see Sanders, Merritt M.*

Rodriguez, Enrique (University of Texas) and Sarah Graff (University of Chicago)
[48] *Beyond the Biological Need to Cook: Archaeologies of Food Preparation*
Cooking and food preparation are related to subsistence by rendering many ingredients edible and increasing their nutritional quality. But focusing only on the nutritional aspects of cooking ignores much broader social and cultural processes that surround food preparation. In this paper, we argue that cooking should be taken seriously as an aspect of social, cultural, political, and economic life, and we examine the relevance of cooking for different models about the past focusing especially on archaeological studies that have derived unique insights from the study of food preparation beyond subsistence.

Rodriguez, Juan
[196] *Providing Access to "La Cultura" to Marginalized Communities in the Dominican Republic*
In developing countries the economic and cultural policies are traditionally concentrated in metropolitan areas. The Dominican Republic is not an exception. Due to the fact that most institutions are currently concentrated in the Capital city of Santo Domingo, more than 90% of the population has no access to "La Cultura:" museums, public libraries, art schools, theaters, and cultural events. By working together with the people of small villages to establish community museums and a "mobile museum" under development, these efforts serve to empower the people of rural localities, reinforce individual and community identities, and bolster economic development of the area.

Rodriguez Ramos, Reniel (Universidad de Puerto Rico-Utuado)
[116] *On the Ideological Origins of Tainoness*
The superstructural foundations of the late (post-AD 1000) indigenous societies of the Greater Antilles have traditionally been conceived as being erected upon an amazonian template. It has been argued that these ideological principles were brought by the Arawak immigrants that ventured into the islands from northeastern South America, being reinterpreted and elaborated within the Antilles by the indigenous groups that eventually developed the cultural manifestations that have been erroneously homogenized with the homonym of "Taínos." However, recent evidence that demonstrates the marked influence of the pre-Arawak societies of the islands in the developments that took place in late contexts in combination with the pan-regional interactions established between Antillean indigenous peoples with

those from other surrounding Circum-Caribbean regions, demand that we drastically revise our notions about the ways in which ideologies were articulated, negotiated, and consumed in the insular Caribbean.
[116] *Second Chair*

Roebroeks, Wil [184] *see Kindler, Lutz*

Rogers, Alexander (Maturango Museum) and John Swigart (Valles Caldera National Preserve)
[41] *Hunting and Gathering in the Southwest? A Possible Game Trap on the Valles Caldera National Preserve*
The peoples of the American Southwest are typically associated with intensive agriculture, particularly in the Formative period. However, during a survey on the Valles Caldera National Preserve (VCNP) at Cerro La Jara in the Valle Grande a feature of stacked and aligned stone was observed which resembles a game trap and may be indicative of hunting and gathering. This poster reports the characteristics of the VCNP feature, and compares it with known game traps from the Great Basin and Eastern California.

Rogers, Jason [27] *see Proue, Molly*

Rogers, Richard (USDA-NRCS)
[249] *Prehistoric Ridged Fields in Iowa*
The recent discovery of 2 prehistoric ridged fields, brings the number of well preserved examples of this form of agriculture known in Iowa to 3. The topographic settings range from a loess ridge top, to an alluvial terrace, to a glacial wetland. Two of the ridged fields are near burial mound groups. Two ridged fields exhibit high phosphorus, suggesting the use of ash as fertilizer. The wetland ridged field did not have high phosphorus, possibly because the soil was already highly fertile. The probable reason for constructing ridges is to reduce the moisture level which can increase the length of the growing season, and in some cases allow the use of hydric soils.
[249] *First Organizer*

Rogoff, David (University of Pennsylvania)
[258] *Late and Terminal Classic Jute Use, Middle Chamelecon Drainage, Northwestern Honduras*
Excavations at and around Las Caleras, Honduras during the 2008 field season revealed extraordinarily high concentrations of jute shells. Recent artifact analysis comparing the second and third-tier sites' assemblages have reduced myriad possible explanations to one leading hypothesis. This latest work suggests that Las Caleras and the smaller sites in close proximity were engaged in specialized production of lime for use in food preparation.

Roney, John [248] *see Hard, Robert J.*

Roos, Christopher (University of South Florida)
[228] *Fire and the Making of Western Apache Landscapes in the Mountains of Eastern Arizona*
Keith Basso's *Wisdom Sits in Places* articulates the importance of natural landscapes in the transmission of Western Apache culture. I suggest that this relationship is also recursive; evidence from oral tradition, ethnography, dendrochronology, and geoarchaeology suggest that Western Apaches actively shaped their landscapes through the use of fire, simultaneously creating Western Apache cultural environments and the "natural" landscapes appropriate for teaching Apache lifeways. This was particularly true for upland environments dominated by ponderosa pine forests. There is tantalizing evidence that this practice of Western Apache pyrogenic placemaking in upland pine forests may have great antiquity and predate Athapaskan migrations to the Southwest U.S.
[198] *see Hollenback, Kacy L.*

Roosevelt, Anna (Univ. Illinois, Chicago) [126] *Discussant*

Roper, Donna (Kansas State University)
[111] *Examining Variation in Late Prehistoric Pottery from the Central Plains*

Central Plains tradition pottery has been studied for over a century, but it is fair to say that it has been vastly understudied. A current research program seeks to move away from traditional typological and chronological concerns and moves toward an understanding of past behavior materialized in the pottery. To this end, vessel form, ceramic composition and production technology, style variation, and the geographic variation within these domains is being studied. The research is showing how the geographic variety of the Plains affects ceramic technology and empirically documenting the social landscape of the region in the early second millennium.

[111] *First Chair*; [72] see Adair, Mary J.

Rorabaugh, Adam (Washington State University)

[203] *Investigating the Cultural Transmission and Variation of Barbed Bone and Antler Technologies in the Gulf of Georgia, Northwest North America*

While anthropologists have long discussed the evolution of social complexity on the Northwest Coast, the relationship between material culture and complexity is a less-explored topic. Viewed from the perspective of Boyd and Richerson's dual inheritance theory, the development of social stratification and systems of deference may influence the contexts of social learning. Prestige-based indirect bias was predicted as a factor in the learning of technologies tied to systems of resource procurement and prestige-based status as complexity developed. Barbed bone and antler points are examined as a technology tied to these resource systems and prestige-based status. Point functional and culture-historic hypotheses are also assessed.

Rosania, Corinne (University of Missouri, Columbia)

[123] *Paleozoology and North American Black Bear (Ursus americanus) Ecology*

Born from the fusion of archaeology and zoology during the 20th century, zooarchaeology (paleozoology) draws on the resources of myriad fields (i.e., archaeology, paleontology, chemistry, geology, zoology and conservation biology) to investigate past cultures and past environments. Likewise, temporally deep ecological knowledge culled by paleozoologists is increasingly applied to modern wildlife management and conservation ecology. Herein, stable isotope analysis reveals late Holocene North American black bear (*Ursus americanus*) diet in Missouri. Documentation of native ursid diet which is not historically known should influence modern conservation efforts that seek to restore this once-extirpated species to the region.

Roscoe, Paul (University of Maine)

[206] *The Conditions for Cannibalism*

Cannibalism is a topic avoided in social anthropology and a matter of controversy in archaeology. On the premise that cannibalism is a human trait but its appearance a product of circumstance, this paper investigates the distribution of exocannibalism in 120 New Guinea societies, and finds that it is almost exclusively limited to low-density communities. Only in low density societies, the paper proposes, is butchery of a corpse following an assault militarily practical, a circumstance that fuels a spiral of revenge-cannibalism.

Rose, John (Salmon-Challis National Forest)

[43] *Homestead Economics: Household Economic Decisions in Historic Construction*

This poster presents a model for examining how historic homesteaders balanced labor versus capital expenditures when they built their dwellings, fences, and other improvements. In the Frank Church River of No Return Wilderness, most homesteads were small farms built by their owners employing simple tools and methods. Today, the construction techniques and materials found in these historic features reflect the economic decisions made by historic households. This poster applies the model to log cabins and fences within the Frank Church River of No Return Wilderness.

Rose, Timothy [151] see Henry, Amanda G.

Rosebrough, Amy

[70] *Power from the Earth: Effigy Mound Social Landscapes*
Recent spatial studies of ceramic and mound style have shed new light on Late Woodland social landscapes in Wisconsin. Data concerning ceramic style is consistent with previous models of effigy-building populations as mobile and socially-fluid. Data concerning mound style, on the other hand, hints at territoriality and the existence of multiple internal social divisions. This contradiction may be resolved by postulating the existence of territorially-bound ritual specialists, standing at the heart of each Effigy Mound community and competing for the allegiance of other community members.

Rosenberg, Danny [147] see Nadel, Dani

Rosenstein, Dana (University of Arizona) and James Feathers (University of Washington)

[182] *Luminescence Dating of Samples from Recent Contexts in South Africa*

The last 500 years was a formative period of the southern African past, during which hunter-gatherers, agropastoralists and colonists interacted frequently and intensely on the shared landscape. A fine-grained historical understanding of this period requires the chronological sequence of archaeological site settlement and abandonment to be highly resolved. Because of acute De Vries effects, radiocarbon dating is inadequate over the last 500 years. Using luminescence dating, chronometric results with high precision have been obtained for South African sites. These results contribute to current research developing methodologies for measuring luminescence and calculating ages of samples from recent contexts (Pietsch 2009).

Rosenswig, Robert (The University At Albany – SUNY), Daniel Seinfeld (Florida State University), Sean Higgins (University at Albany) and Wilberth Cruz Alvarado (Universidad Autonomo de Yucatan)

[5] *Ancient Maya Food from Formative Period San Estevan, Belize*
In this paper, macrobotanical, faunal and ceramic data are used to reconstruct the evolving foodways of San Estevan's residents from the Middle through the Late Formative periods (800 BC – AD 200). During the course of this millennium, a small community developed into a local political center and monumental architecture was built for the first time. Macrobotanical and vertebrate faunal evidence allow us to reconstruct changing diet of the site's residents and ceramic remains inform us about food preparation and presentation. These patterns are employed to explore the relationship between changing economic and political patterns at the site.

[5] *First Chair*

Rosenthal, Jeffrey [197] see Whitaker, Adie

Rosenzweig, Melissa (University of Chicago)

[11] *Under the Green Thumb of Assyria*

This presentation examines the role of agrarian production and consumption in power relations at the historical site of Tushan (Ziyaret Tepe), a military garrison and provincial center for imperial activity on the northern frontier of Assyria. In particular, this paper utilizes the latest results of macrobotanical analysis from samples of the "Bronze Palace" on the high mound of Ziyaret Tepe to explore the politics of agricultural practices in southeastern Turkey during the Late Assyrian imperial period (ca. 900-600 BCE). Analysis of the Bronze Palace paleobotanical assemblage will focus on indications of resource disparities, in order to discern whether agrarian practices have the potential to create and/or maintain social differentiation and political inequality.

[11] *Second Chair* [11] *Second Organizer*; [11] see McLeester, Madeleine

Rossen, Jack (Ithaca College)

[247] *The Dating Game: The Politics of Repatriation in Haudenosaunee (Iroquois) Country*

The politics of repatriation in Iroquois (Haudenosaunee) country are based on new stratigraphic excavations to better date cultural

horizons and materials and culturally connect them with present-day Iroquois peoples. Resistance to NAGPRA-based repatriation in New York state has taken several forms, including obfuscation of archaeological data and misinformation campaigns designed to discredit archaeological research. The implications for research conducted over the last three summers at the Levanna site are discussed. This issue lies at the core of reasons for performing and transforming archaeology in the 21st century.

[66] *Discussant*

Rostoker, Arthur (Proyecto Ipiamais)

[23] *A pedestrian approach to Tropical Forest Archaeology: in advance of magic bullets.*

For archaeologists trained in the past 50 years, collaboration with technicians and scientists from related disciplines is routine. Recently, archaeometric equipment, particularly for remote sensing, has become portable and user friendly. Students are routinely trained to use it, yet remote sensing is not a magic bullet for all seasons. In the mud and broken terrain of the eastern slope of the Andes, with buried anomalies few and far between, reconnaissance and survey are best carried out on foot, probing with hand tools. An ancillary benefit of this simple methodology is that most available funds are expended within rural host communities.

Roth, Barbara (UNLV)

[248] *Were They Sedentary and Does it Matter? Early Farmers in the Tucson Basin*

Much of the recent literature on the Late Archaic/Early Agricultural period in the Tucson Basin has focused on establishing whether these groups were sedentary irrigation agriculturalists or practiced some level of mobility, at least during part of the year. I argue here that the question "were they sedentary?" limits our understanding of these early farmers. It appears that they were flexible in their responses to both environmental and social conditions, sometimes aggregating into larger, more stable communities and other times moving seasonally. I discuss the implications of this for our interpretations of early farmers throughout the Sonoran Desert region.

[248] *First Chair* [248] *Second Organizer*

Roth, Barbara [128] see Schriever, Bernard; [51] see Berg, Caryn M.

Rothenberg, Kara (University of South Florida) and E. Christian Wells

[259] *Using Soil Chemical Residue Analysis to Prospect for Ancient Activity Loci at the Prehispanic Site of Palmarejo, Northwest Honduras*

This research compares various soil properties, including pH, organic matter, and extractable phosphate, from a prehispanic archaeological site in Honduras to broaden our reach in prospecting for activity loci using soil chemistry. Recent studies tend to rely on spatial differences in elemental concentrations for identifying activity patterns in the archaeological record. However, other related soil properties, including pH and organic matter, sometimes correlate with chemical residues, especially phosphates. The research presented explores these interconnections with the greater goal of identifying the ways and extent to which various soil properties are linked in the formation and preservation of ancient activity loci.

Rothman, Mitchell (Widener University) [96] Discussant

Roth-Murray, Carrie (University of Wales, Lampeter)

[82] *Artefacts and Ecofacts: Questioning the Social Role of Material Culture*

In Classical Archaeology, material culture is seen as being emblematic of complex societies. As a result, material culture is often viewed in economic terms, identifying groups of producers, traders, and consumers, as well as in artistic terms, identifying which groups are the "better" producers. The discovery of unworked ecofacts, particularly seashells, in burials and votive deposits indicates that other symbolic elements are at work in the exchange and function of

materials. Social and symbolic dimensions concerning the use of ecofacts and artefacts in Mediterranean contexts must be considered. Cross-cultural comparanda from North America will be considered to inform this discussion.

Rothschild, Nan (Barnard, Columbia univers) and Heather Atherton (Columbia University)

[181] *Material Manifestations (or Not) of Ethnic Identity*

Initially concerned with addressing constructions of ethnicity and identity, research at the late 18th-century Spanish Colonial village of San José de las Huertas, NM revealed that a complex relationship existed between multiple ascribed and elective identities, many of which are not visible in the material record. Using Las Huertas as the principal case study, this paper examines the disjuncture between material objects and casta or ethnic identifications described in oral and historical accounts of Spanish Colonial America. It also seeks to explore the legacy, if any, this disjuncture has had on the present-day descendant community.

Rouse, Lynne (Wash U in St. Louis)

[222] *Risking It All: The Long-Term Effect of Economic and Political Strategies in the Oasis Communities of Bronze Age Turkmenistan*

An essential component of our understanding of diachronic change in any ancient society is to ascertain the factors that drove decision-making processes. Both on the individual and the community level, decisions based on risk-minimization rather than production-maximization affected the trajectory of economic and political strategies. This paper focuses on the Bronze Age of southern Turkmenistan (ca. 2200 – 1500 B.C.). Specifically, I examine the available archaeological data for the developed agricultural societies of the Murghab delta, focusing on their relationship with independent mobile pastoral groups. I assess this data for indications of either risk-minimization or production-maximization approaches to decision-making and examine their long-term effects.

Routledge, Bruce [259] see Adelsberger, Katherine A.; [92] see Fatkin, Danielle S

Roux, Valentine (CNRS) and Hara Procopiou (University of Paris I)

[216] *Arkeotek Publications: Improving the Process of Accumulating Knowledge*

Several articles on grinding materials have been published according to the logicist model in the Arkeotek Journal (www.thearkeotekjournal.org). The logicist model consists of defining the set of basic data (archaeological and other) and the sequence of inferences made to support a hypothesis, followed by use of this data. It enables us to progressively constitute a logicist corpus that is a thematic knowledge base on grinding material. As we shall see, such a basis contributes directly to the process of accumulating knowledge as well as to the dynamic of research.

Rowan, Yorke (University of Chicago) [216] Discussant

Rowe, Marvin [104] see Boyd, Carolyn E.

Royce, Karen (The Ohio State University)

[244] *The Water Plant Site: Thirty Years Later and Still Providing Us with New Insights*

Geophysical surveys using fluxgate gradiometer and magnetic susceptibility instruments were conducted at the early Late Woodland Water Plant site. The site was first investigated through archaeological survey and excavation under the direction of Dr. William S. Dancy approximately thirty years ago. The re-examination of this site using different investigative techniques has yielded additional, illuminating information. Most importantly, the site does appear to be definitively defensive in nature based on two sets of earthen ditches and wooden palisade features encompassing roughly an 8-acre area. Use of geophysical methods combined with excavation and radiocarbon dating has produced a possible site construction history.

Ruby, Allika (Far Western Anthropological Research Group) and William Hildebrandt (Far Western Anthropological Research Group, Inc.)

[154] *Dietary Persistence and Tool Selection in a Changing Economy: Obsolete or Optimal?*

Native peoples of southeastern California were among the last in North America to have continuous direct contact with Euroamericans. In the forests of Coso Mountains, just east of the Sierra Nevada, pinyon nuts continued to be harvested well into the modern era and traditional processing tools were used even after other kinds of tools were replaced by mass-produced forms. A key assumption of acculturation is that traditional materials will be substituted for Euroamerican imports when available; our findings indicate that this process is more complex and requires a refined understanding of the costs and benefits associated with technological substitutions.

Rudolph, Katie (UW- Milwaukee), Douglas K. Charles (Wesleyan University) and Jane E. Buikstra (Arizona State University)

[215] *Structure and Renewal at the Mound House Site in Greene County, Illinois*

Ceremonialism and ritual renewal has been coupled with Middle Woodland mound construction and use in the Lower Illinois River Valley. Investigation of a basal postmold structure in Mound 1 at the Mound House site, Greene County, Illinois, supports this interpretation. Spatial organization of nearly 500 postmolds on the pre-mound surface including evidence of three parallel, concentric arcs suggests repeated activity at Mound 1 prior to, and in conjunction with, mound construction. This reinforces an argument for cyclic, ritual use of the Mound House site and offers an additional perspective on Middle Woodland mounds in the Lower Illinois Valley.

Rugroden, Sara

[235] *Liminality and Architecture: The Search for the Space In-between*

In 2009, I examined ritual architecture at the site of Paquimé (AD 1250-1450), northern Mexico, with the intention of identifying liminal spaces. According to Arnold van Gennep's model, liminal spaces should bridge or connect sacred with profane locations. Specifically, I compared architectural spaces that were adjacent to previously identified ritual spaces with theorized characteristics of liminal spaces. My research concluded that most of the defined ritual spaces at Paquimé have at least one contiguous liminal space. In this poster I assess if this model is more broadly applicable by attempting to identify liminal spaces in other archaeological sites.

Ruhl, Donna (Florida Museum of Natural History) and Melissa Ayyaz (Florida Museum of Natural History)

[26] *Rehabilitation of Archaeobotanical Collections from Pineland: A Major Coastal Archaeological Site Complex in Southwest Florida*
Archaeobotanical collections exist from excavation projects that took place at southwest Florida's Pineland Site Complex from 1988 to 1995. They focus on its A.D. 50-1710 cultural and environmental histories. The collections consist of dry, wet (waterlogged), and conserved plant specimens. A grant from the National Endowment for the Humanities is supporting curation. Project methods follow national standards and are illustrated with multiple images. A monitored programmatic plan for the preservation of waterlogged specimens has been developed and is highlighted here. Ultimately, this project will greatly improve the long-term stability and accessibility of these rich and rare archaeobotanical collections from Pineland.

Ruiz, Alvaro [114] see Haas, Jonathan

Ruiz, Joaquin [255] see Fenn, Thomas; [255] see Thibodeau, Alyson M.

Rush, Laurie (US Army, Fort Drum) and James Zeidler (Colorado State University)

[164] *Heritage Preservation; Military Progress in the Middle East*
The Central Command Historical Cultural Advisory Group and the

Legacy Heritage Training for Deploying Personnel have been working to improve knowledge, awareness, and planning tools for cultural property protection in the Middle East and Afghanistan. This poster will illustrate educational methods, training tools, and planning assets for supporting cultural property awareness among deploying personnel. International cooperation efforts will also be discussed.

Rush, Laurie [164] First Organizer ; [164] First Chair ; [89] see Scardera, Francis

Russell, Bradley (State University of New York At Albany)

[20] *Demographic and Sociopolitical Implications of Survey Outside of Mayapán's Defensive Wall*

Recent survey and mapping of unrecorded areas of Mayapán located outside of the site's defensive walls resulted in significant revisions of the size and population estimates for this important Postclassic political capital and yielded new data on the sociopolitical organization of the city. The work suggests that the city was far larger and more complex than previously understood and provides a more complete picture of the city's form and layout. This paper will explore the implications of this data for our understanding of the social transformations taking place between the Classic and Postclassic periods of Maya history.

[20] Third Organizer

Russell, Nerissa (Cornell University)

[82] *The Three Faces of Domestication*

Animal domestication is difficult to define. Scholars have variously emphasized physical or behavioral changes, human control mechanisms, and property relations. Biologists tend to stress the biological aspects, while archaeologists and anthropologists more often focus on the social. Here I classify domestication models: according to type species of the domestic animal. Dogs, sheep, and cattle have inspired the most modeling. Most scholars have generalized from their favorite species to all domesticates, but it is more useful to recognize at least three distinct routes to domestication. While there are some similarities among these paths, many features are distinctive, especially the motivations.

[82] First Chair

Russell, Will (Arizona State University)

[192] *El Paso Polychrome and Site Chronology in the Postclassic Eastern Mimbres Region*

Late Postclassic (AD 1250-1450) pueblos in the eastern Mimbres area are highly variable with regard to architecture, settlement layout, and inter-regional connectivity. Traditional ceramic seriation, with admittedly coarse resolution, suggests that these villages were contemporaneous. If true, their differences may indicate disparate, though proximate, social identities. El Paso Polychrome (ca. AD 1000-1450) is present at most late sites in the area. This type exhibits temporally diagnostic morphology allowing the ordering of jar rim sherds. Analyses based on these attributes have addressed the contemporaneity of three Late Postclassic, eastern Mimbres sites, contributing to an improved understanding of social variability and reorganization.

Russell, William [33] see Griffith, Tabitha L.

Rutherford, Allen (Tulane University), Jonathan Haas (The Field Museum), Manuel Perales Munguia (Proyecto Arqueológico Norte Chico) and Winifred Creamer (Northern Illinois University)

[138] *Patterns of Movement and Site Orientation in the Late Archaic Norte Chico region, Peru*

Monumental architecture in the Norte Chico region of Peru has played the most significant role in the discussion of sociopolitical complexity in the region during the Late Archaic period. While this focus has led to a greater understanding of the dynamics in the region, it has not begun to answer key questions concerning movement between sites and the possible relationships between sites based on location and orientation. Using Least Cost Path Analysis (LCPA) and individual site topography, intra-valley movement will be

assessed with specific concentration on the ways in which movement affected site location as well as site orientation.

Ryan, Karen (Canadian Museum of Civilization) and Janet Young (Canadian Museum of Civilization)

[79] *A Possible Example of Shamanistic Healing Amongst the Sadlermiut Inuit of Arctic Canada*

The existence of shamans (angakkuit) and a shamanistic belief system are widely reported in historic Inuit society. Angakkuit acted primarily as mediators between the spiritual and physical worlds and were often tasked with performing healing rituals. While certain details of these events are well reported, others (particularly the use of shamanistic paraphernalia) are conspicuously absent. The present study discusses a human figurine found in a Sadlermiut grave which was modified to mirror illnesses evident on the grave occupant's skeleton. We examine how this unique burial provides an opportunity to explore concepts of illness, healing, and spirituality in Inuit society.

Ryan, Susan (University of Arizona and Crow Canyon Arch. Center)

[128] *The Vertical Continuum: Ritual Termination and Renewal of Late Pueblo III Kivas*

Dry-laid masonry shrines, constructed within the depressions of decommissioned kivas dating to the late thirteenth-century, have been identified in Ancestral Pueblo villages located in the Mesa Verde region of southwest Colorado. Using Shields Pueblo as a case study, this paper examines ritual termination and renewal behavior as a means of creating a ritually-charged vertical space continuum. Shrines physically identified and commemorated structures imbued with ritual significance, perpetuating that significance despite the structures decommissioned status. Additionally, the shrines evoked memories and cued subsequent generations into recalling the significance of place, a place that was depopulated shortly after the shrines were constructed.

Ryzewski, Krysta (Brown University)

[255] *The Iron Age of America: Learning Metalworking in the New England Frontier*

Manufacturing processes based on European models, (e.g. the Saugus Ironworks), mark some of the greatest industrial and entrepreneurial failures in early colonial America. Colonial metalworking is poorly documented and therefore assumed to involve primitive technologies and unspecialized labor. Recent archaeology in southern New England demonstrates that a thriving metals industry existed during the colonial period, one that involved multicultural laborers, tight networks of production, innovative techniques, and complex manipulations of natural resources in otherwise unfamiliar environments. The development of these technologies over several generations, and the cross-craft techniques involved in production are discussed using historical, archaeological, and metallurgical examples.

[123] see Urban, Thomas M.; [255] First Chair

Sabloff, Jeremy (Santa Fe Institute) [119] Discussant [208] Discussant [178] Discussant

Sabo III, George (Arkansas Archeological Survey)

[115] *A Comparison of Braden and Craig Style Birdman Motifs from the Spiro Ceremonial Center*

James A. Brown and colleagues have argued for the chronological priority of a Cahokia-derived Classic Braden style and its generative relationship to regional derivatives including the Craig style at Spiro. Brown also examined in some detail the Classic Braden "Birdman" motif, linking it to the Morning Star/Red Horn character prominent in nineteenth century myths preserved among several Siouan-speaking tribes. This paper compares thematic and contextual associations of Braden and Craig style Birdman images from Spiro, and suggests that the latter images reflect key characteristics of religious and ceremonial syncretism.

[115] Third Organizer

Safi, Kristin (Washington State University), Christopher A. Kiahtipes (Washington State University), Dave N. Schmitt, Jean-Paul Ndanga and Karen D. Lupo (Washington State University)
[53] *Neglected Pots: Compositional Analysis of Ceramics from the Northern Congo Basin*

Ceramics are the most ubiquitous archaeological remains in the Central African rain forest. Despite their abundance, little is known about the compositional variability of these materials across space and through time. Variation in the temper type, temper amount, and the number of clay sources used by prehistoric potters can clarify the degree to which the production process differed across communities. This preliminary study incorporates high and low tech analyses to evaluate the degree of compositional patterning in ceramics collected from excavations and surface contexts at Lumbomba and Poteme located in the northern Congo Basin in the Central African Republic.

Sagarbarria, Ryan (Antiquus Archaeological Consultants Ltd.)

[203] *New Perspectives on Slinging Stones: Persuasive Evidence of Sling Projectiles in the Pitt Polder of British Columbia*

An ongoing large-scale CRM project, implemented to test the majority of a 10,000-acre parcel of land in the Lower Fraser drainage, British Columbia, has identified persuasive evidence for sling hunting projectiles. A sample of 148 "sling stones," bi-conical/ovoid stones, homogenous in dimension, weight, and shape, have been collected from clusters found in the uppermost clay deposits of extinct marshlands adjacent to known pre-contact archaeological sites. This contribution aims to jointly apply ethnographic accounts, Salish oral narratives, and comparative statistical analyses to a large, reliably sourced sample providing a baseline study of this presently obscure hunting technology.

Sagarbarria, Ryan [203] see Eng, Jordan J.

Sain, Doug [90] see Smallwood, Ashley M.

Saitta, Dean (University of Denver)

[167] *Ludlow Massacre Archaeology in Community Context*

Archaeology at the Ludlow Massacre Memorial has an interesting social context. Fieldwork began against the backdrop of a local steelworkers strike that used the memory of Ludlow as important symbolic capital in the public battle for hearts and minds. Subsequent vandalism of the Memorial's stone monument increased the site's visibility and ignited a quest for more protected status. Recent designation of Ludlow as a National Historical Landmark illustrates what can happen when scholars and citizens make common cause. This paper reflects on what made the Ludlow project's community outreach a singularly rewarding experience for those who were involved in it.

Sakai, Sachiko (UC Santa Barbara)

[253] *Change in Production and Distribution Pattern of Olivine-tempered Ceramics in the Arizona Strip and Adjacent Areas in the American Southwest*

Olivine ceramics are widely distributed in the Arizona Strip and adjacent areas between A.D. 300 and 1300. Previous compositional analyses using LA-ICP-MS and INAA suggest that at least five clay sources were used in olivine-tempered ceramics found in various areas. In this paper, I will examine how selection of clay sources for olivine-tempered ceramics changed over time and why. To understand the diachronic change in clay source selection, I will use Luminescence dating to all ceramic samples examined by the compositional analyses. The ultimate goal for this study is better understanding of the production and distribution pattern of olivine-tempered ceramics.

[161] see Lipo, Carl P.; [253] First Organizer

Salas Carreño, Guillermo [18] see Mannheim, Bruce

Saldana, Melanie (California State University Los Angeles)

[148] *Speleothem Complexes as Sacred Space: An Analysis of Operation III, Lot Two in Actun Yaxteel Ahau*

The survey of the upper level of Actun Yaxteel Ahau, conducted during the spring of 2009, documented four elaborate speleothem complexes that present a very similar structural layout. All appear to have been heavily utilized in much the same way. This paper presents the first analysis of speleothem complexes as sacred space. The ancient Maya are known to have employed architecture to create enclosed space. It appears, however, that they gravitated to these natural features because of the special importance of the drip-water formation matrix.

Salinas, Harlen Tzuc [212] see *Lizama Aranda, Lilia Lucia*

Salomon, Frank (University of Wisconsin-Madison)

[96] *Ritual-Administrative Control of Goods in an Andean Village Storehouse*

Until the mid-20th century, the village of Rapaz managed its communal sector (fields, terraces, pastures, and herds) through a ritual-administrative complex seated in a walled precinct. The precinct's two buildings are a *qulka* or Andean storehouse, and a still-used sacred meetinghouse, the home of a collection of *kipus*, where traditional authorities govern the common sector. Ethnographic information clarifies the relationships among storage, governance, ritual, and communal economy. This paper emphasizes harvest collection and disbursement through the storehouse, an administrative system with a marked feminine symbolic association.

Salsgiver, Amy (Indiana University of Pennsylvania) and Kristin Swanton (Indiana University of Pennsylvania)

[180] *Educating the Educators: Introducing Sensitive Issues Through Archaeology*

Controversial issues in America's history have been avoided, softened or ignored during the elementary years. Twenty-first century archaeologists are relying on new techniques, data recovery and technological advances that are allowing them to expand knowledge on many aspects of American history including the effects of colonization on Native American people. The aim of this paper is to discover age appropriate techniques that teachers can implement into their existing curriculum using archaeology as a foundation to introduce a more holistic picture of this time in our history. This can ultimately provide a foundation for secondary educators to build upon.

Sampeck, Kathryn (Illinois State University)

[218] *Ancient Quelepa, Colonial San Miguel: Waxing and Waning of Eastern El Salvador's External Connections*

Quelepa, in today's eastern El Salvador, does not conform to frontier or core-periphery models. Andrews' investigations revealed strong cultural ties in the Preclassic to Olmec phenomena and in the Terminal Classic to the Gulf Coastal material culture. The Postclassic is poorly known, but early colonial documents show the region to have risen to prominence with the inception of indigo dye trade. The seventeenth-century atlas drawn by William Hack shows the San Miguel region to be a vibrant locale of maritime activity. Changes in exchange networks reflect the history of a place that was at times both marginal and central.

Samson, Alice (Faculty of Archaeology, Leiden University)

[116] *The House that Higuana Inherited: Trajectories of Social Life in El Cabo, eastern Dominican Republic*

The development of hierarchical polities documented by the Spanish in Hispaniola has focussed archaeological attention almost exclusively on a small, undocumented section of society, the *cacique* class, with scholars on a "wild goose chase" for that elusive paramount chief. This neglects the majority of social life. The reconstruction of houses, house groups and house groups within a community in the site of El Cabo, eastern Dominican Republic, focuses on indigenous sociality, aesthetics and a domestic identity. This perspective sheds an alternative light on how society was constituted on an everyday basis, and in longer, transgenerational cycles, over hundreds of years.

Sanchez, Guadalupe [199] see *Carpenter, John P.*

Sanchez Miranda, Guadalupe (INAH Subdireccion de Laboratorios y Apoyo Academico), Becket Leason (Instituto Nacional de Antropologia e Historia), Edmund Gaines (University of Arizona), John Carpenter (Instituto Nacional de Antropologia e Historia) and Vance Holliday (University of Arizona)

[21] *Fin del Mundo Clovis site: Hunting, Land Use and Interactions during Late Pleistocene Times in northern Sonora*

The Fin del Mundo Clovis site was discovered in 2007. Investigations reveal that this site contains a Pleistocene elephant hunting/butchering location and at least one encampment. A quartz crystal quarry is located at about six kilometers from the site, raw material from which a Clovis point and other artifacts recovered at the site were made. The hunting locality revealed an intact deposit of Late Pleistocene/Early Holocene age, two juvenile Pleistocene elephants and the necessary tool-kit for hunting. The camp site reflects lithic artifacts suitable for a number of tasks, including scraping hides, cutting, and working wood or bone, as well as broken Clovis points and debitage. Here we will discuss the Clovis lithic technology from Fin del Mundo, interaction with others Clovis sites in Sonora and offer some insight about the settlement pattern of the Clovis groups that inhabited northern Sonora during late Pleistocene times.

Sanchez Romero, Margarita (University of Granada (Spain))

[143] *Women in Action: The Hidden Side of the Archaeological Record*

The concept of maintenance activities has been challenging and changing ideas regarding the analysis of women in the archaeological record of the Iberian Peninsula. This notion has enlightened how fundamental women's work is in foregrounding social dynamics in any community. Going further in our approach to prehistoric communities, we link these activities with women's bodies as a unique form of material culture, in order to understand women's experiences, behavior and identities.

Sánchez-Miranda, Guadalupe [235] see *Arroyo-Cabrales, Joaquin*

Sand, Christophe [206] see *Chiu, Scarlett*; [206] see *Kahn, Jennifer G.*

Sanders, Merritt (Tulane University), Christopher B. Rodning (Tulane University), David G. Moore (Warren Wilson College), Merritt M. Sanders (Tulane University) and Robin A. Beck, Jr. (University of Oklahoma)

[52] *Excavating Burned Structures at the Berry Site, Burke County, North Carolina*

Situated in the Western North Carolina Piedmont, the Berry site is the location of the Native American town of Joara and the Spanish settlement of Fort San Juan. This fort was established by Captain Juan Pardo in 1567, and it was attacked and abandoned in 1568. Five burned structures form a compound associated with Spanish occupation at the site. Fieldwork in 2007 and 2008 included excavations of one entire structure and half of another structure. This paper summarizes our structure excavation methods, including procedures for collecting artifacts and organic materials, total station mapping, and digital photography.

Sanders, Merritt [35] see *Horn, Sherman W.*; [35] see *Kettler, Kurtis H.*; [35] see *McCall, Grant S.*

Sanders, Merritt M. [52] see *Sanders, Merritt M.*

Sandgathe, Dennis (UPenn Museum of Archaeology and Anthropology), Harold L. Dibble (University of Pennsylvania), Paul Goldberg (Boston University) and Shannon P. McPherron (Max Planck Institute for Evolutionary Anthropology)

[8] *The Neandertal Child from Roc de Marsal: A Re-appraisal of its Status as an Intentional Burial*

Neandertal mortuary behaviour has long been a subject of debate. Among claims for intentional Neandertal burial in Europe, the child

skeleton from Roc de Marsal (RdM) has been one of the less contentious examples. This is due in large part to claims that it was recovered from an intentionally excavated pit and was associated with "grave goods". However, based on the actual original evidence on the context of the remains and on new data from recent excavations, no compelling evidence exists to show intentional burial. The original published and unpublished evidence and data from the recent excavations will be presented here

Sandgathe, Dennis [8] see *Aldeias, Vera I.d.*; [8] see *Dibble, Harold L.*; [8] see *McPherron, Shannon P.*; [8] see *Turq, Alain*; [8] *First Chair* [8] *Second Organizer*

Sanger, Matthew (American Museum of Natural History)

[217] *Vacant Quarters and Rising Tides: Visible Shifts in the Relational Landscape along the Georgia Coast (USA)*

Combining data from coastal islands, hammocks, and near coast mainland this paper investigates the dynamic relationships between people, experienced environment, and conceptualized place over a span of 5,000 years. Environmental factors and socio-historical events, the most recognizable of which include sea-level changes during the Archaic and the establishment of a vacant quarter between competing chiefdoms during the Mississippian, produced archaeologically visible affects on settlement which relate to shifts in sociopolitical organization as well as inter and intra group relations. The changing relation between people and surrounding landscape is also theorized as various aspects of mobility suggest variable conceptions of space.

Sanhueza R., Lorena [123] see *Giesso, Martin*

Santarone, Paul

[210] *New Insights into the Simon Cache, Idaho*

This paper presents new analysis and insight into the Simon Cache, a cache of bifaces and fluted points first discovered in 1961 on the Big Camas Prairie near Fairfield, Idaho.

Sarjoughian, Hessam [184] see *Bergin, Sean M.*

Sasaki, Randall (Texas A&M University), Jun Kimura (Flinders University (Australia)) and Le Thi Lien (Vietnam Institute of Archaeology at Hanoi)

[189] *The Original Vietnam War: The Mongol Invasion of 1288*

The Mongol Invasion of Vietnam in 1288 ended in a climactic battle at Bach Dang River. The resistance forces secretly planted wooden stakes set into the riverbed at low tide; the invading fleet was then lured into the trap and destroyed. The preliminary survey of 2009 identified hundreds of these wooden stakes which delineate the battlefield and the likely locations of hull remains. The newly discovered sites may possess a potentially rich archaeological record of historically undocumented Chinese/Mongolian ships, as well as clues for clarifying the naval battle tactics employed in the battle.

Sassaman, Kenneth E. [61] see *Randall, Asa R.*

Sasso, Robert (University of Wisconsin- Parkside), Dan Joyce (Kenosha Public Museum) and James R. Yingst (Heartland Archaeology Research Program)

[219] *The History and Archaeology of the Vieau Site (47Ra90), an Early Nineteenth Century Fur Trade Post in Racine County, Wisconsin*

The Vieau site at Franksville, Wisconsin, is a multi-component prehistoric and historic site including an early nineteenth century fur trade post and Potawatomi village. Historic records show the site as continuously occupied since the 1820s, eventually becoming a farmstead in the late 1830s. UW-Parkside and the Kenosha Public Museum have conducted archaeological field research from 2002 to the present. While much disturbance has occurred since the time of the post, remains encountered provide information on a variety of aspects of material culture of nineteenth century life in this locality. The authors provide an introduction to site history, contexts, and

archaeology.

Saturno, William [64] see *Sharpe, Ashley E.*; [139] see *Storozum, Michael*

Saul, Bruce M. [250] see *Reitz, Elizabeth J.*

Saunders, Michael (Texas State University)

[99] *The Sacred Sites of San Jose Chacaya: Prehistoric Associations to Contemporary Ritual*

Indigenous religious beliefs still predominate in many Maya communities. Recent investigations in San José Chacayá, Guatemala, mapped the contemporary local sacred sites. While their distribution reflects patterning common in other Maya communities, the altar locations also reveal a relationship with an archaeological site around which they are clustered. As some of these altars are pre-Conquest stone monuments and others appear to establish the boundaries of the archaeological zone, it seems that these altars also held significance for the prehistoric community. The continuity exhibited in their utilization today can help to identify the means by which contemporary sacred geography is defined.

Saunders, Paula (City University of New York)

[97] *Up from the Ground: An Architectural Study of Enslaved Houses at a Nineteenth-Century Coffee Plantation in Jamaica*

This paper is an architectural study of houses in one enslaved African village community in nineteenth-century Jamaica. It examines the house form and features, materials used, and the innovations of African-descended peoples in developing solutions to their daily needs. Located near the Blue Mountain, Orange Vale was one of the largest coffee plantations in Jamaica during the peak of the coffee boom. By using naturally-occurring limestones and sandstones in constructing the foundation, steps, and thresholds of their dwellings, enslaved African peoples at this plantation demonstrate how the natural materials in their environment were transformed for both functional and cultural use.

Saunders, Rebecca (Museum of Natural Science, LSU) [251] *Discussant*

Savelle, James (McGill University)

[64] *Bowhead Whales, Logistical Organization and Social Inequality amongst Prehistoric Thule Inuit*

The centrality of the bowhead whale in the economy of prehistoric Thule Inuit in the Canadian Arctic has long been recognized. It is only recently, however, that attempts to determine the effects of the enormous surpluses generated by the hunting of these animals may have had on Thule social structure. This paper examines these effects through the related themes of the logistical requirements for successful bowhead harvesting, and the transformation of the resulting whale product surpluses into wealth and status, at both the intra- and inter-village levels.

Savoie, Brent [212] see *Luin, Luis F.*

Sayer, Camille (Salmon-Challis National Forest) and Sharon Plager (Salmon-Challis National Forest)

[43] *Prehistoric Galleries Revealed in Idaho's Rugged Camas Creek Drainage*

A formal inventory of the Camas Creek Trail was conducted on the Salmon-Challis National Forest. Camas Creek is a major tributary of the remote Middle Fork Salmon River in Idaho. Until the trail was punched through in the 1930's, the lower canyon presented a virtually impassable travel route from the river to upland resources. The few historic sites documented are associated with either trail construction or its subsequent use. The remaining prehistoric sites were the focus of our research. The density of pictograph sites found along Camas Creek is notable and their locations suggest interesting departures from simple economic explanations.

Sayers, Daniel [225] see *Riccio, Jordan M.*

Sayre, Matthew (UC Berkeley) [132] *Second Organizer*

Scaglion, Richard (University of Pittsburgh) and Maria-Auxiliadora Cordero (University of Pittsburgh)

[68] *South American Sweet Potato in Ancient Polynesia: Evidence for Trans-Pacific Contact?*

Research in the Cook Islands has established that the sweet potato, a new world cultivar, was introduced into Polynesia by AD 1000. But how did it get there? Here, we consider evidence supporting the possibility of human transfer. The words "comal" and/or "cumal", similar to the Polynesian "kumara", were used by the Cañari people of Ecuador, sweet potato cultivators whose territory once stretched from the Gulf of Guayaquil to the Andean highlands. In addition to the sweet potato evidence, this paper considers other factors pointing to the Gulf of Guayaquil as a possible locus of trans-Pacific contact.

Scarborough, Vernon (University of Cincinnati) [153] *Discussant*

Scardera, Francis, Laurie Rush (US Army, Fort Drum), Margaret Schulz and Randy Amici

[89] *Consideration for astronomically-aligned stone features in the Northeast*

The oral histories and lore of the Haudenosaunee (Iroquois) people are filled with astronomical references, yet the archaeological record barely acknowledges their presence. Developing a protocol to identify and acknowledge the manifestation of these sites in the Northeast landscape is critical. This paper focuses on the results of archaeological fieldwork methods employed to document a possible astronomical feature in the landscape in Jefferson County, New York. The importance of fostering native consultation and participation in this process is emphasized. Aligning the landscape with the heavens is essential, but aligning these sites to the native cognitive universe is even more important.

Scarry, Margaret (Univ. of North Carolina)

[250] *What can Plants and Plant Data tell us about Seasonality?*

In most environments, plants have cyclical rhythms of flowering, fruiting, storing energy for spring growth, etc. Because nuts, grains, and fruits are ready for harvest at predictable times, plant remains from archaeological sites seem likely candidates for estimating season(s) of occupation. Unfortunately, the potential to dry and store many plants confounds this issue. This paper considers how (and if) the harvesting periods for plants represented in archaeological sites on the Georgia Bight and in the broader Southeast can be combined with considerations of labor allocation and other archaeological data to provide clues about seasonality for episodic and year-round occupations.

Schaafsma, Hoski (ASU)

[44] *Manipulated Landscapes and Altered Soils: Squeezing Water Out of a Dry Landscape*

Perry Mesa, in south-central Arizona, has a long history of sequential human occupations. In the late 1200's an agrarian people settled the mesa and transformed hundreds of acres of grassland into an extensive system of dry-farming features. This study examines dry farming water management at multiple scales, from individual features to the complete landscape. Their use of numerous watersheds and feature types increased area-wide water retention, while manipulation of soil textures within individual features improved small-scale conditions. The success of these techniques is manifest in the range of crops produced, from domestic maize, agave and cotton to native crops.

Schachner, Gregson (UCLA)

[235] *Ancestral Pueblo Settlement Dynamics in the Petrified Forest of Arizona*

Recent archaeological survey in the Petrified Forest of Arizona provides an opportunity to reexamine ancestral Pueblo settlement dynamics in this iconic region. Surveys by National Park Service and UCLA archaeologists have documented apparently continuous

ancestral Puebloan occupation dating from A.D. 200 to 1400. This continuity contrasts sharply with surrounding areas, which were either discontinuously settled or occupied for only a portion of this period. Comparison of the spatial and architectural traits of Petrified Forest settlements to those in surrounding regions suggests that local settlement patterns were shaped by people and ideas from many parts of the ancestral Pueblo world.

Scharf, Elizabeth (University of North Dakota)

[74] *Chenopods and People: Reflecting on the use of the Chenopodiaceae in North America*

This presentation analyzes existing information regarding the prehistoric use of plants from the Chenopodiaceae family in North America. Cases are reviewed for both hunter-gatherer and farming cultures, looking at a range of human activities and their intended and unintended consequences. These are compared and contrasted to produce scenarios in which humans and chenopods entered into co-evolutionary relationships that could lead to domestication and cultivation, and the specific mechanisms involved in these long term interactions are explored.

Schauer, Matt (UIC) and Micah Smith (DePaul University)

[45] *Life on the Frontier: Occupation of Inca Fortifications in Northern Ecuador*

In north highland Ecuador, the Inca Empire encountered heavy resistance from a society known as the Cayambe which resulted in a string of military fortifications known as Pambamarca. At Pambamarca, there are fourteen hilltop fortifications located in close proximity to one another. The occupation of these sites and the activities that occurred there has been poorly understood. Therefore, the Pambamarca Archaeological Project began a program of systematic shovel tests at each of these sites in order to determine the density and distribution of occupation and the multitude of activities that occurred. This paper presents the results of that program.

Schauer, Matt [45] *see Kling, Amber M.*

Scheel-Ybert, Rita Scheel-Ybert [142] *see Caromano, Caroline F.*

Scheiber, Laura (Indiana University) and Judson Byrd Finley (University of Memphis)

[228] *Paths, Places, and Positions: Negotiating Shoshone Movements in the Rocky Mountain West*

Although archaeologists have documented over 8,000 years of human presence in the central Rocky Mountains, it is only recently (in the last 200-500 years) that we see prolonged and intensified use of certain mountain landscapes. Bighorn sheep hunting complexes, conical pole lodges, and resident campsites speak to intensified mountain resource procurement. In this paper we discuss recent research in the Absaroka Mountains surrounding Yellowstone National Park that seeks to address the ways in which Mountain Shoshone people constructed a sense of place within what appears to be relatively new social landscapes of the late prehistoric and early historic periods.

[228] *First Chair*

Scheiber, Laura [72] *see Finley, Judson B.*

Scheinsohn, Vivian (INAPL), Claudia Szumik (CONICET/INSUE), Florencia Rizzo (UBA), Sabrina Leonardt (UBA)

[22] *Rock Art Distribution in NW Patagonia: The Forest and the Steppe*

In the last years, Patagonian archeology has revolved about human exploitation, colonization and occupation in the forest and the steppe. Ancient occupations were recorded in forested environments on North Patagonia but only from Late Holocene times, there is a neat archaeological signal at the forest. Some researchers posited the hypothesis that at least two different populations coexisted in that moment, one at the forest and the other at steppe. In this paper we will test this hypothesis by focusing on rock art and by means of

cladistics and endemism analysis.

Schele, Elaine (University of Texas)

[112] *The Twin Mortuary Temples of Palenque: Applying Historical GIS to the Archaeological Records of Temples XVIII & XVIII-A*
Temples XVIII and XVIII-A were excavated in the mid 20th Century by archaeologists Berlin, Ruz, Segovia and Saenz. The buildings are largely unknown to the general public and yet, when explored, they contained several royal burials. The richly furnished tomb discovered in Temple XVIII-A was one of the most important ever found at Palenque. Reconstructing the excavation record through the application and display of GIS can help bring the discoveries out of obscurity and into public consciousness.

Schieppati, Frank [22] see Hayward, Michele H.

Schiffer, Michael (University of Arizona) [208] Discussant

Schilling, Timothy (Washington University in St. Louis)

[140] *The Moorehead Moment: Monumental Architecture to Monumentality*
Research into the 13th century Moorehead Phase at Cahokia reveals the reorganization of the Cahokian polity with leadership strategies shifting away from the traditional corporate base toward politics surrounding the circulation of precious items among a limited number of people. During this time the way the Cahokians used the landscape changed. Most notably, the Cahokians capped Monks Mound and erected a palisade enclosing the mound and the Grand Plaza. Usually these events are viewed as two separate acts. However, to understand this seminal time in Cahokian history we need to see these actions as connected and having implications that reverberated across the Mississippian world.

Schindler, Bill (Washington College) and Aaron Krochmal (Washington College)

[88] *Finish Your Plate! Rethinking Relative Utility Factors to Better Model Resource Potential in Prehistoric Diets*
Optimal foraging models often rank individual resources based upon relative utility factors. These evaluations influence archaeological interpretations of prehistoric settlement, diet, subsistence selection and utilization. However, researchers calculating this factor are often drawing from a modern context where perspectives of diet and nutrition have little semblance to the past and run the risk of resulting in erroneous resource ranking. This paper attempts to shed itself of biased notions of "edibility" and demonstrates how, utilizing a combination of ethnographic and experimental research, calculations of "potential" relative utility can be quantified for the white-tailed deer.

Schirack, Maggie (University of Montana), Lucy Harris, and Michael Wanzenried (University of Montana)

[39] *An Examination of Lithic Technological Responses to Subsistence Resource Intensification at the Bridge River Site, British Columbia: 1800-1100 BP*
Lithic technological systems are structured by and responsive to changes in subsistence, mobility, and raw material availability. Though much work has been done documenting the relationship of lithic technologies to these and other variables, less attention has been focused on documenting the more subtle effects of subsistence resource intensification on lithic technological systems. In this paper we will use a variety of data derived from the Bridge River housepit village in south central British Columbia to test the hypothesis that processes of subsistence intensification impacted aspects of production, use, maintenance, and reuse of lithic tools.

Schlagheck, John [81] see McKenzie, Dustin K.

Schlanger, Sarah (NM Bureau of Land Management)

[223] *Old Trails and New Challenges: Finding and Preserving Historic Trails in the Developing West*
The partnerships emerging to safeguard America's National Historic Trails include volunteer-driven trail associations and historical

societies, Native American communities with centuries-old ties to travel routes, municipalities, private landowners, and state and federal land managers. Preservation and management challenges are discussed for the Old Spanish Trail and El Camino Real de Tierra Adentro, where collaborative efforts have turned up 18th century inscriptions, rediscovered packtrain routes through the Mohave, mapped cobbler's nails from shoes worn out on desert crossings, created trail steward programs, formed preservation alert networks, developed innovative mitigation programs, and brought attention to hundreds of historic trail resources.

[130] Discussant

Schleher, Kari (University of New Mexico) and Marit Munson (Trent University)

[200] *Ceramics and Rock Art in the Northern Rio Grande: A Comparison of Design*
Changes in ceramics and rock art after A.D. 1325 are often thought to reflect new religious practices in the Northern Rio Grande. Our analysis suggests that designs on these two types of media differ considerably. Bounded geometric designs, which are typical on ceramics, are quite rare in rock art. Although there is overlap in the iconography on the two media, mode of representation differs greatly. This suggests that two different groups were likely involved in producing the designs. We argue that design differences may have wide-reaching implications for social networks and practices of production in this region.

Schmader, Matthew (City of Albuquerque)

[119] *It's All About Space: Two Case Examples of Site Structure*
Examining spatial organization and site structure have been guiding principles of processual archaeology for over 30 years. Lew Binford emphasized the need to document the distribution and characteristics of features and artifacts at varying scales to explain site formation and contents. Two case examples from central New Mexico illustrate the lasting power of Binford's approach. One case examines interior use of space and segregation of different activity areas in eighth century pithouse structures. The other case details the patterning of metal and lithic artifacts found in relation to walled architecture at a battle site from the Coronado expedition of 1540.

[119] First Chair

Schmidt, Kari (Statistical Research, Inc)

[192] *El Paso Phase Research in Southern New Mexico and Far West Texas*
Recently, SRI conducted excavations at FB 9122, an El Paso phase (A.D. 1275/1300 to 1450) residential site located on the lower alluvial fans of the Organ Mountains just north of El Paso, Texas. The El Paso phase in the Jornada Mogollon region is known primarily from the excavation of a handful of large villages and other smaller residential and logistical sites. This paper will describe FB 9122 and its constituent elements, make comparisons with other El Paso phase sites in the Jornada region, and suggest productive directions for future research in the post-A.D. 1130 Mogollon region as a whole.

Schmitt, Dave N. [53] see Safi, Kristin N.

Schmitt, Emma (College of Wooster)

[138] *Social Metaphors: An Analysis of Social Structure Through a Study of Paracas Textile Motifs*
An examination of floral and faunal designs on Paracas (Peru) textiles from several museum collections indicate their use as models of social stratification in society. The natural imagery reveals certain hierarchical relationships (e.g. predator and prey) that reflect social distinctions. This study uses D'Altroy and Earle's wealth finance/staple finance model in combination with a prestige goods theory to explore issues social stratification in the sample group.

Schneider, Erica (ASC Group, Inc.)

[179] *Data in the Pipeline: A Study of Prehistoric Settlement Pattern Data from the Rockies Express-East Pipeline Project in Ohio*
The REX-East Pipeline project consists of a 640-mile long gas

pipeline stretching from northeastern Missouri to southeastern Ohio. Cultural resource studies for this massive infrastructure project began in 2006 and continued through 2009. The project presents a relatively rare opportunity to examine a cross-section of archaeological sites within a portion of the Midwest. In this study, I examine the results of the Phase I archaeological surveys in Ohio focusing on prehistoric sites. The study will use GIS to examine the types of sites identified, occupation periods, and geographic settings to explore changes in regional settlement patterns over time.

Schneider, Joan (California State Parks, Colorado Desert District)

[216] *Testing the Assumptions about Bedrock Processing Features: What have we Learned from Residue Analyses?*

Archaeologists have begun to experiment with types of residue analysis to test functional assumptions about bedrock processing features. Bedrock features such as mortars, basins, slicks, rubs, and anvils are very common and highly visible in many regions, yet little empirical data are available regarding functions. Functional interpretations based on ethnography, personal memories, and environmental contexts are insufficient means of examining the economic, ideological, and social complexities represented by these features. I will examine available types of residue analysis and applications to bedrock features, as well as synthesize data that have been derived from analyses and suggest directions for future research.

Schneider, Seth [239] see *Richards, John D.*

Schneider, Tsim (UC Berkeley)

[114] *Intrusions and Refuge at Shell Mounds in Colonial San Francisco Bay, California*

Historic deposits are documented at some shell mounds in the San Francisco Bay, but they are poorly understood. One major issue is that centuries of natural and cultural modification have altered most mounds, especially their top deposits. Therefore, interpretations of site use are often limited to prehistory. In this paper, however, I explore historic practices of "intrusion" at three intact shell mounds used as places of refuge by hunter-gatherers fleeing Spanish missions. I bring to bear issues of intrusion and "persistent places" in my examination of long-term cycles of site use and abandonment before, during, and after European contact.

Schoenfelder, John (UCLA)

[246] *Of Kites and Poles: Site Documentation via (Very) Low-Altitude Aerial Photography in Skagafjörður, Iceland*

Alongside remote sensing and more traditional means of excavation mapping, kite- and pole-mounted digital cameras were used to take vertically-oriented photographs of two sites excavated during the Skagafjörður Archaeological Settlement Survey. This presentation discusses methods, experimental refinements, and uses for the results. While both kite and pole methods had (often complementary) strengths and limitations, each was effective and ultimately efficient in terms of cost and time. The photographs provided an immediate aid to tactical planning as well as a permanent record of exposed and removed contexts, with benefits amplified by post-processing and integration into a GIS.

Schohn, J (University of North Carolina - Chapel Hill)

[7] *Another Step Removed: How NAGPRA further Disenfranchised non-Federal Tribes*

Prior to NAGPRA, archaeologists worked to varying degrees with non-Federal tribes. NAGPRA, however, has given archaeologists an excuse to ignore tribes they once worked with, leaving members of non-Federal tribes powerless to protect their ancestral remains without the assistance of (often unwilling) Federal tribes. This paper examines how tribes in South Carolina have attempted to work around the impediments put in their way in the 20 years since NAGPRA.

Scholl, Nathan (AMEC Earth & Environmental), Duane Simpson

(AMEC Earth & Environmental), Joe Artz (Iowa OSA)

[150] *The Geoarchaeology of the REX Pipeline in Missouri: Spatial and Temporal Patterns of Holocene Occupations in Alluvial and Colluvial Landscapes of the Salt River Valley Region*

The University of Iowa Office of the State Archaeologist (OSA) and AMEC Earth and Environmental conducted Phase III investigations and geomorphological reconstructions at six prehistoric archaeological sites in the Missouri section of the REX pipeline. All sites are located on Holocene and late Wisconsinan landforms of the Salt River and its tributary, Grassy Creek, including: fluvial terraces, alluvial fans, and coalesced bar and terrace landforms. Cultural deposits from the sites date the sediments to the early through late Holocene. Geoarchaeological methods used during this study will be evaluated for their effectiveness in the overall processes.

Schollmeyer, Karen (Arizona State University/Simon Fraser University), Margaret C. Nelson (Arizona State University) and Steve Swanson (EPG)

[192] *Disentangling Archaeological Systematics in the Mimbres Region after A.D. 1130*

Research in the post-A.D. 1130 Mimbres region has focused on a number of "phases" defined by disparate sets of temporal, geographic, ceramic, and architectural characteristics. Here, we summarize time-space systematics in current use, emphasizing the relationships between different phases, and their links to broader Southwestern developments. The geographic and temporal scale at which Postclassic period variability has been perceived has profoundly influenced our understanding of this time period; its separation into phases appears meaningful in some areas, but is highly problematic in others. Disentangling these classifications will greatly improve our understanding of what regional diversity in this period represents.

[192] *First Chair*

Schollmeyer, Karen Gust [192] First Organizer; [192] see Swanson, Steve

Schooler, Steven (Texas State University-San Marcos)

[255] *Supply, Trade, and Conflict on the Colonial Frontier: Aspects of French, Spanish, and Native Interaction as Revealed by a Lead Isotope Analysis of Artifacts from Nine Eighteenth-Century Colonial-Era Sites within Texas and Oklahoma*

The French and Spanish competed ardently in the 1700s for the loyalties and commercial potentials of the various Native groups they encountered. By analyzing lead artifacts found at colonial-era sites in Texas and Oklahoma, the intricacies and ramifications of an emerging global-scale market in firearms and ammunition are revealed. The trend is most vividly demonstrated at the Spanish mission of Santa Cruz de San Sabá, destroyed in 1758 by an alliance of Norteño tribes brandishing French firearms. At this site, bullets made from European, Mexican, and Mississippi Valley lead speak to the violently explosive clash of cultures which occurred here.

[255] *Second Chair*

Schortman, Edward (Kenyon College)

[258] *Working in a Vacuum: Enactment of Power in Terminal Classic SE Mesoamerica*

The Terminal Classic in the Naco valley, NW Honduras was marked by political fragmentation and the break-up of elite craft monopolies formerly based at the Late Classic capital of La Sierra. Artisans working at sites of all sizes now instantiated new socio-political networks through processes of production and consumption that they controlled. This paper examines these developments at one settlement cluster and explores their implications for understanding the creation of heterarchical relations generally.

[258] *Third Organizer*

Schortman, Edward [65] see Schortman, Hayden N.; [258] see Hayes, Joanna R

Schortman, Hayden (Kenyon College), Edward Schortman

(Kenyon College) and Patricia Urban (Kenyon College)

[65] *Seeing Culture through Instantiated Behavior: Examples from Late and Terminal Classic Southeastern Mesoamerica*
In recent years, archeologists have turned to examinations of material culture as a window into the symbolic aspects of culture, structured behavior, and the enactment of habitus. In this presentation, we will examine instantiated behavior from the perspective of Marcel Mauss' ideas about the social and the material. The insights gained will be illustrated with examples from work in Late and Terminal Classic contexts in northwestern Honduras.

Schoville, Benjamin (School of Human Evolution and Social Change/Arizona State University) and Kyle Brown (SACP4/University of Cape Town, South Africa)

[129] *Frequency and Distribution of Edge Damage on Middle Stone Age Lithic Points, Pinnacle Point 13B, South Africa and from an Experimental Calibrated Crossbow*

Convergent-points are often the dominant tool type in many MSA assemblages. Although damage to the lateral margins of points is frequent, analytical methods for dealing with edge damage patterns have not been applied to a complete MSA point assemblage. The assemblage edge damage frequency and distribution on MSA points from site PP13B, South Africa are compared to the patterns of edge damage formed on replicated points hafted to a calibrated thrusting spear. This recording method provides interpretive linkages to assemblage damage patterns and suggests points at PP13B were deposited after cutting activities rather than after use as thrusting spears.

Schrader, Sarah (Purdue University) and Michele Buzon (Purdue University)

[122] *Investigating Activity Patterns: Osteoarthritis, Vertebral Degeneration and Musculoskeletal Stress Markers in Colonized Ancient Nubia*

Human skeletal remains from the New Kingdom, Egyptian colonial site of Tombos (1400-1040 BC) in Nubia, were analyzed for signs of osteoarthritis, vertebral degeneration and musculoskeletal stress markers. This multi-dimensional, three-fold approach investigates activity patterns and markers of occupational stress, both of which are highly influenced by long-term, physically demanding, repetitive activities. These data directly relate to issues of social identity and questions regarding the function of this community within the Egyptian empire. A low level of activity, due to a hypothesized administrative and middle-class lifestyle, was reflected in the Tombos sample.

Schreg, Rainer [184] see Fisher, Lynn E.

Schreiber, Katharina (University of California - Santa Barbara)

[145] *A brief History of Wari Studies*

The history of Wari studies is briefly summarized. Our current state of knowledge is a balance between the rapid accumulation of new data and the waxing and waning of different interpretive scenarios. It argued that Wari must be viewed holistically, not from the perspective of a single site or region, and that our models must take into account the fact that our data are still far from complete.

[122] see Tung, Tiffany A.

Schreiner, Amanda (CUNY Graduate Center)

[246] *Zooarchaeology of the Viking Age and Later in Skagafjörður*

An initial examination of the animal bones from a sample of the farmsteads investigated during the Skagafjörður Archaeological Settlement Survey suggests general continuity across the socio-economic spectrum of sites during the Viking Age. The presence of pig specimens at many of the farmsteads, even after 1300 AD, is quite remarkable. Also interesting is the paucity of older sheep remains, which is in stark contrast to the Myvatn area.

Schriever, Bernard (Museum of Texas Tech University) and Barbara Roth (The University of Nevada, Las Vegas)

[128] *Pithouse Retirement and Dedication in the Mimbres Mogollon*

Region

The Mimbres Mogollon region of southwestern New Mexico has been a key area where evidence of ritual dedication and retirement of communal structures has been found. We present data that extends these activities to domestic contexts, documenting the ritual retirement of several Late Pithouse period structures and evidence for the incorporation of dedicatory objects during pithouse construction. These data suggest that symbolic activities associated with construction and abandonment were important components of Late Pithouse period occupations and discuss the implications of their presence in domestic contexts.

Schroeder, Bryon

[171] *Conflict on the Northwestern Plains*

The topic of warfare in Northwestern Plain's hunter-gatherer past is not the topic of major discussion. However the evidence of warfare, or at least violence, does exist and has been mentioned in analysis of the region's human remains, rock art, and site morphology. A single butte-top defensive site known as the Alcova Redoubt located in central Wyoming will be placed into this already existing evidence of violence on the Northwestern Plains. Conclusions will be drawn on the rapid period of social reorganization that likely lead to the increase of violence occurring around European contact on the Northwestern Plains.

Schroeder, Sissel (University of Wisconsin-Madison)

[59] *Jonathan Creek and the Interpretive Potential of New Deal-Era Collections*

The legacy of New Deal-era investigations at Mississippian sites extends beyond their role in the construction of regional culture histories as new analyses tap the interpretive potential of these collections. The Jonathan Creek project in Kentucky, conducted near the end of the New Deal, provides an historical lens through which the development of innovative field methods and professional practices can be viewed as archaeologists shifted their focus from elites and mounds to the exploration of community layout and household archaeology. Reanalysis of architectural data at Jonathan Creek has revealed sacred and secular structures embedded within the fabric of the community.

Schubert, Blaine (East Tennessee State University) and Russell Graham (Pennsylvania State University)

[224] *"Clovis-Folsom Drought": Afloat with the Vertebrates*

The Younger Dryas, an abrupt climate shift, coincides with the transition from Clovis to Folsom cultural complexes on the Great Plains. At Murray Springs, southeastern AZ, C. V. Haynes documented a shift from drier conditions at the end of Clovis time to moister environments during deposition of the Black Mat in the post-Clovis interval. He extended these "drought" conditions, "the Clovis Drought," from TX to SD and from CA to NY. Later, V. T. Holliday made an important distinction between drought and aridity. He then interpreted the environmental shift from Clovis to Folsom, in the southern Plains, as increasing frequencies of drought with overall warming but he did not detect an abrupt period of aridity. Vertebrate faunas from the US exhibit the warming trend during this time. They do not provide evidence for continental-scale aridity as implied by Haynes. Increasing frequency of droughts cannot be documented by vertebrate faunas until there is a more finely dated faunal sequence. It does appear that Bison herds may have been smaller on the Great Plains until sometime after the Younger Dryas.

Schuermann, Ryan (University of Texas at Austin) and Charles D. Trombold (Washington University in St. Louis)

[13] *Extended Excavations on a Large Satellite Village of La Quemada, Zacatecas, Mexico*

The second 12-month excavation season on a village site ("Bosque Encantado", MV-206) was completed in 2009. This settlement is located less than one kilometer from La Quemada and appears to be representative of others in the Malpaso valley. This excavation period yielded new data on internal settlement layout, chronology, mortuary practices and faunal/ floral remains. This paper briefly describes

details of architectural variability, aspects of the ceramic assemblage, implications of new AMS radiocarbon dates, composition of the faunal/floral remains, and possible extra-regional trade links during the epi-Classic period.

Schuldenrein, Joseph (Geoarcheology Research Assoc) and Michael Aiuvalasit (Geoarcheology Research Associates)
[252] *Ancient Landscapes and Settlement Along the Millennium Corridor*

The range of site types and depositional contexts along the Millennium corridor is varied and complex. The Phase III sites included settings in classic trunk stream floodplains as well as more ephemeral occupations in upland, slope and ridge locations. These latter locations were unique as they overlooked an ancient glacial lake basin that was transformed into a series of peat beds during the terminal Pleistocene to Holocene transition. We examine both settlement geography and preservation aspects of the archaeological sites located in these diverse meso and microenvironments.

Schuldenrein, Joseph [252] see *Aiuvalasit, Michael J.*

Schulz, Margaret [89] see *Scardera, Francis*

Schurmans, Utsav (University of Pennsylvania), Harold Dibble (University of Pennsylvania) and Mohammed El Hajraoui (Institut National des Sciences de l'Archéologie et du Patrimoine)

[129] *Preliminary Study of the Aterian and Mousterian Lithic Collections from Smuggler's Cave, Atlantic Coast Morocco*

The site of Smuggler's Cave, Morocco, is well-known as one of few sites where hominin remains are associated with the Aterian. Surprisingly, the stone tool collections associated with these remains were never published. As part of the renewed excavations at the site, this material was studied. Here we report on the results from both sets of collections. The assemblages are characterized by the relative rarity of tools in general and of stemmed artifacts in particular. The implications for the recognition of so-called Aterian assemblages and the supposed interstratification of Aterian and Mousterian assemblages in North Africa are discussed.

[129] *First Chair*

Schurr, Mark (University of Notre Dame)

[257] *What Bone Chemistry Tells Us About Angel Site*

In the tradition of innovation established by Glenn A. Black, the Angel collections are source materials for studies of bone chemistry. Stable isotope analysis and fluoride dating have been applied to human and non-human bones from the site. Human bone chemistry studies originally focused on understanding intra-site chronology and dietary variation. More recent studies have integrated Angel into a regional framework suitable for exploring intra-community interactions. At the same time, the chemistry of faunal remains is providing new information about the people who inhabited the site and the animals they lived with and preyed upon.

Schutte, Michele (University of Wisconsin Milwaukee)

[124] *Analysis of Train and Street Car Trauma in the MCIG Collection*

As part of the UWM Milwaukee County Institution Grounds Cemetery Research Initiative a re-boxing effort was begun to stabilize the collection. As a participant, I became interested in a subset of the skeletal collection. Within the greater population a few individuals have documentation indicating the cause of death was the result of being struck by a train or street car. These individuals should have various indicators of perimortem trauma distinguishable from excavation damage, other unrelated traumas or skeletal anomalies. Comparisons of these indicators with contemporary train and vehicular accident data will assist in verifying the associated cemetery documentation.

Schwarcz, Henry (McMaster University) and Phillip Walker (University of California at Santa Barbara)

[122] *Isotopic Paleodiet Studies of the Chumash: Evidence of Sex-*

Based Diet Differences

Isotopic data have been obtained from human skeletal remains at sites along the California coast, from north of Santa Barbara to Los Angeles. Analyses of the C-13/C-12 and N-15/ N-14 ratios in collagen show that the entire population consumed a mixture of high-trophic-level marine carnivores (e.g. seal), and terrestrial foods including flesh of large herbivores. Males were systematically enriched in heavy isotopes, suggesting a higher intake of higher-trophic-level marine foods. Measurement of carbonate of bone mineral shows that males also consumed more fat than females; we suppose this represents preferential distribution of high-lipid-content foods (e.g., seal blubber) to males.

Schwartz, Lauren (UC, Riverside)

[258] *Variation in Household Architectural Designs & Styles at the site of PVN647, Northwest Honduras*

The study of architecture has been well documented in Mesoamerican archaeology, however, little is known of architectural designs from within Southeast Mesoamerica. Furthermore, even less has been investigated with regard to household architecture and spatial arrangements. This paper will discuss recent research of household contexts at PVN647 within the eastern region of the Naco Valley, Honduras. Of particular focus will be variations of vernacular architecture, construction and site-planning techniques both within and between household contexts for this region of the valley, all of which hold the potential to further our understanding of cultural expression within this region of Mesoamerica.

Schwartz, Steven J. [31] see *James, Steven R.*

Schwarz, Kevin (ASC Group, Inc.)

[179] *A Jack's Reef Horizon Settlement Cluster in the Central Scioto Valley*

Archaeological excavations for the REX-East pipeline project identified three sites in the Central Scioto Valley that provide evidence of Jack's Reef Horizon occupations in floodplain and upland settings. In 1992, Mark Seeman proposed the existence of the Jack's Reef Horizon in Ohio as the habitational aspect of the Intrusive Mound Complex. Very little professional research has been undertaken on domestic sites though. Radiocarbon dates confirm habitation associated with this late Late Woodland culture between A.D. 700-1000. Geophysical and excavation data reviewed in this paper indicate intensive habitation of small-scaled residential bases, secondary refuse disposal, and a flake tool lithic technology.

Schwendler, Rebecca (National Trust for Historic Preservation)

[130] *First Organizer*; [130] *First Chair*

Schwartz, Steve (UC Davis), Alex Mackay (Australian National University), Jayson Orton (University of Oxford/University of Cape Town) and Teresa Steele (University of California, Davis)

[182] *Preliminary Report on a Middle Stone Age Open-Air Bifacial Point Manufacturing Site in Southern Namaqualand, South Africa*
Recent attention has focused on Middle Stone Age bifacial-point assemblages from stratified contexts, because of their potential as chronological markers (as the "Still Bay") and association with unique human behaviors. We analyzed 60 bifacial points identified at Soutfontein 1, an open-air site located in the Knersvlakte of southern Namaqualand. The majority were made on white-vein quartz, and the remainder on silcrete. Patterns of shape and retouch differ between the materials, and the high abundance of locally available quartz, the variation in retouch invasiveness, and breakage patterns suggest that quartz bifacial points were manufactured on-site.

Schwartz, Steve [182] see *Steele, Teresa E.*

Scott, Ann (The University of Texas at Austin)

[148] *Caves, Rituals, and Speleothems: The Utilization of Space at Actun Yaxteel Ahau, Belize*

For the last two decades archaeologists have noted that activity areas in Maya caves are often associated with drip water formations.

Recent ethnoarchaeological data suggest that speleothem columns are particularly significant features. During the survey of the upper passage of Actun Yaxteel Ahau, the author documented evidence of intensive activity around two such columns. One was part of a larger complex that included a substantial chamber enclosed by a curtain of low hanging stalactites. At the base of some stalactites were pools where cave pearls formed and cave pearls were found deposited in cultural contexts within the cave.

[148] *First Organizer*; [107] *First Chair*

Scott, Douglas (University of Nebraska- Lincoln) and Peter Bleed (University of Nebraska-Lincoln)

[171] *Carbines and Cannon: Archaeological Investigations of the February 1865 Battle of Rush Creek, Nebraska*

Elements of Ohio and Iowa Volunteer Cavalry units pursued a large band of Cheyenne and Lakota following the Battle of Mud Springs in early February 1865. The soldiers caught the Indians at the mouth of Rush Creek, currently Cedar Creek, on the North Platte River in western Nebraska. As one soldier quipped catching the band was not hard but there was a hard time letting them go. The 150 soldiers found themselves surrounded by nearly 2000 warriors. Long range small arms fire was exchanged until a mounted charge was made by the troopers. They failed to dislodge the warriors and a 12pdr Mountain Howitzer was brought into play that effectively ended the battle. Archaeological investigations of the contested landscape clearly demonstrate how the soldiers and warriors successfully employed landscape features to protect themselves in this battle resulting in minimal losses to both sides.

[69] *Discussant*

Scott, Douglas [220] see Bleed, Peter

Scott, Elizabeth (Illinois State University)

[125] *Archaeology in Ste. Genevieve: Revealing French Cultural Traditions on the American Frontier*

Established by the French in the late 1780s, the present town of Ste. Genevieve, Missouri, remained overwhelmingly French in character well into the 1830s, despite ever increasing numbers of Anglo-American settlers. A persistence of French cultural traditions may be seen in its vernacular architecture, legal practices, language, and religion. Most of the material culture recovered archaeologically, however, is British or Anglo-American in origin. This paper uses architectural and archaeological evidence to explore ways in which we can "see" French traditions in the cultural landscape of town lots and the activities occurring there, traditions often overlooked on America's western frontier.

[125] *First Chair*

Scott, Rachel (Arizona State University)

[243] *Disease Patterning in Early Medieval Ireland*

Scholars have long studied the occurrence of disease in early medieval Ireland, using specific data to create a general portrayal of human health. While historical annals document periodic famines and pestilences, human skeletal analysis reveals evidence for infection and systemic stress. This paper refines current understanding of health and disease in early Ireland by examining differences among communities across the island and among individuals within communities. How did social, environmental, and biological factors affect the patterning of disease? The consideration of such patterns elucidates more than health, also illuminating social interaction, gender identity, and lived experience in early medieval Ireland.

Scudder, Kelley (University of South Florida)

[170] *Archaeological Revolution on a Small Island Nation in the Twenty-first Century: A Grass-Roots Approach to Cultural Resource Management on the Island of Nevis*

During the past few years on the island of Nevis, the efforts of a handful of community members and archaeologists have resulted in the development of a comprehensive community-based cultural resource management program that have dramatically changed the way in which archaeological sites are conserved. The impact of these

efforts extends well beyond the shores of this small island nation to nations throughout the Atlantic all the way to Africa. This case study examines how small island nation communities, with limited revenue can have a profound impact on the conservation of archaeological sites and heritage resources, locally and globally.

Scudder, Kristen

[5] *An Investigation of Turtle Use at Isla Civituk, Campeche, Mexico*
Previous research in Mesoamerican fauna analysis has contributed insights into animal resource use, but Maya turtle use remains unexamined. Turtle shell is recovered from almost every Maya archaeological site and in some of these archaeofauna assemblages, out of the class of reptiles, turtle is the most common species recovered. The primary objective of my research is to establish an archaeological model of exploitation of the turtles recovered from Isla Civituk (A.D. 900-1525) that includes what species or families were recovered and used, methods of procurement and discard and finally, overall their relative importance to the Isla Civituk Maya.

Seamont, Morgan (University of Colorado) and Maxine McBrinn (PaleoCultural Research Group)

[118] *Research Paradigms in the Desert West: Regions and Regimes*
Archaeologists working in the Great Basin and in the Southwest examine a past dominated by hunters and gatherers for much of its duration, where people contended with aridity, patchy resources, and topographic variability. Despite these commonalities, researchers in these two regions are strongly influenced by longstanding professional traditions and often rely on distinctive tool sets, even when posing parallel questions. While each research perspective contributes to our understanding of the past, using a variety of approaches creates a more robust and complete picture of the early peoples of the Desert West.

Searcy, Michael (University of Oklahoma)

[199] *Contextual Variation of Mesoamerican Iconography in the Southwest*

Archaeologists have worked to define the relationship between Mesoamerica and the Southwest and how it affected Southwestern communities for decades. Using iconographical analysis of motifs found on pottery that was produced between A.D. 1200-1450, this paper examines how Mesoamerica may have differentially affected sociopolitical organization in the Southwest among the Salado and Chihuahuan traditions. I analyze variation in the types and distribution of Mesoamerican iconography associated with hierarchical and non-hierarchical communities in order to determine whether the integration of foreign symbols was implemented to promote group solidarity through religious association or to help elites legitimize their authority.

Sears, Erin (University of Kentucky)

[229] *It's the Little Things in Life: Ceramic Figurines at the Midpoint of the Maya World*

The creation of Maya portable art, as exemplified in ceramic figurines, can be viewed as a passive reflection of cultural norms or as a dynamic expression involving the negotiation of identity and the manipulation of cultural boundaries. At a simple level, the demonstration that figurines were made at one location and moved to another suggests contact between social nodes. When this movement is placed within the context of shifting relationships along different trade and riverine systems, the discovery of figurine fragments take a more active role.

Sebastian, Lynne (SRI Foundation) [158] Discussant [130] Discussant

Sedig, Jakob (University of Colorado)

[213] *The Function of Projectile Points: Uses Outside of the Realm of Hunting and War*

Projectile Points are often assumed to have functioned as devices for hunting or as weapons of war. Using cross-cultural ethnographic data my research has identified a much wider range of functions to which

projectile points may have been put, including ceremonial and medicinal purposes. This paper will discuss these varied functions and present a set of measures to more accurately assess the function of prehistoric projectile points. Finally, I use data on projectile points from the Northern San Juan region of the American Southwest to evaluate the utility of these measures for determining projectile point function.

Seebach, John (Sul Ross State University)

[21] *The Acquisition and Use of Lithic Material during the Paleoindian Period in Trans-Pecos, Texas*

The Paleoindian occupation of Trans-Pecos, Texas may have been motivated by a single resource: lithic material. Early Paleoindians utilized many local sources, especially those available in the region's northern half. Acquisition appears less regionally circumspect during the Late Paleoindian era. Extra-limital materials are found within the sample, minimally indicating previously visited quarries. Even still, the prodigious number of stone sources found within the geologically heterogeneous Trans-Pecos stymies the estimation of mobility ranges. The Trans-Pecos record instead implores us to model behavior at a scale beyond the de facto seasonal round that has come to typify Paleoindian research.

Seeman, Mark (Kent State University) [176] Discussant

Segura Llanos, Rafael and Izumi Shimada (Southern Illinois University, Carbondale)

[18] *Pachacamac as an Embodiment of the Water and Life Cycle*
Pachacamac, one of the most revered Andean huacas, is sited in a unique setting where three major bodies of water converge: the Pacific, the Lurín River, and the Urpi Wachak Lagoon. Temples built at different moments are situated to have direct visual access to them. The exterior configuration of the Old Pachacamac Temple emulates that of *Spondylus princeps*. These observations together indicate a close symbolic linkage with water. We examine archaeological and paleoenvironmental data from our recent research at Pachacamac for their interrelations and argue sacrificial and funerary practices at the site centered on life, death, and rebirth.

Seinfeld, Daniel (Florida State University)

[55] *Carbon Isotope Analysis of Ceramics from Two Sites in Mesoamerica*

Bulk stable carbon isotope analysis offers a relatively fast and inexpensive method for determining the proportion of maize used in ancient vessels. Previous work has demonstrated the effectiveness of this method for determining maize use patterns between classes of ceramics from a single archaeological context, a midden at the Olmec site of San Andrés, Tabasco, Mexico. This paper explores the wider applicability of bulk stable carbon isotope analysis by describing results that compare maize-use patterns between different time periods at the Maya site of San Estevan, Belize.

Seinfeld, Daniel [5] see Rosenswig, Robert M.

Sellen, Adam (Universidad Nacional Autónoma de México) and Lyneth Lowe (Universidad Nacional Autónoma de México)

[88] *A Passion for Collecting: The Archaeological Cabinet of Don Florentino Jimeno, Campeche, Mexico*

In the second half of the nineteenth century, Florentino Jimeno, a Spanish shopkeeper living in Campeche, amassed over 6,000 archaeological specimens from the region, reflecting his deep passion for the pre-Hispanic past and its material evidence. By analyzing his catalogs we have recuperated valuable information on the characteristics and provenience of the objects, and more fully understand his work in developing a functional classification based on typologies that was influenced by the intellectual criteria of the time. In this paper we will explore distinct facets of this energetic collector, and will try to explain the ultimate fate of his holding.

Sellet, Frederic (University of Northern Colorado), Dennis Stanford (Smithsonian Institution) and Pegi Jodry (Smithsonian

Institution)

[72] *"Ceci n'est Pas une Pipe ?": a Possible Paleoindian Pipe from the Lindenmeier Site*

A recent analysis of the Lindenmeier collection, collected by Frank Roberts from 1934 to 1940 and curated at the Smithsonian Institution, revealed an unusual modified stone concretion. The object is a rhyzo-concretion that has been transformed by drilling. It is similar in shape and size to tubular pipes occurring in various archaeological contexts across North America from Paleoindian to proto-historic times. This paper evaluates the possible function and age of the Lindenmeier object. Is it a Folsom pipe?

Senn, Matthew [11] see McCorriston, Joy

Sepulveda, Marcela (Universidad de Tarapaca) and Eric Laval (Ingenieur d'Etude, C2RMF, Paris)

[23] *Trabajo interdisciplinario para abordar el estudio de las pinturas rupestres*

Se presentan resultados de análisis físico-químicos de pinturas rupestres del norte de Chile obtenidos de la colaboración e investigación desarrollada por arqueólogos, químicos y conservadores. Este trabajo, elaborado desde un enfoque interdisciplinario y una mirada comparativa, nos permite visualizar cuan importante resulta homogeneizar lenguajes entre las diferentes disciplinas y reunir el tipo de información que cada una puede generar en la resolución de problemáticas arqueológicas, en este caso la tecnología o procesos productivos ligados a la confección de las pinturas. La identificación elemental (por SEM-EDX) de los componentes de las pinturas de sitio de Vilacaurani permite evidenciar diferentes elementos, naturaleza del pigmento, tamaños de compuestos y homogeneidad en las mezclas, que otorgan relevantes evidencias sobre los procesos de producción de las pinturas.

[23] Second Organizer

Serafin, Stanley (Tulane University)

[20] *Taphonomy of an Assemblage of Burned and Battered Human Remains at Mayapán*

This paper presents results of taphonomic analysis of an assemblage of burned and battered human remains from the important late Maya center of Mayapán. Basic demographic parameters such as MNI, age and sex are presented. Natural and cultural taphonomic factors, such as tool marks, breakage patterns and thermal alteration, are quantified to demonstrate the relative contribution of each. Comparison is made with highly fragmented human assemblages reported elsewhere in the Maya area where conflicting interpretations of violence and burial desecration have been made. Implications of the present findings for this debate are expounded.

Serangeli, Jordi, Nicholas Conard (University of Tuebingen) and Utz Böhner (University of Tuebingen)

[205] *The Digging of the DB Pillar in Schoeningen – Lower Saxony, Germany*

Since July 2008 the last phase of excavation has started at the opencast mine in Schöningen. The aim of this logistically complex project is to save the "cultural landscape" before the bucket-wheel excavators destroy the layers. Remains from the iron age, the Neolithic and the Lower Palaeolithic have been saved and documented. We emphasize here the discovery of some wooden and bone artifacts in addition to many faunal remains from an interglacial between the Elster and Saalian ice ages. We integrate these finds with studies of the quaternary geology and ecology to contextualize the use of past landscapes.

Serra, Mari (IIA-UNAM), J. Carlos Lazcano Arce (Coordinación de Humanidades, UNAM) and Mónica Blanco (Librería Jalil)

[221] *Obsidian and rituals at Xochitecatl-Cacaxtla, Tlaxcala*

At Xochitecatl-Cacaxtla there have been important discoveries showing ceremonial uses of obsidian, like offerings of knives found in cists located in strategic places in the ceremonial buildings, offerings associated with burials, and needles used for autosacrifice located in

domestic contexts. Some of these instruments are represented in the "Mural de la Batalla" in Cacaxtla, where warriors carry obsidian knives very similar to those in the offerings from the buildings. There is evidence of local manufacture of obsidian blades and spearheads; however it is probable that the ceremonial knives came from other sites, implying the presence of a ceremonial exchange network.

Shackley, M. Steven [60] *see Dillian, Carolyn*

Shafer, Charles F. [8] *see Skinner, Anne*

Sharer, Robert (Penn Museum)

[218] *The Middle East is a Long Way Away: Working with Will in El Salvador in the 1960s*

The foundations for archaeology in El Salvador were laid in the 1940s by Longyear's investigations in eastern El Salvador and Boggs' excavations at Tazumal. But progress ended in the mid 1950s when the government cancelled archaeological projects at Atiquizaya by Wolfgang Haberland and Chalchuapa by William Coe. After a decade hiatus, research was revived by projects by Will Andrews at Quelepa and myself at Chalchuapa. Although the origins of these projects were very different, their contributions opened the door for the succession of archaeologists, foreign and domestic, that have enriched our understanding of PreColumbian El Salvador to the present day.

[218] *Discussant*

Sharon, Gonen (Institute of Archaeology, The Hebrew University)

[58] *Reflecting on the Levallois Core Method in the Acheulian*

The presence of the Levallois core method has been documented in many Acheulian assemblages along the entire geographical distribution of the Acheulian. Discussion of the Levallois is hampered by the fact that the definition of Levallois cores and products is insufficiently precise and far from consensus. There is an obvious divergence between the Acheulian and the Mousterian Levallois. I will explore some of the features exemplifying this divergence and examine their potential cause(s) in light of the new data available for Acheulian core technology and through its comparison to the Mousterian Levallois as described primarily from the Levant and Europe.

Sharp, Emily (Vanderbilt University) and Tiffany Tung (Vanderbilt University)

[137] *An Accident Waiting to Happen?: Violent and Accidental Injuries among Wari and post-Wari Populations in the Central Andes*

The dissolution of the Wari empire ca. AD 1000 had a profound impact on the health and lifeways of former inhabitants, particularly in the imperial heartland, where there was an apparent intensification of violent conflict. This study examines how other facets of life were affected by comparing the frequency and distribution of postcranial fractures between a Wari and post-Wari site to document changes in physical activity patterns and violent acts. Results show a temporal increase in fractures of the arms, legs, and thorax, likely related to warfare and subsistence activities in highland terrain.

Sharp, Robert (The Art Institute of Chicago), David Dye (University of Memphis) and Kevin E. Smith (Middle Tennessee State University)

[115] *The Classic Braden Style and Its Legacy in the Nashville Basin*
The Classic Braden style that issued from Cahokia was an important source of inspiration throughout the Southeast, as evidenced by about A.D. 1200 in the Nashville Basin in a variety of media, including ceramics, stone sculpture, symbolic weaponry, and marine shell. In this paper, we describe the specific iconographic connections identified between the two regions and offer our current thoughts on the changing nature of this relationship over time. While research is ongoing, a clearer picture begins to emerge of a regional iconographic style centered on Nashville.

Sharp, William

[249] *An Example of Shifting Archaeological Methods and Interpretation illustrated by Investigations of a Famous Kentucky Site*
Fox Farm is the premier archaeological manifestation of late prehistoric, tribal, village farming people occupying north central Kentucky for seven to eight hundred years prior to modern settlement. The site was referred to in several accounts and investigated by the American Museum of Natural History in the nineteenth century. In the twentieth century, James B. Griffin used materials from Fox Farm in his publication *The Fort Ancient Aspect: Its Cultural and Chronological Position in Mississippi Valley Archaeology*. This paper examines earlier, later, and the latest investigations to illustrate changes in archaeological method and theory.

Sharpe, Ashley (University of Florida) and William Saturno (Boston University)

[64] *From Ritual to Rubbish: The Maya Zooarchaeological Record of San Bartolo, Guatemala*

Faunal remains from archaeological sites are a significant yet commonly overlooked source of information that provides unique insights into the social habits of a culture. This study was performed to examine these relations as they pertain to the Maya of San Bartolo, Guatemala, by analyzing the animal bones from the past 2002-2007 field seasons. Analyses focused on comparing taxa with their contexts during the site's Preclassic and Late Classic occupations, in order to better understand how subsistence practices, tool production, and ritual behavior changed through time and across social strata.

Sharratt, Nicola (University of Illinois at Chicago), Laure Dussubieux (Field Museum of Natural History), Mark Golitko (University of Illinois at Chicago), and P. Ryan Williams (Field Museum of Natural History)

[121] *Clay Procurement in the Middle Horizon; LA-ICP-MS Analysis of Wari and Tiwanaku Ceramics from the Moquegua Valley, Peru*
During the Middle Horizon (AD 600-1000), the Moquegua Valley, Peru was simultaneously occupied by both the Wari and the Tiwanaku states. Visual analysis of Middle Horizon ceramics indicates that Wari and Tiwanaku potters in the valley replicated the forms and styles of their respective heartlands. Data derived from LA-ICP-MS analysis of sherds demonstrates that Wari and Tiwanaku ceramics can be chemically as well as visually distinguished. Comparison of these data with five clay groups identified for Moquegua suggests that although colonists from both states exploited locally available clays, the clay sources utilized by Wari and Tiwanaku potters were distinct.

Shaw, Justine (College of the Redwoods) and Alberto Flores Colin (Escuela Nacional de Antropología e Historia)

[109] *Yo'okop's Sacbe 2: A Road to the Dead*

Although Yo'okop's Sacbe 2 was first known to researchers in 1969, it was never cleared and accurately mapped until 2008. These efforts revealed a 1.8-km roadway measuring up to 4 m tall with a number of interesting features, including a vaulted passage and associated structures. However, unlike the site's other sacbeob, which connect major architectural groups, Sacbe 2 terminates in a single pyramidal mound atop a simple platform. Based upon the scale of the causeway and the nature of the associated architecture, it is believed that the components may have been used to conduct elite mortuary rituals.

Shaw, Leslie (Bowdoin College)

[38] *A Century of Maine Avocational Archaeology*

The state of Maine has a record of over 12,000 years of occupation, leaving tens of thousands of archaeological sites, including historic sites dating from the arrival of Europeans in the 16th century. The avocational archaeologists of the state have been instrumental in locating and recording the majority of sites on the state registry. The partnerships between avocational, professional archaeologists, and Native Americans have had their ups-and-downs over the past century, but today there is a strong effort to work together on locating and protecting Maine's archaeological heritage.

Shea, Beth [215] *see Pirkil, Mary E*

Shea, Daniel E. [23] *see Rivera, Mario A.*

Shea, Holly (Central Washington University)

[203] *Projectile Point Typologies on the Columbia Plateau and the Archaeology of the Grissom Site in Kittitas County, Washington*
The focus of the study in progress is the examination of more than 300 projectile points from the Grissom site near Ellensburg, Washington. The analysis will include use of metrics and Carter's 2002 dichotomous key to assign point type as well as description of certain attributes of the points. I hypothesize that the collection will show a broad time range with heavy focus on the late Prehistoric period and extensive use of local raw materials. My analysis will determine the research potential inherent in the collection and will examine how the Grissom site fits into existing Columbia Plateau typologies.

Shea, John (Stony Brook University)

[58] *Why Didn't Neandertals Make Projectile Weapons?*
Neandertals were effective hunters. Yet, for more than a century, archaeologists have searched in vain among Middle Paleolithic stone tool assemblages for stone and bone tools comparable to the projectile armatures used by recent humans. Neandertals' failure to develop projectile technology remains an enigma. This paper explores possible explanations for Neandertals' failure to develop effective projectile technology. It considers, and rejects, longstanding hypotheses of insufficient intelligence, biomechanical inadequacy, interpretations of hafted stone spear points as projectile points, and claims that Middle Pleistocene wooden spears were projectile weapons. This paper proposes a new explanation based on energetic and time-budgeting considerations.

Shea, John [82] *see Sisk, Matthew L.*; [53] *see Hildebrand, Elisabeth*

Shearn, Isaac (University of Florida)

[201] *The Archaeology of Dominica: Using GIS to Create a Unique Predictive Model*
Recent archaeological surveys conducted in Dominica suggest that across the mosaic of ecological micro-niches that characterize Dominica's varied geological zones and extreme topography, archaeological sites can be found in many different geographical contexts. Furthermore, the North American CRM predictive model is inadequate for predicting or explaining the locations of these sites. Here, several archaeological sites and their ecological contexts are described and mapped using GIS. GIS is used to create a unique predictive model for Dominica, which takes into consideration the highly varied ecological micro-niches, the extreme topography, as well as historical and cultural factors.

Sheets, Payson (University of Colorado)

[5] *What Were the Maya Doing with All That Manioc at Ceren?*
Recent excavations at Ceren encountered manioc fields of various cultivators, where over 10 metric tons of tubers were harvested about a week before the Loma Caldera eruption. How were the tubers processed and consumed? One possibility is cutting, drying, and grinding into "almidon" powder, and some artifactual evidence was found in terms of a possible manioc processing toolkit. Another possibility is masticating and fermenting for the village ceremony that was taking place when the eruption struck. Yet another is local consumption, but that was limited by small population size. Another is transportation to other settlements, but that too was limited.

Shelach, Gideon (Dept. of East Asian Studies, The Hebrew University) [95] *Discussant*

Shelton, China (Boston University)

[34] *Food and Identity in the Iron Age Central Apennines: Paleoethnobotanical Results from the Sangro Valley Project*
An analysis of paleoethnobotanical material collected from an agricultural workspace dating to the 7th-5th centuries B.C. in the

Italian central Apennines has provided new evidence for the nature of subsistence and economy in this mountainous region. Previously, there was little direct evidence available to investigate how the pre- and protohistoric populations in this area negotiated their place within this difficult landscape; results now suggest that they were growing and eating a crop (bitter vetch) that has been regarded as fodder or famine food in richer agricultural zones. Because differences in diet contribute to the definition of distinct social groups, it is possible that the visible distinction in diet shown by the paleoethnobotanical remains may in part have underlain the social divisions historically evident between the highland (Samnite) and lowland cultures (the Romans, among others).

Shelton, Rebecca [99] *see Morton, Shawn G.*

Shepard, Rita (Cotsen Institute of Archaeology, UCLA)

[246] *Ephemeral Pithouses at Viking Settlement Farmsteads in Iceland*

The SASS project has discovered several instances of wall remnants and apparent floors associated with cuts dug through the original ground surface into prehistoric tephra. Our research in Skagafjörður has shown that these apparent pithouses are much more common than previously thought. These constructions were adjacent to the larger and more permanent buildings. At sites with more complete evidence, similar structures have been called "pithouses" and have had a variety of interpretations. This paper will explore possible explanations for these features, including cult houses, weaving houses, refuse pits, and early temporary dwellings.

Shepardson, Britton [259] *see Lockwood, Christopher*

Shephard, Christopher [225] *see Atkins, Ashley*

Sheppard, Jonathan (Simon Fraser University)

[39] *Settlement Patterns in Relation to Resource Acquisition & Complexity in the Mid-Fraser Region of B.C.*

Bringing together geographical and archaeological frameworks, this poster presents the patterning of late prehistoric housepit villages along the Mid-Fraser of British Columbia, analyzing the relationship between resource proximity and the distribution of settlement size. Past theories regarding emerging social complexity in the region suggest that the highly diverse socioeconomy, and large size of settlements such as Keatley Creek, are a product of the abundance of particular extractable resources. This poster examines additional resources and factors that contributed to social complexity, taking into account a greater number of settlements and resources in the region than those previously studied.

Sheppard, Paul [161] *see Speakman, Robert J.*

Sheptak, Rus [65] *see Gomez, Esteban M.*

Sherwood, Sarah (Dickinson College), Alan Cressler (US Geological Survey), Sarah A. Blankenship (University of Tennessee, Knoxville), Jan Simek (University of Tennessee, Knoxville) and Nicholas Herrmann (Mississippi State University)

[22] *People in High Places: Human Images in Tennessee Rock Art*
Over the past several years, a number of human figures have been identified in open-air prehistoric rock art sites from the southern Cumberland Plateau in Tennessee, sometimes in association with other images, often alone or in small clusters. These human effigies share important characteristics, including aspects of site location, pigment color, and character attitude. These similarities imply coherence in subject matter. Regional comparisons of these human figures with those seen in caves and in other rock art sites suggest that they are part of a wider late prehistoric iconography that was "mapped" onto the landscape on a very large scale.

Sherwood, Sarah [52] *see Newsom, Lee A.*

Shillinglaw, Katherine (University of Wisconsin - Milwaukee)

[124] *Analysis of Juvenile Remains from the Milwaukee County Poor Farm Cemetery*

In 1991 and 1992, 586 juvenile burials were recovered from the Milwaukee County Poor Farm Cemetery. The cemetery exhibits temporally and spatially distinct areas for burial of juveniles. Analysis of a 30% sample of juvenile burials from two temporally distinct areas was completed to compare age, preservation, and grave goods. The late 19th and early 20th century was a time of change in the way children were doctored and how labor was approached. Social programs were being used to actively reduce infant mortality. This poster contextualizes the apparent poor health of juveniles in a time of increasing health awareness.

Shiltz, Susanne [27] see *Shuttleworth, Andy*

Shimada, Izumi (Southern Illinois University)

[67] *Shell Artifact Manufacturing: Insight from a Late Horizon Shellworker's Tool Kit*

A Late Horizon burial accompanied by what appears to be his complete tool kit and Spondylus, Conus and other shell artifacts at various stages of manufacture was fortuitously discovered on the outskirts of the Inka regional administrative center of La Viña in the mid-La Leche Valley on the north coast of Peru. This paper presents a reconstruction of the manufacturing technology and sequence for a variety of small shell artifacts. This manufacturing process is compared to those of the earlier Moche and Sicán cultures to define a possible north coast technological style and tropical shell use pattern and value.

[18] see *Segura Llanos, Rafael*; [23] *Discussant*; [67] *Discussant*
Shimelmitz, Ron (Tel Aviv University; University of Arizona), Avi Gopher (Tel Aviv University) and Ran Barkai (Tel Aviv University)

[58] *Serial Production of Predetermined Blades from Late Lower Paleolithic Qesem Cave, Israel*

Amudian blade production appears throughout the 7.5m sequence of the Acheulo-Yabrudian site of Qesem Cave (400-210 kyr). 3,000 blades and waste from five assemblages were analyzed, revealing the unique character of this early blade technology. Major characteristics include the use of flint slabs as cores and the serial production of central blades, cortical blades and naturally backed knives in a single reduction sequence with follow-through blows. This efficient manufacture of pre-Mousterian end-products with a predetermined shape is in the heart of the Amudian industry and is considered an aspect of modern human behavior as early as 400 kyr ago.

Shimer, Carol [211] see *Edwards, Susan R.*

Shipton, Ceri (Monash University)

[256] *The Evolution of Skill in the Acheulean*

The origins of mode 3 prepared core technology have been highlighted as a critical watershed in the evolution of hominin cognition; however prepared core technologies are actually widespread during the Acheulean. Experiments indicate that mastery of elementary movements presents the greatest challenge in knapping. In the case of Acheulean bifaces, striking sufficiently invasive flakes to thin the tool without breaking it requires lengthy practise and is only achieved by the most skilled modern knappers. Using between assemblage differences in the thickness to width ratio of bifaces, we argue that there was an evolutionary trajectory for increasing skill during the Acheulean.

Shirar, Scott (University of Alaska Museum of the North), Jeff Rasic (University of Alaska Museum of the North) and Pat Druckenmiller (University of Alaska Museum of the North)

[79] *A Synthesis of Prehistoric Dog and Wolf Remains in Alaska*

Past studies highlight the important roles that dogs played in prehistoric cultures. They were used not only for hunting but also as pack animals, sentries, and even as a food source. The importance of domesticated dogs in Alaska historically and during the last 500 years is undeniable. However, there is scant evidence for dogs in Alaska

prior to the Late Holocene despite evidence suggesting the first colonists of North America brought dogs with them. This paper synthesizes the current evidence regarding dog domestication in Alaska and compiles radiocarbon dates for dog and wolf remains (including one new specimen) found throughout the state.

Shock, Myrtle (UC Santa Barbara)

[47] *Archaeobotanical Remains from features at Lapa dos Bichos: The Role of Plants in the Diet of Brazilian 'Agriculturalists'*

Dry conditions in southeastern Brazilian rock shelters have resulted in excellent preservation of archaeobotanical remains. The prevalence of domesticated and native plants was examined in twenty five features, from the site of Lapa dos Bichos, resulting in a detailed characterization of diet from 500 to 2500 BP. The results indicate that native plants remained as a large portion of the diet. Thus our record of the transition to agricultural practices in this region is more detailed and suggests a mixed economy.

[142] see *Silva, Francini Medeiros*

Sholts, Sabrina (University of California, Santa Barbara), Dennis Stanford (National Museum of Natural History), Louise Flores (University of California, Santa Barbara), Phillip Walker (University of California, Santa Barbara)

[122] *Analyzing Clovis Points using Digital Morphometrics: Evidence for Direct Transmission of Technological Knowledge*

The Clovis point is the principal diagnostic artifact of the earliest well-documented archaeological complex in North America. In only a few hundred years, Clovis points spread throughout the continent, but the archaeological record provides few clues of how they traveled so far, so fast. In this study, we analyzed flake scar patterns of Clovis points using 3D laser scanner models and digital morphometrics. Clovis points from different sites exhibit greater bifacial uniformity than those replicated by a single modern knapper, indicating that Clovis manufacturing technology was not easily copied and most likely required direct transmission of knowledge between groups.

Sholts, Sabrina [122] see *Kuzminsky, Susan C.*

Short, Laura (Texas A&M) and Laura O'Halloran (Texas A&M)

[71] *Acorn processing in Texas*

Depending on how one counts, there are over 200 species of oaks in North America. The oaks' defining feature is the acorn. This hard little fruit has provisioned many different groups throughout North America for millennia prior to European contact. This poster explores acorns as a food source, and their use among pre-Columbian Texans in particular. Significantly, there is very little direct archaeological evidence for acorn consumption—research relies on a combination of ethnographic data and the presence of processing tools and/or preserved acorn shells. Residual acorn starch may provide strong direct evidence of acorn processing.

Shurack, Nikki (National Park Service)

[37] *The Role of Ceramic Stylistic Variation in an Aggregated Setting in Southwest Colorado*

The nature and extent of group interaction throughout the transition to more complex social arrangements during the Pueblo I period in the Southwestern Colorado region remains poorly understood. This research examines ceramic stylistic variation in an aggregated environment dating to AD 750-850 near Durango, Colorado. Excavation of over 80 pit structures yielded nearly 100,000 ceramic sherds, including 80 intact or reconstructable white ware bowls. Analysis of design elements, structure, and layout reveal clues about the ethnic identity of converging groups. Changes in design style reflect changes in the manner of group interaction over time.

Shuttleworth, Andy (University of Liverpool), Larry Barham (University of Liverpool) and Susanne Shiltz (Oxford University)

[27] *Latitudinal Trends in Hunter-Gatherer Societies*

An analysis of over 30 hunter-gatherer societies from different climatic regions has highlighted several behavioral trends which are

linked to the latitudinal placement of a society. The analysis highlights specific behaviors such as kinship, art expression and spatial use which have not previously been linked to latitudinal location, and supports the work of Oswalt (1976) and Roscoe (2004). This paper emphasizes how latitude acts as a predictor for hunter-gatherer behaviour, and proposes how this variable can be used for modeling the behaviors of prehistoric populations of *H. sapiens* and *H. neanderthalensis*.

Siegel, Peter E. [97] *see Jones, John G.*

Sierra, Luis [87] *see Condon, Peter C.*

Sievers, Christine (University of the Witwatersrand, Johannesburg, SA)

[151] *Experiments with Fire and Carbonization of Buried Seeds*
Large frequencies of carbonized sedge nutlets were found in a dry shelter, Sibudu Cave, South Africa, that was occupied between 77,000 and 35,000 years ago. The nutlets were probably part of reed bedding that became burnt, perhaps post-depositionally. Experimental fires were designed to test the hypothesis. Below ground temperatures were recorded for different fuels, matrices, wind and ambient temperatures. Buried plant material carbonized at temperatures even as low as 160 °C when these were sustained for several hours. Thus fires built above ancient occupation floors can serendipitously carbonize and preserve seeds and other plant material long after its deposition.

Sievers, Colleen (BLM Rock Springs Field Office)

[223] *"I can hardly give you an idea of this wonderful place."*
The South Pass Area Historical Study was the first comprehensive analysis of historical documentation combined with intensive field analysis of 19th century activities along the trail ruts of the Oregon, California, Mormon Pioneer, and Pony Express National Historical Trails. The study resulted in the documentation of 108 miles of historic trail with more than 90% of the trail being easily identifiable with intact trail setting much as it was 150 years ago. South Pass played a critical role in the lives of half-a-million ordinary Americans between 1840 and 1870 on their way to new homes in the West.

Sievers, Colleen [75] *see Bryan, Karina*

Sievert, April [139] *see McKillop, Heather*

Silverman, Shari (Post Rain Arroyo)

[120] *Cultural Influences on Transportation and the Archaeological Record in Western North America*
Economic, environmental, and political factors influence transportation modes within western North America. Although these influences can be seen throughout the archaeological record, North American travelers currently experience it at an accelerated pace. Increasing costs of living, high gasoline prices, job loss and other economic stresses, intensified constraints across political borders, and city and rural infrastructures are altering the way people travel, and their destinations, work or otherwise. In addition, cultural changes, such as views on recycling and litter, alter the archaeological record.

Silverstein, Jay (JPAC/U of Hawaii), Daniel Jones (University College London) and Robert Littman (University of Hawaii)
[92] *Archaeology in the Nick of Time: Saving Graeco-Roman Thmuis, Egypt*

The surviving ruins at Tell Timai represent nearly an entire city with a history ranging from the dawn of Hellenistic Egypt to the coming of Islam. The once prominent Nile Delta center of trade, manufacturing, and politics amazingly still stands as a jumble of mudbrick buildings. Yet these structures which have endured so much history are yielding with ever-increasing rapidity to encroachment from the neighboring towns. Work begun in 2009 offers a hope of respite from the pending destruction and new insights into the organization of religion and economy of the Delta in Late Antiquity.

Simborth, Erika [188] *see Burkholder, Jo Ellen*

Simek, Jan (University of Tennessee)

[104] *Dark Pathways: Prehistoric Cave Art as Ritual Framework*
Detailed documentation in a number of southeast US prehistoric cave art sites has shown that these sites are organized in content and location on a cave-wide scale, suggestive of sequential or processional utilization. These cave art sites were not passive art expositions but rather active places where complex ceremonies were carried out and rituals performed. Similar organizational characteristics are present in the earlier cave art from southwest Europe, suggesting similar, active utilization of those caves in some of humanity's earliest ritual performances. Prehistoric cave art, thus, had both aesthetic and functional importance in these two cases.

Simek, Jan [62] *see Blankenship, Sarah A.; [22]* *see Sherwood, Sarah C.*

Simmons, Alan (University of Nevada Las Vegas)

[186] *The Earliest Prehistory of the Mediterranean Islands—New Developments from Cyprus*
Akrotiri Aetokremnos is a late Epipaleolithic site on the island of Cyprus that was excavated some 20 years ago. It is a contentious locality since it is currently is one of the oldest well-documented sites in the Mediterranean islands, and, more controversially, we have claimed that it represents a rare Pleistocene extinction scenario that directly implicates humans and pygmy hippopotami. Recent investigations on the island have claimed contemporary or even earlier sites, and new studies at Aetokremnos itself have provided additional data. Particularly significant is evidence for the presence of human-imported pig at the site. This report summarizes these recent developments.

Simmons, Scott (University of North Carolina Wilmington)

[139] *Dispositions of the Dead: Spanish Contact Period Burial Patterns in the Southern Maya Lowlands*
Human burials examined at the ancient Maya site of Lamanai, Belize provide some insights into the impacts of Spanish colonialism on traditional Maya lifeways. In a great number of instances the Maya of Lamanai were buried in one of the site's Spanish colonial mission churches. Yet in other cases community residents were buried away from the churches in more traditional positions typical of interments dating from precolumbian times. The research presented here examines the contexts and dispositions of burials dating from Spanish contact at Lamanai and compares these with burial patterns reported from contemporaneous sites in the Southern Maya Lowlands.

Simms, Steven (Utah State University)

[248] *The Case for Fremont Villages and Cultural Complexity*
The Southwestern heritage of the Fremont, sedentism, and irrigation were acknowledged in the 1930s. Later efforts to distinguish the Fremont and more excavation indicated Fremont settlements were small, with little cultural complexity. These interpretations are suspect in their use of negative evidence and sampling. Arguments for Fremont complexity returned in the 1990s and evidence now exists for Fremont villages, residential cycling, and dispersed communities. The Fremont is part of a trend toward landscape scale pathways to inequality and complexity in social structure among farmers and some foragers in the Late Holocene Desert West, especially when populations peaked after 1500 B.P.

Simon, Arleyn (Arizona State University), Jennifer Huang (Bureau of Reclamation) and Tina Carpenter

[100] *Demarcation of the Landscape: Rock Art Evidence for Alliance, Conflict, and Subsistence at Perry Mesa, Arizona*
The villages of Perry Mesa, Arizona, occupied during the late AD 1200 – 1300s, are posited to have formed alliances to provide defenses for this high mesa and its agricultural production and stores. Ongoing rock art surveys at the Agua Fria National Monument by the ASU Deer Valley Rock Art Center sponsored by the BLM provide a

unique perspective on symbolic demarcation of the landscape near Baby Canyon Pueblo, Lost Jupiter, Sycamore Terrace, and Pueblo La Plata areas. We use survey results and regional comparisons to examine themes and styles of designs, landscape positioning, and issues of alliance, conflict, and subsistence.

Simon, Mary (Illinois Transportation Archaeological Research)

[83] *Indications for Middle Mississippian Period Plant Use from the Orendorf Site in Illinois*

Settlement D at the Orendorf site is part of a large, Middle Mississippian fortified town that was catastrophically burned some time around A.D. 1250. Consequently excavations conducted during the 1970's produced a wealth of macrobotanicals from a variety of contexts, including burned houses and internal pits. Analysis of these materials was re-initiated in 2009, and is ongoing. Here we summarize the results of work conducted to date and discuss some of the implications of these finds for understanding Middle Mississippian foodways, ceremony, and use of the local environment in the central Illinois River valley.

Simon, Nora (College of Wooster)

[184] *The Road to Salvation: Medieval Pilgrimage to Canterbury Cathedral*

This study examines the material remains along the popular medieval pilgrimage route to the shrine of Saint Thomas Becket at Canterbury Cathedral. The goal is to catalog the towns, sacred and secular facilities, and natural features along the route from Winchester to Canterbury. Locales and features are analyzed in terms of Renfrew's model for identifying sites of ritual importance, while the act of pilgrimage is described as a rite of passage using Turner's theory of liminality and *communitas*. The entire route is analyzed as a ritual, or sacred, landscape of late medieval England.

Simpson, Duane [150] see Scholl, Nathan C.

Simpson, Erik (Salmon Ruin - Division of Conservation Archaeology)

[152] *A Settlement Pattern Analysis of Adaptation and Continuity in the Upper San Juan and Gallina Highlands*

The populations of the Gallina region are considered to have their origins in the Upper San Juan region of northwestern New Mexico and southwestern Colorado. This interpretation has been hampered by an apparent occupational hiatus. A thirteen century analysis of settlement patterns from the two regions suggests that cultural continuity does exist and that the occupational hiatus is the result of research bias.

Simpson, Steve [202] see Dennett, Carrie L.

Sims, Marsha (Nat Resources Conserv Svc)

[249] *A Case of Avoidance is the Name and Snake Hunting is the Game, A Use for Scapula Hoes*

Avoiding cultural resources provides a means of mitigation. Some examples in this study show resources avoided and the complications, and the also benefits of hypotheses. This research supports previous hypotheses that humans reduced stone tools, flakes, and landscapes throughout the Plains and Rocky Mountains in the form of fauna such as snakes and birds similar to other areas of the U.S. Hunting techniques, culture history, and uses of scapula hoes demonstrate a connection to snake hunting, veneration of fauna established in past cultures, and hunting other fauna. The snake appears in the fluted symbol on Paleoindian points of past cultures. [249] *First Chair [249] First Chair*

Sinclair, Chloe (Santa Monica College), Brandon Lewis (Santa Monica College) and Scott Guzman (UCLA)

[112] *Examination of Elite Lineages at the Ancient Maya Site of La Milpa*

The Three Rivers Archaeological Project represents a regional research program aimed at elucidating the nature of Maya political, social, and economic integration. Toward this end, extensive research

is being undertaken at the primary center of La Milpa, located in northwestern Belize. As part of a multi-institutional investigation, we are examining the role of elite lineages within the developmental trajectory of La Milpa. Ongoing research at two separate courtyard groupings within the site epicenter has shed critical insight into the long-term historical development and overarching political economy of this polity.

Sindbaek, Soren (University of York, UK)

[113] *Broken Links and Black Boxes: Material Affiliations and Communication Networks In the Viking World*

Flows of communication in past human societies almost certainly had a character of complex, dynamic networks. Archaeology offers data, which preserve patterns of such networks, yet are anything but conventional sources on human interaction. Presenting fragmentary samples of material affiliations, their analysis resembles the famous 'Black Box' problem of electronics: Knowing only the outputs, can we reconstruct circuits that would generate the observed patterns? Issuing from a case-study of Viking-period interaction in the North Sea Region, this paper demonstrates how this problem can be negotiated by combining traditional, contextual interpretation of distribution maps with formal network analysis and modelling.

Sisk, Matthew (Stony Brook University) and John Shea (Stony Brook University)

[82] *The Use of Cross-Sectional Perimeter in Modeling Stone Projectile Point Use*

This paper continues recent work analyzing simple metrics of stone points as potential indicators of use as projectile armatures (arrowheads, spearthrower dart tips), thrusting or hand cast spear points. Previously a ballistics measurement, tip cross sectional area (TCSA), has been the primary metric classification of use. Here we use a related measure, tip cross sectional perimeter. It is felt that this is a better overall measure because when an arrowhead penetrates, the target is sliced and not pulverized (as with a bullet). Experimental and archaeological data will be presented and compared with studies using TCSA.

Skibo, James (Illinois State University) [208] First Organizer; [208] First Chair

Skinner, Anne (Williams College), Bonnie A. B. Blackwell (Williams College), Charles F. Shafer (Williams College), Pierre Guibert (Université de Bordeaux) and Tenzing Tsomo (RFK Science Research Institute)

[8] *ESR Dates for the Mousterian Layers and Neanderthal Infant at Roc de Marsal, Dordogne, France*

Roc de Marsal yielded an articulated Neanderthal infant skeleton and Quina Mousterian assemblages overlying those dominated by Levallois types. Using standard ESR, 23 teeth have been dated. External dose rates were measured by volumetrically averaged geochemical sedimentary analyses and TL dosimetry. The teeth's low U concentrations ensure that the ages are independent of the U uptake rate. Layer 2 dated at 45 ± 3 ka (OIS 3), Layer 4 at 78 ± 3 ka (OIS 4-5a boundary), and Layer 9 at 74 ± 3 ka. Layer 1 ages varied, probably due to proximity to large éboulis blocks or post-depositional disturbance.

Skinner, Anne R. [161] see Blickstein, Joel IB; [259] see Blackwell, Bonnie A. B.

Skousen, Benjamin (Brigham Young University)

[134] *The Meaning of "Monkey Pots" and their Implications for the Late to Terminal Classic Transition in the Mirador Basin*

Overall, this paper focuses on "monkey pots," a particular kind of pottery vessel found throughout the Maya world. In this study, two kinds of monkey pots from the Mirador Basin are examined – one from the Late Classic period (AD 680-800) and another from the Terminal Classic period (AD 780-830). I compare the functional, decorative, and contextual data for each type of monkey pot, infer the vessels' meaning to the ancient Maya, and determine whether these

meanings changed through time. Finally, I discuss the implications of these monkey pots for the Late to Terminal Classic transition in the Mirador Basin.

Slater, Donald (Brandeis University & Robert S. Peabody Museum)

[148] *Seeking Xibalba: Preliminary Investigations of the Central Yucatan Archaeological Cave Project (CYAC)*

CYAC's preliminary investigations have revealed a vast abundance of cave features within the Yaxcaba Municipal region of Yucatan, Mexico. The 50+ caves documented thus far, including caverns, rejolladas, cenotes, and rockshelters, represent merely a fraction of those visible via remote sensing. However, the data gathered from this sample is beginning to uncover interesting clues about the timeline and ritual use of the area's caves. Evidence of cave/chamber termination, and the discovery of offerings, cosmograms, ritual pathways, rock art, and unusually placed architectural elements, presents new opportunities for the interpretation of socio-political and religious power relations among the region's pre-Hispanic Maya.

Slaughter, Mark (Bureau of Reclamation), Laureen Perry (Bureau of Reclamation), Pat Hicks (Bureau of Reclamation) and Renee Kolvet (Bureau of Reclamation)

[211] *Site Visibility along the Lower Colorado River*

Despite being arguably the most reliable source of water in the arid Southwest, research along the lower Colorado River has uncovered limited evidence of prehistoric Native American habitation. The ethnographic and ethnohistoric data indicate that significant populations were in-place when contacted by Europeans and later explorers. This paper explores natural and cultural processes that can help explain limited site visibility along the lower Colorado River.

Slaughter, Mark [200] *see Jensen, Eva*

Sload, Rebecca

[107] *The Iconography of the Underworld at Teotihuacan, Mexico*

Logically, it appears that the cave under the Pyramid of the Sun has ideological precursors outside of Teotihuacan because its initial use was quite early in the city's history. The cave's construction apparently mostly contemporaneously and the lack of any known earlier ritual caves inside the city limits indicate beliefs that were established at conception and originated elsewhere. Formative period cave iconography is explored and similarities are found between Olmec and Izapa cultures and Teotihuacan in the way caves and the underworld are represented. That iconography is presented here, along with the practices and beliefs it suggests.

Slobodina, Natalia (University of Washington)

[194] *Explaining Social Complexity in the Bering Strait Region*

While most fieldwork in the Bering Strait region took place within a unilinear evolutionary framework, recent reevaluation of the radiocarbon dates and other data provides a picture of a patchwork of different concurrent polities which were interacting through trade, warfare, intermarriage, or slavery. Mason (1998) uses Renfrew's (1986) Peer Polity Interaction model in his attempt to explain the region's complicated interactions, but this model does not explain their emergence. It is suggested that a contextual explanation, similar to Bunge's (2004) "model of a model" will eventually be accepted for the development of peer polities and social complexity in the Bering Strait.

[194] Second Chair [194] Second Organizer

Small, David (Lehigh University)

[78] *Can we Develop a Structural Cross-Cultural Archaeology?*

The advent of post-processual archaeology and the salient features of current structuralist approaches to anthropology appear to make a cross-cultural archaeology which seeks to understand social structure in cultural comparison almost impossible. In this paper I will outline an approach that develops structural models that are amenable to cross cultural study, and indicate how we can use them in future work. My examples will come from the Classical Mediterranean and the Mayan

New World.

[78] First Organizer, [78] First Chair

Smallwood, Ashley (Center for the Study of the First Americans Texas A&M University), D. Shane Miller (University of Arizona) and Doug Sain (Eastern New Mexico University)

[90] *An Overview of the Clovis Lithic Assemblage from the Topper Site, South Carolina*

The Topper site is one of only two excavated Clovis sites in the Atlantic Coastal Plain of Georgia and the Carolinas. The buried Clovis lithic assemblage includes discarded tools and debitage that resulted from the production of bifaces, blades, and a variety of unifacial tools. This paper will review the lithic record at the Topper quarry to present aspects of the toolkit and technological organization used by the site's Clovis occupants. With the dearth of stratified sites in the Southeast, Topper adds new information about the late-Pleistocene occupation of eastern North America.

Smith, Abigail (Washington University in St. Louis)

[214] *Archaeological Population Origins, As Revealed by Isotopic Analysis*

The remains of six individuals were excavated on Gorée Island, Senegal, a site with intense Afro-European interactions throughout the historic period. Strontium, carbon, and oxygen isotope ratios were calculated from tooth enamel to assess geographic origins. $^{87}\text{Sr}/^{86}\text{Sr}$ and $\delta^{13}\text{C}$ values for all but one individual cluster closely and suggest local, African origins. The divergent individual has markedly higher $^{87}\text{Sr}/^{86}\text{Sr}$ and lower $\delta^{13}\text{C}$ values than the others, possibly resulting from European origins. $\delta^{18}\text{O}$ discrimination was not marked. These results highlight the potential of isotopic analysis to answer questions of origin in similar heterogeneous contexts, especially with increased sample size.

Smith, Angele (Univ of Northern British Columbia)

[117] *Archaeological Landscapes: Exploring Scale, Movement and the Politics of Spatiality*

Spatial analysis has long been considered fundamental to archaeology. More recently archaeologists espousing a more phenomenological approach, contributed to the growing literature of spatial theory by examine social landscapes at a more humanistic and intimate scale. I am concerned with space and spatial relations in understanding social interactions of power. Spatial/social relations are about spatial barriers, spatial opportunities, and/or spatial symbols that exist physically, socially and ideologically. Using case studies from both 19th century and contemporary Ireland, I will explore the use of spatially driven research concerning the politics and representation of spatial scales and the movement across these scales.

Smith, Bruce (Smithsonian Institution) [215] Discussant

Smith, C. Wayne [139] see McKillop, Heather

Smith, Cameron [203] see Ames, Kenneth M.

Smith, Christy (HDR | e2M)

[165] *Partners in Cultural Resources Management*

Tribal consultation is an integral element of cultural resources programs. HDR | e2M has partnered with the Wyoming Army National Guard (WYARNG), and over ten Native American Tribes to successfully integrate American Indian perspectives, cultural insight, and management recommendations into a cultural resources program. Tribal consultation occurs through annual consultation meetings, ethnographic and tribal monitoring projects. This poster illustrates examples of successful consultation projects between the federal and tribal agencies, as well as lessons learned by HDR/e2M archaeologists while working with our cultural resources management partners.

Smith, Claire (Flinders University) [174] Discussant

Smith, David [37] *see* Snow, Meradeth

Smith, Geoffrey (University of Wyoming)

[118] *Through Bones and Stones: Assessing Early Holocene Models of Foraging Lifeways in the Great Basin*

Although scant, subsistence residues from early Holocene sites in the Great Basin suggest that Paleoindian lifeways may not have differed from Archaic lifeways as much as previously thought. Here I compare data from both periods and evaluate this possibility using a behavioral ecological perspective. Specifically, I test the hypothesis that early Holocene faunal assemblages differ in prey abundances and species diversity from later assemblages. I also consider the implications of this comparison together what is known about Paleoindian and Archaic behavior from source provenance studies and analyses of lithic technology. Together, these approaches offer a multi-dimensional view of temporal shifts in human adaptation in the Great Basin.

Smith, George

[237] *Heritage Values in Contemporary Society*

Discussion of heritage in the twenty-first century must include the many voices representing the heritage sector and stakeholders, including but not limited to those in archaeology (university professors; and governmental, private sector, and public archaeologists), law, economics, historic preservation, education, tourism, and indigenous populations, to discuss how the past is valued and how such values can be defined, measured, and applied to public policy, spending, management, education (at all levels), education and training of heritage sector professionals, economic and sustainable development, and delivered services relating to a collective heritage in a manner that is accountable and includes public involvement.

Smith, Heather (Center for the Study of the First Americans), Ted Goebel (Center for the Study of the First Americans, Texas A&M University) and Thomas DeWitt (Texas A&M University)

[21] *Digital Shape Analysis of Clovis Projectile Points*

In this paper we present the results of a shape analysis of Clovis fluted points from 24 sites across North America that are securely dated to the Clovis time period (~11,300-10,800 14C BP). Through shape analysis we can significantly increase the number of measured landmarks on an artifact and more precisely analyze its form to provide a more meaningful statistical expression of its shape in lieu of standard morphometric variables. Through our analysis, we can explore the major factors of variability in Clovis point shape across the continent, especially to determine whether that variability is geographically or temporally patterned.

Smith, Jennifer (Washington University)

[9] *Prospects for Environmental Reconstruction for the Holocene of Dalmatia*

Regional paleoenvironmental reconstruction in the vicinity of the Danilo Bitinj and Pokrovnik sites is critical to an evaluation of the landscape and climatic setting of early agriculture in Dalmatia. Literature currently available from the broader Adriatic region presents conflicting accounts of the timing and nature of environmental change during the Holocene. Analysis of tufas and lacustrine carbonate sediments from the Krka river may provide an archive both of climatic change and of variation in soil erosion rates during the Holocene particularly relevant to understanding subsistence at Danilo and Pokrovnik.

Smith, Jennifer R. [9] *see* Fadem, Cynthia M.; [259] *First Organizer*; [259] *First Chair*

Smith, Karen (Monticello) and Keith Stephenson (University of South Carolina)

[26] *Signaling Theory and Weeden Island Period Mortuary Ritual*
Burial mounds associated with Weeden Island culture (ca. A.D. 200-900) are remarkable for their pottery "caches" of several to fifty or more vessels. These mass ceramic deposits have no historical

precedent and, as a result, have been the focus of much empirical work but also considerable speculation. Unsatisfied with a normative explanation that invokes elite mortuary ritual alone, we seek an alternative understanding couched in evolutionary theory of signaling behavior. We use this poster as an opportunity to model the social contexts in which signaling would be advantageous, given our understanding of Woodland period population and settlement dynamics.

Smith, Karen [166] *see* Bell, Alison

Smith, Kevin (Middle Tennessee State University) and Emily L. Beahm (University of Georgia)

[115] *Reconciling the Puzzle of Castalian Springs Grave 34: Scalloped Triskeles, Crested Birds, and the Braden A/Eddyville Gorget*

Castalian Springs Grave 34 was among the first of about 100 interments in Mound 1. Lined with cedar logs, the burial produced five closely associated engraved shell gorgets that brings together the Braden A/Eddyville style Castalian Springs gorget with two examples each of the Cox Mound and Nashville "styles." Recent excavation data, radiocarbon dates, and reanalysis of the entire 1891 Mound 1 mortuary assemblage suggest that Burial 34 was created about A.D. 1225-1275. This Classic Braden connection may have served as one inspiration for the Late Braden "spin-off" style reflected most clearly in the Thruston Tablet.

Smith, Kevin [217] *see* Moore, Michael Carter

Smith, Kevin E. [115] *see* Sharp, Robert V.

Smith, Lisa (University of Montana), Anna M. Prentiss (University of Montana), Dana Lepofsky (Simon Fraser University), Eric S. Carlson (University of Montana)

[39] *Resource Intensification at Bridge River: A Case Study in Subsistence Practices of Complex Hunter-Gatherers*

Resource intensification is often a fundamental component of the development of complex hunter-gatherers societies. However, archaeologists seldom have the spatial and temporal data needed to actually track this process. In this paper we present results of multi-disciplinary research into subsistence intensification at the Bridge River site, British Columbia. More specifically we examine variability in the use of different plants and animals over time recognizing that predation history may vary with predation context, prey target, and predator group. Consequently, we look for indicators of intensification in multiple data sets at the household as well as village scale.

Smith, Micah [45] *see* Schauer, Matt

Smith, Michael (Arizona State University)

[156] *Xochicalco and Calixtlahuaca as Mesoamerican Hilltop Political Capitals*

The political capital located on a hilltop was a distinctive form of urban settlement in prehispanic Mesoamerica. Xochicalco and Calixtlahuaca are two of the more intensively researched of these sites within central Mexico. I compare and contrast these two cities, focusing on topographic setting, urban layout and planning, monumental architecture, and residential neighborhoods. Similarities and differences between Xochicalco and Calixtlahuaca are used to generate hypotheses about the forms and functions of hilltop capitals that can be evaluated against other Mesoamerica examples, from Monte Alban to Utatlan.

[219] *see* Walz, Gregory R.

Smith, Monica (UCLA)

[1] *6,000 Years of Urbanism: The Archaeology of Cities Past and Present*

A city is brought into existence not only by the leaders who organize spaces and monuments but also by the many thousands of people who construct, maintain, and live in those spaces. The trajectory towards social complexity and its most elaborate physical

manifestation, the urban form, has as its foundation each individual's cognitive capacity for dense social, ritual, economic, and political networks. Archaeological research at Sisupalgarh in eastern India provides the opportunity to look at the household, neighborhood, and civic level of interaction in the ancient city from the perspective of ordinary inhabitants.

Smith, Scott (University of California, Riverside), Adolfo Pérez Arias (Universidad Mayor de San Andrés) and Maribel Pérez Arias (University of Pittsburgh)

[47] *Iruhito: A Rural Riverside Community in the Tiwanaku Heartland*
Located on the banks of the Desaguadero River in the Altiplano region of Bolivia, the site of Iruhito presents a fascinating opportunity to examine long term dynamics in the Lake Titicaca Basin. Preliminary research indicates that the site was first settled toward the end of the Early Formative period (1500 – 800 BC) and was continually occupied through the emergence and subsequent disintegration of the Tiwanaku state. This paper synthesizes the results of preliminary investigations conducted at Iruhito and outlines the direction of future research at this important site.

Smith, Stephen [74] see Munoz, Cynthia M

Smith, Tina [76] see Whittington, Stephen L.

Smyth, Michael (Foundation for Americas Research/Rollins College)

[96] *Storage, Tribute, and Political Administration among the Lowland Maya*

Storage, the setting aside of food and goods for future need and investment, was of critical importance to ancient Maya political economies. Even though the Maya occupied a tropical environment, the growing season was not year-round and many environmental factors limited surplus production. Under these conditions, the maintenance of large agricultural populations required substantial investment in storage. Clearly, the political administration of tribute collection was fundamental to elite power structures and the organization of storage can reveal much about the Maya political economy. This paper will explore differences in storage strategies, how and where goods are stored and how stored goods are administered, as a way to reconstruct political structure among the Maya.

Snead, James (George Mason University) [1] First Organizer, [94] Discussant; [110] see Reed, Paul F. [127] Discussant

Snow, Dean (Pennsylvania State University)

[24] *Making the Most of Cyberinfrastructure*

Problems in cyberinfrastructure development fall into strategic, tactical, and technical categories. I argue that we tend to focus on the last and neglect the other two, to the potential detriment of archaeology. Disciplines vary in what are considered data, the sizes of data sets, the ease of data acquisition, standards of confidentiality, when and how data should be made public, and opinions regarding what should be preserved over the long term. Current efforts to foster cyberinfrastructure in the social and behavioral sciences are dominated by social scientists who tend to work with large survey data sets on a narrow range of problems. While there is considerable variation in standards and objectives within anthropology alone, anthropological standards and practices fall largely outside the realm of the dominant social sciences. Standards and practices in archaeology are at particular risk of being marginalized as science moves forward in this critically important endeavor. This paper discusses ways in which archaeologists can establish links to other disciplines having similar strategic and tactical goals so that archaeology is not left behind in the larger cyberinfrastructure effort.

[93] Discussant

Snow, Meradeth (UC Davis), David Smith (UC Davis) and Steven LeBlanc (Peabody Museum, Harvard University)

[37] *Ancient DNA in the Southwest United States and Mesoamerica*

Mitochondrial DNA from dental samples taken from the NAN, Swartz Ruin and other Mimbres sites is compared with that from other ancient and modern samples around the greater Southwest to better understand how the Mimbres Culture fits into the region. Preliminary data from the southern outpost of the Southwest, the Casas Grandes (Paquime) site in Chihuahua, Mexico, was also analyzed to test the hypothesis that the Mimbres and/or other Southwest populations were related to Mexican populations further south. Preliminary results suggest the Mimbres haplogroup frequencies are similar to those found in other prehistoric Southwest populations.

Sobel, Elizabeth (Missouri State University)

[203] *Contact-Period Shifts in Native Exchange Systems: Obsidian Evidence from the Southern Northwest Coast of North America*
Anthropologists widely assume that during the early decades of European arrival on the Northwest Coast of North America, the intensity and geographic scope of Native exchange systems increased. However, this model is based on ethnohistory and remains untested by archaeology. I address this problem with an archaeological analysis of pre-contact and post-contact obsidian artifacts from Cathlapotle, a Chinookan town site located along the Columbia River (Washington). The results support the assumed increase in the intensity of exchange, but not the supposed increase in the geographic scope of exchange activity in this region.

Sobur, Marta (Harvard University)

[92] *Shell Craft Production in South-Eastern Arabia during the Iron Age II*

The shell finds repertoire from Muweilah, an Iron Age II (1100-600 BC) desert settlement located in the United Arab Emirates, indicates intensive exploitation of marine molluscan resources from the Persian Gulf lagoons. Beyond constituting a readily available dietary reserve, shellfish was exploited for the production of utilitarian and decorative items in a versatile domestic economy. This study presents the evidence for shell craft production at Muweilah in attempt to elucidate those technological strategies, interests and needs of the Iron Age societies, which conventionally remain eclipsed by the advances in metal tool production in the region of south-eastern Arabia.

Soderland, Hilary (Boalt Hall, UC-Berkeley) [237] First Organizer; [237] First Chair

Solis, Felipe (Asesorías arqueológicas) and Anayensy Herrera (Asesorías Arqueológicas)

[191] *Mesoamericans at the Jicaro Site, Bay of Culebra, NW, Costa Rica*

Archaeological research carried out at the Jicaro site over the last four years, yielded a total of 16 radiocarbon dates indicating it was inhabited from 1000 to 1350 A.D. by a population whose sociocultural practices and physical characteristics ties it to the Mesoamerican migrants mentioned in the XVI century's ethnohistorical documents. The findings are compared to those of others at the Bay of Culebra to establish similarities and differences amongst the coetaneous populations in the region, in order to discuss changes wrought by the Mesoamerican immigrants as well as continuities product of interaction among populations of different historical identities.

Solis, Wendy (Trent University)

[5] *Ancient Maya Exploration of the Jute (Pachychilus Spp.) at the Site of Minanha, West Central Belize*

In contrast to the research on marine shell exploitation in the Maya subarea, a limited number of studies have been published on Maya utilization of available freshwater molluscan resources. Although it was originally assumed that these molluscs only served a dietary purpose, detailed analyses of the jute (*Pachychilus* species) shell collection from the ancient Maya site of Minanha, in West Central Belize, suggests that jute entered the archaeological record through a diverse array of processes, only some of which involved consumption.

Somers, Lewis [251] see Hargrave, Michael L.

Song, Yuqin [189] *see* Liu, Haiwang

Sonnenburg, Elizabeth (McMaster University), Aubrey Cannon (McMaster University), Eduard Reinhardt (McMaster University) and Joseph Boyce (McMaster University)

[29] *Paleoenvironmental Reconstruction and Water-Level*

Fluctuations: Implications for Understanding of Paleoindian and Archaic Archaeology in Southern Ontario

Rice Lake has been continuously occupied for over 12,000 years. Despite its rich archaeological record, large areas of shoreline have been inundated by rising Holocene water-levels, limiting understanding of Paleoindian and Archaic subsistence strategies and settlement patterns. To gain a better understanding of the submerged landscape of Rice Lake and identify areas of archaeological interest, a geophysical survey and sediment coring program was initiated. Quartz microdebitage dating to 10,700 YBP was found in cores extracted adjacent to a terrestrial Archaic archaeological site. Paleoenvironmental reconstruction indicates Paleoindian peoples were exploiting resources associated with wetland/marsh environments and choosing easily accessible materials.

Soruco Saenz, Enrique [199] *see* Ohnerson, Michael

Suth, Katherine E. [169] *see* Meissner, Nathan J.

Spangler, Jerry [238] *Discussant*

Spanos, Mary (Anthropological Textiles)

[26] *Public Archaeology: Balancing a Need for Clothed Museum Figures with a Limited Archaeological Record*

The humid climate of the North American Southeast preserved limited archaeological data to inform us about the prehistoric clothing of that region. This poster presentation will discuss how ceramic impressions of yarn and cloth were combined with prehistoric art and early explorer chronicles to outfit the life-size Woodland and Mississippian figures in the new archaeology museum at the University of South Alabama. The museum's chronological tour of the history of the Gulf Coast includes a French trader in 1750 and a former slave in 1900. Samples from the reproduction garments for these prehistoric and early historic figures will be available.

Spatz, Ashton (Moraine Valley Community College)

[92] *An Examination of PPNB Marine Mollusc Shell Exchange Networks in the Southern Levant*

There has been speculation surrounding the mechanisms involved in the long-distance exchange of marine shell in the PPNB Levant. Thus, mollusc assemblages, including both Red and Mediterranean Sea shells, from several PPNB sites in the southern Levant are examined to access if they conform to a down-the-line exchange model. The shells are also analyzed to determine if they are being exchanged as raw material or finished products. Preliminary evidence supports the trade of shells via down-the-line exchange networks during the PPNB. However, the form in which these molluscs are exchanged appears to differ based on their source.

Speakman, Robert (Smithsonian Institution), Christine France (Smithsonian Institution), Nadia Jimenez Cano (Smithsonian Institution), Nicole Little (Smithsonian Institution), and Paul Sheppard (Smithsonian Institution)

[161] *Stable Isotopic and Chemical Indicators of Volcanic Eruptions in Tree Rings from Parícutin, Mexico—Implications for Dating Prehistoric Eruptions*

Annual growth rings obtained from well dated cores from Parícutin, Mexico reflect unique chemical signatures that coincide with a known volcanic eruption (1943-1952). Carbon isotopes spike (~3‰) during the eruptive period then return to baseline values. These data in combination with other stable isotopic indicators and increases in phosphorus, sulfur, and possibly other elements, suggest a unique set of chemical inputs from the eruption. The analytical approach developed here potentially can be used to date unknown eruptions,

such as the eruption of Sunset Crater (ca. 1100 AD) which historically has relied on the identification of growth anomalies in dendrochronological sequences.

[123] *Third Organizer* [161] *Third Organizer*

Speakman, Robert [161] *see* Wolff, Christopher B.; [161] *see* Inanez, Javier G.

Speer, Charles (University of Texas at San Antonio)

[200] *Understanding the Effects of Heat Treatment in Edward's Plateau Chert*

This project attempts to explain the effects of heat treatment on Edward's Plateau chert. The use of heat treatment to improve the flaking characteristics of lithic material appears to have been a widespread phenomenon. However, little work has been done to determine the effects thermal alteration has upon various types of chert. Experiments were performed to elucidate those physical transformations that result from heat treatment, which included uniform heat treatment of standardized rock samples, color and luster shifts, Vickers Hardness testing to examine flaking potential, and pressure flaking. Lastly, the application of this knowledge to archaeological problems is assessed.

Speer, Jim [234] *see* Hansen-Speer, Karla

Speller, Camilla (Simon Fraser University), Cara Monroe (Washington State University), Dongya Yang (Simon Fraser University), Scott Wyatt (Washington State University) and William Lipe (Washington State University)

[84] *Origins of Southwestern Domestic Turkeys*

Mitochondrial DNA (mtDNA) was analyzed from 200 archaeological and modern turkey remains to investigate the origin and distribution of turkey stocks within the Southwest. Nearly 80% of the turkey specimens, recovered from 37 sites dating from the Basketmaker II through Pueblo IV periods, display a single mtDNA haplotype, indicating human control of breeding. Although genetic data rule out the South Mexican turkey (*M. gallopavo gallopavo*) as a progenitor, three other subspecies (Merriam's, Rio Grande, and Eastern wild turkeys) may have contributed to Southwestern domestic stocks. Our data also support exploitation of wild birds in conjunction with the domestic bird.

Speller, Camilla F. [203] *see* Yang, Dongya

Spencer, Darla (Cultural Resource Analyst)

[247] *Results of a Stylistic Analysis of Late Prehistoric and Protohistoric Pottery Assemblages from Southern West Virginia* Excavations at the Burning Spring Branch site (46Ka142) on the Kanawha River in 2001 revealed a pottery assemblage that exhibited Siouan-style attributes, such as corncob impressing as a surface treatment. A recent stylistic analysis of pottery from contemporaneous sites in southern West Virginia determined that the use of this surface treatment was extensive. This paper will present the results of the analysis and discuss the implications for determining cultural affiliation for these village sites and the possibility that Siouan-speaking groups migrated through West Virginia and inhabited the southern river valleys.

Spengler, Robert (Washington University in St. Louis)

[189] *Plants in the Diet of Mobile Pastoralists: Semerich'ye, Kazakhstan, during the Bronze and Iron Age Interface*

The geographic area encompassing the mountain-border between China and the countries of Central Asia has been a pivotal location in shaping Eurasian history, playing a major role in the spread of culture. The role of agriculture in Bronze and Iron Age Central Asia has been an issue debated over for decades. I address this issue through a cross-site analysis of paleoethnobotanical remains recovered through flotation. Comparative archaeobotanical analysis from the recently excavated sites of Begash, Mukri, and Tuzusai in the Semerich'ye region of southeastern Kazakhstan elucidate patterns of plant use at each site through time and in environmentally

different locals.

Speth, Janet

[83] *The Orendorf Avifauna Revisited*

Earlier papers on the Orendorf avifauna dealt with species composition, habitat exploitation and dietary contribution. The avifauna is now examined to determine spatial and temporal differences in avifauna in the area of Settlement C. The distribution of elements across the site will also be examined in light of taphonomic and social factors.

Spielmann, Katherine (Arizona State University)

[176] *Temporal Variation in Structures at Seip Earthwork*

Two projects comprising several seasons of excavation in a small portion of the Seip earthwork have uncovered the remains of three different and stratigraphically distinct types of architecture. Two of these structural types have counterparts at or near other Hopewell earthworks; the third remains somewhat of an enigma. This paper discusses and compares the intense, recurrent use of this portion of Seip with architectural evidence from other Hopewell earthworks, and considers possible explanations for the change in architectural construction across the centuries the earthwork was used by Hopewell people.

[12] *Discussant*; [100] *see Abbott, David R.*; [154] *Discussant*

Spies, Arthur [224] *see Lothrop, Jonathan C.*

Spivey, S. (Washington University in St. Louis) and Tristram Kidder (Washington University in St. Louis)

[251] *The Origins of Poverty Point*

Recent research suggests the origins of the Poverty Point-related sites in the Mississippi Valley are more complex than previously thought. Chronological data indicate an occupation hiatus in the Poverty Point site region between 4800-3600 cal B.P., while new data from Jaketown in west-central Mississippi shows it to be earlier than the earliest occupation at Poverty Point. This paper reviews extant interpretations of Poverty Point origins and argues it is best understood as the synthesis of multiple ethnic groups with distinct histories who came together at the type site for social, economic, and religious reasons.

Sportman, Sarah (University of Connecticut)

[117] *Daily Practice, Social Identity and the Organization of Domestic Space at Hammondville, NY, 1870-1900*

This paper utilizes a practice approach to interpret differences in the organization of domestic space among five residential structures at Hammondville, NY, a late 19th century, multiethnic, company-owned mining town. Artifacts recovered through systematic testing of house-yard areas were entered into Surfer®, a mapping program, to create distribution maps of material culture and faunal remains to define activity areas for food processing, rubbish disposal, domestic labor and leisure. Comparisons of spatial organization among households of different economic levels and ethnicities illuminate the ways Hammondville residents, as social agents, expressed their identities and negotiated the structured material world of a company-owned village.

Spurr, Kimberly (Past Peoples Consulting) and Stewart Deats (EnviroSystems Management, Inc.)

[158] *Mortuary Behavior, Social Dynamics, and the Transition from Life to Death in the Prescott Culture of Arizona*

Early archaeologists characterized the Prescott, Arizona, area as a cultural hinterland that received trade goods, people, and ideas from other regions, with few indigenous developments. Expanded research over the last decade has verified relationships between the ceramic-period Prescott Culture and surrounding groups, but demonstrated more complex internal social dynamics than was previously acknowledged. Mortuary ritual reflected in the archaeological record presents an opportunity to investigate social dynamics, status, and the appropriate disposition of corporeal remains upon death. This paper will use demographic data and patterns in mortuary

assemblages to explore the performance of mortuary ritual in the Prescott Culture.

Stafford, Thomas (Stafford Research, Inc.), Dennis Jenkins (Museum of Natural and Cultural History, University of Oregon) and Loren Davis (Oregon State University)

[62] *AMS 14C Geochronology of the Paisley Caves' Deposits, Oregon*

Radiocarbon dating of plant and vertebrate fossils, bone artifacts and human coprolites, and midden and guano deposits provide the foundation for the geochronology of the early human occupation site. Depositional processes, bioturbation, archival carbon and organic chemical deposition and remobilization all affected the chronology. Determining accurate chronologies used physical stratigraphy, taxon-specific plant identifications and understanding organic geochemical overprints and how to eliminate secondary carbon problems. Radiocarbon dates span high pluvial lake stands that deposited sands in the base of Cave 2 to the early Holocene, and enable accurate dating of pre-Clovis occupations and the late Pleistocene megafauna extinction.

Stafford, Tom [122] *see Erlandson, Jon McVey*

Stafford, Jr., Thomas [224] *see West, Allen*

Stahl, Ann

[17] *Complementary Crafts: Metallurgy, Potting and Inter-Regional Trade in Banda, Ghana*

The inclusion of crushed iron slag in ceramic fabrics associated with Ngre and Kuulo phase occupations of the Banda area, Ghana suggests a relationship between a craft assumed to have been the province of men (metallurgical production) and one assumed to have been the province of women (potting). Drawing on archaeological evidence, the paper focuses on innovation and decline in this practice through the period of late Saharan and early Atlantic trade (ca. AD 1200-1600) and explores implications for the dynamics of craft production and labor in a period of shifting trade relations.

Stahlman, Kathleen (Powell Archaeological Research Center), George Milner (Pennsylvania State University), and John Kelly (Washington University)

[140] *Settlement Distribution in the Greater American Bottom, Including the Northeast Ozarks, During the "Moorehead Moment"*

Over the past quarter century, significant demographic changes at Cahokia and the surrounding area have been quantified using settlement data. One major change was a decline in population during the last part of the Mississippian period, eventually leading to the region's near abandonment. There were fewer settlements, including mound centers, and the overall number of residential structures also declined. Information on the occupation of the Mississippi floodplain, where trends were first identified, is updated, and the regional scope is expanded by including the neighboring uplands, emphasizing the nearby resource-rich Ozarks.

Stair, Joseph (University of Kentucky)

[109] *Diversity in Domestic Architecture at Uci: an Analysis of Megalithic Stones*

This research documented the variable use of the megalithic architectural style in residential platforms at the site of Uci. This data permitted me to systematically define a domestic megalithic tradition in the Northern Maya Lowlands. It also facilitated the testing of two hypotheses: first, the differential use of megalithic stones throughout the site and its surrounding areas may signify different communities at Uci, second, different investments in residential architecture can represent different socioeconomic statuses at Uci. Preliminary results suggest that the platforms with high numbers of megalithic stones have larger dimensions than platforms with few or no megalithic stones.

Stallings, Richard (AMEC Earth & Environmental)

[150] *Middle to Late Woodland Lithic Utilization Patterns in the Lower*

Salt River Valley, Missouri

This paper explores the lithic utilization patterns at two sites near the Mississippi River in northeastern Missouri. Site 23PI1344 is a longer term multicomponent habitation that contained numerous Late Woodland features, while site 23PI1372 is a short term Middle Woodland encampment with only two features. These sites afford an opportunity to examine lithic technology issues as they relate to different site types and cultural periods. Multiple lines of evidence, including complimentary debitage attributes and microwear analysis, were employed to accomplish the research goals. General reviews of the assemblages and more focused issues such as lithic production trajectories and tool function will be presented.

Stanford, Dennis [122] see *Sholts, Sabrina B.*; [72] see *Sellet, Frederic*

Stanish, Charles (Cotsen Institute, UCLA) [121] see *Brum, Misty CM*; [188] *Discussant*

Stark, Barbara (Arizona State Univ) [254] *Discussant*

Stark, Jacqueline (Valles Caldera National Preserve)

[41] *Ancestral Puebloan Land Use of the Valles Caldera National Preserve*

In comparison to heavily researched surrounding areas such as the Parajito Plateau, little was known about the Ancestral Puebloan occupation (A.D. 600-1600) of the Valles Caldera National Preserve (VCNP). In this poster, I examine multiple lines of evidence, such as agricultural features, ceramics, and projectile points, to gain a broader understanding of Ancestral Puebloan land use within the VCNP. Although the ceremonial importance of the caldera is well established in Puebloan oral tradition, the archaeological evidence now emerging provides us with a new opportunity to build our understanding of Ancestral Puebloan land use within the Jemez Mountains.

Stark, Miriam (University of Hawai'i) and Alex Morris (University of Hawai'i-Manoa)

[153] *Settlement and the Built Environment in the Lower Mekong before Angkor: A View from the Mekong Delta*

Fieldwork by the Lower Mekong Archaeological Project focuses on the period from c. 500 BCE to 800 CE to track settlement patterns associated with the "Funan" (c. 500 BCE – 500 CE) and the pre-Angkorian period (c. 500 – 800 CE). This paper summarizes temporal trends in land-use patterns and population settlement. Doing so requires analysis of key settlement configurations during these two periods and discussion of how pre-Angkorian populations organized themselves across the landscape. Patterns that we have identified in southern Cambodia through this fine-grained survey provide a template across much of the Mekong basin for urban settlement.

Starkovich, Britt (University of Arizona)

[16] *Intensification of Small Game Resources in Southern Greece from the Middle through Upper Paleolithic*

In some parts of the Mediterranean during the Middle and Upper Paleolithic, intensification of small game resources is reflected by a shift from slow-moving game such as tortoises to quick-moving animals such as hares and birds. In this presentation, I examine such changes in small game use from the Middle Paleolithic (OIS Stage 5a) through the end of the Upper Paleolithic and Mesolithic at Klissoura Cave 1, Peloponnese, Greece. This shift from high to low-return resources is examined against environmental changes and possible taphonomic biases. Small game butchery patterns and transport decisions are also discussed.

[16] *First Chair* [16] *Second Organizer*

Steadman, Dawnie (Binghamton University, SUNY)

[1] *The Path Forward is Behind Us: Forensic Archaeology and the Recovery of Historic Memory*

Historical memory provides a shared sense of the past that can promote group adhesion, stability and validity. However, in places such as Spain, historic memory has been manipulated into a single

ideology that delivers operational codes to the present – namely, that Franco and fascism saved Spain from itself during the Spanish Civil War. Accusations of extrajudicial executions are denied or suppressed. Now archaeology is becoming increasingly important to efforts to recover an alternate memory of Spain's past. By exhuming victims buried in clandestine graves, archaeologists provide scientific documentation of past atrocities that can be delivered to families, Civil Society and the courts.

Steadman, Dawnie [83] see *Wilson, Jeremy J.*

Steele, Teresa (UC Davis), Alex Mackay (Australian National University), Jayson Orton (University of Oxford/University of Cape Town) and Steve Schwartz (University of California, Davis)

[182] *Initial exploration of Middle and Later Stone Age archaeology in southern Namaqualand, South Africa*

Despite the abundance of archaeological research conducted in South Africa's Western Cape, little is known about the prehistory of southern Namaqualand, its northwestern corner. Therefore, we tested three shelters and surveyed open-air sites along the Varsche and Sout Rivers. Two shelters preserve mid-to-late Holocene Later Stone Age materials, and we sampled a potentially 8m deep Middle Stone Age sequence at the third. The abundance of open-air artifacts indicates an strong Middle Stone Age presence, including an area with 60 bifacially-worked points. Our research confirms the region's potential to yield informative data on human adaptations.

Steele, Teresa [182] see *Schwartz, Steve*

Steffen, Anastasia (Valles Caldera National Preserve)

[41] *Sharp, Brittle, Transparent, and Revealing: Exploring the Potential for Obsidian Technology, Sourcing, and Chronometry Studies in the Valles Caldera National Preserve*

Analyses of obsidian artifacts and geology are vital in any approach to the VCNP prehistoric archaeological record. On the interpretive side, the ubiquitous diverse obsidian lithic assemblages here demand creative attention to the range of reductive technologies represented and to obsidian source distributions across this volcanic zone. On the analytic and methodology side, the potential offered by geochemical sourcing and hydration chronometry cannot be ignored. Together, the interpretive and methodological potential of this setting is dynamic and compelling: this poster addresses strides taken in obsidian chronometry, sourcing, and geological archaeology toward realizing the potential of this exquisite lithic landscape.

Steffen, Anastasia [41] *First Organizer*; [41] see *Olinger, Colleen*

Stehman, Kelly (National Park Service) and Michael Novotny (Western Mapping Company)

[144] *Do Surface Artifacts Lie?: A Comparison of Surface, Fill, and Floor Artifact Assemblages*

Current archaeological survey methods typically rely on surface artifact assemblages to determine site significance and research potential. Do surface artifacts provide an accurate proxy for gauging subsurface deposits and artifact assemblages? This paper examines the lithic and ceramic assemblages in different depositional contexts at a Sinagua residence site located in Walnut Canyon National Monument. By comparing lithic and ceramic artifacts recovered from surface, fill, and floor site contexts, we are able to determine the reliability of site assessments based completely on surface artifacts.

Stein, Julie [207] see *Taylor, Amanda*

Steinberg, John (UMass Boston)

[246] *The Problems of Conducting Settlements Pattern Research on the Transition to State in Iceland*

The problems with conducting survey for Viking Age farmsteads in Iceland are substantial: the archaeology is deeply buried under aeolian sediment; there are almost no artifacts associated with the farmsteads; and the houses are made of turf. These conditions make farmsteads abandoned during the Viking Age invisible. Conversely, in

Iceland there are no pre-Viking settlements; there is a unique written record; and if identified, the preservation can be outstanding. Solving the problems of survey, with a package of methods, has allowed us to begin understand the manner in which the transition from chiefdom to state played out on the landscape.

[246] *First Organizer*; [246] *First Chair*

Steinbrenner, Larry (Red Deer College)

[191] *The Pacific Nicaragua Potting Tradition, AD 800-1350*

More than eighty years after Lothrop's watershed Pottery of Costa Rica and Nicaragua, archaeologists working in Greater Nicoya continue to struggle with problems of ceramic taxonomy. Decades of research have led to the identification of a bewildering array of ceramic types, but little discussion of the interrelationships between these types. This paper argues that most of the Sapoá Period polychrome types previously identified in Pacific Nicaragua—including those usually treated as markers of different immigrant Mesoamerican groups—are more alike than unlike, and are best understood as the products of a common potting tradition with a Central American origin.

Steiss, Debbie [60] *see Birch, Jennifer*

Stelle, Lenville (Parkland College) [104] *First Organizer*; [104] *First Chair* [22] *First Chair*

Stemp, William (Keene State College) and Jaime Awe (Institute of Archaeology, NICH, Belize)

[221] *From a Land Down Under: Ritual Use of Obsidian in Maya Caves in Belize*

Analysis of obsidian tools and debitage from caves (ATM, Stela, Halal, Chapat, and Uayazba Kab) in Belize reveals patterns of manufacture and use considered significant for understanding Maya ritual activity. These obsidian artifacts are similar in a number of interesting ways, suggesting some common behaviors. However, differences in assemblage composition and context suggest that rituals may vary and that individual agency must also be considered. How stone tools were incorporated into Maya cave rituals remains a difficult question to answer, but the obsidian artifacts recovered aid in reconstructing the complex experiences of those who ventured into the land down under.

Stephan, Elisabeth [157] *see Bocherens, Hervé*

Stephen, David [235] *see Van Zandt, Tineke*

Stephenson, Keith [26] *see Smith, Karen Y.*

Steponaitis, Vincas (UNC-Chapel Hill) and Gregory D. Wilson (UC-Santa Barbara)

[115] *Early Engraved Wares at Moundville*

Moundville is well known for its engraved ceramics, particularly the later varieties with representational designs. Recent work has brought into focus an earlier engraved assemblage that dates to the late Moundville I phase (ca. AD 1200). These early designs have a strong "Caddoan" flavor, but the pots are locally made. Here we describe this early assemblage and discuss its implications. Specifically, we believe that it is part of a widespread thematic horizon across the South that stretches from Spiro (Oklahoma) to Hiwassee Island (Tennessee), and is also represented at Cahokia.

[14] *Discussant*

Sterling, Kathleen (Binghamton University) and Sebastien Lacombe (Binghamton University)

[184] *The Symbolic Paleolithic Landscape: Pieces of Places and Marking Meaning*

Because there are no architectural remains from Paleolithic Europe, few archaeologists think about the ways in which the landscape was meaningful to early people. Beyond what the land provided for subsistence and shelter, certain places held an importance that was marked in various ways. Decorated caves are an obvious practice,

but the collection of stone from certain sources is a neglected line of evidence that can reveal information about points on the landscape that were important to Paleolithic peoples. Combining petrographic techniques, a landscape approach, and social theory, more of the social landscape of the Paleolithic can be made visible.

Sternke, Farina (University of Glasgow)

[256] *Two Out of Three Ain't Bad! Skill, Apprenticeship and Technological Change in European Paleolithic Societies*

It is now generally accepted that differential levels of skill can be observed in Paleolithic stone tool productions. However, to-date, research has only concentrated on the description of individual assemblage components. The research presented in this paper aims to examine the nature of the knapping skill transmission in the European Lower and Middle Paleolithic. In particular, it explores the acquisition and transmission of the knapping skill by focusing on the identification of different skill levels and examples of skill development in archaeological and experimental knapped stone assemblages to establish the transmission patterns linked to different production methods and techniques.

[256] *Second Organizer* [256] *Second Chair*

Stettler, Heather [24] *see Cannon, Mike*

Stevens, J. Sanderson [150] *see Broughton, Laurid*

Stevens, Nathan (UC Davis) and Douglas Harro (Applied Earthworks, Inc.)

[123] *Lithic Use-Wear Analysis using Laser Scanning Confocal Microscopy*

Although use-wear analysis of prehistoric stone tools using conventional microscopy has proven useful to archaeologists interested in tool function, critics have questioned the reliability and repeatability of the method. The aim of this project is to show that it is possible to quantitatively discriminate between various contact materials using laser scanning confocal microscopy. It is hoped that this method will not only provide a defensible means of discerning tool function, but provided results are consistent with use-wear analyses using conventional microscopy, will also form a quantitative foundation for previous studies.

Stevens, Sandy (John Milner Associates, Inc.)

[179] *A New Terminal Late Woodland Ceramic Type along the Lower Whitewater River in SE Indiana*

Site 12FR336 is a large Late Woodland habitation located along the lower Whitewater River on a broad Holocene terrace. JMA recovered 4,000 ceramics, most of which is classified as Argosy Cordmarked. Argosy Cordmarked pottery is defined as containing large and numerous particles of crushed limestone or grit, cordmarked exteriors, outward flaring rims and square or rounded lips. Based on the number and diversity of features and the type of ceramics, Site 12FR336 appears to represent a series of short-term seasonal occupations, perhaps ceremonial in nature, during the terminal Late Woodland period (i.e., pre-Fort Ancient). The ceramics and the presence of an etched slate gorget suggest affinities to the broadly (yet poorly) defined Newtown phase.

Stevens, Stanley [4] *see Barker, Andrew L.*

Stevenson, Alexander

[207] *The Material Expression of Risk Sensitive Foraging Strategies*
Diachronic evaluation of risk coping strategies provides a framework for investigating both material culture and foraging strategies. This paper presents a method for understanding such fluctuations through the concept of risk sensitive hunts. Hunts are created from theoretical and functional classification of tool assemblages and Z-score assessment of archaeologically recovered dietary remains. Hunts are then assigned to risk-prone and risk-averse categories and are then evaluated across archaeological components. This method is applied to two archaeological sites in the Upper Klamath Basin in Oregon. Analysis shows a trend at each site toward increasingly risk-averse

foraging strategies in the last two millennia.

Stewart, R (Temple University), Kurt Carr (The State Museum of Pennsylvania), Michael Frankl (Occoquan Paleotechnics)

[90] *The Thunderbird Site and the Flint Run Paleoindian Complex, Virginia*

The stratified deposits of the Thunderbird Site and Flint Run Paleoindian Complex are summarized. Investigations led by the late William Gardner beginning in the early 1970s provide details regarding chipped stone technology and technological change through the period, site organization, and settlement patterns. These data support an interpretation of lifeways less mobile and more generalized than the highly mobile, specialized hunting adaptations frequently associated with Paleoindians elsewhere. This research is a basis for addressing Paleoindian issues in the broader Middle Atlantic Region and Northeast, resulting in the recognition of diversity in adaptations and the distinction of a Paleoindian "Mason-Dixon Line".

Stiner, Mary (University of Arizona)

[58] *How different were late Lower Paleolithic and early Middle Paleolithic patterns of carnivory at Hayonim Cave and Qesem Cave in the southern Levant?*

Recent results on the late Lower Paleolithic and early Middle Paleolithic from two Levantine caves permit a systematic comparison of large and small animal exploitation, carcass processing routines, and meat consumption between the two periods. Both sites provide strong evidence for habitual large game hunting and similar patterns of prey age selection, as well as transport of high quality prey parts to residential sites. Small animal exploitation was limited mainly to lost-cost/high-yield species. Different, at least at these two sites, is evidence for patterns of meat sharing on site based on tool mark evidence.

[16] *Discussant*; [16] see Munro, Natalie D.; [259] see Mentzer, Susan M.

Stiver Walsh, Laura (Proyecto Pueblo Viejo de Teposcolula)

[103] *A Classic Period Mixtec Señorío in the Teposcolula Valley*

The origins and antecedents of Postclassic Mixtec señoríos pose a longstanding question for Oaxaca scholars. While studies of Classic polities remain few, expanding regional survey results in the Mixteca Alta highlight local continuity rather than external forces. This presentation examines Classic occupation in the Teposcolula Valley, better known for excavations at its major Postclassic capital. Settlement patterns indicate neighboring San Miguel Tixá was the cabecera of an earlier polity, and recent excavations at Tixá provide comparative information on architecture, burials, and resources. Data show differences in scale and complexity, yet the ethnohistorically-based señorío model likewise matches Classic period sociopolitical patterns.

Stockdell, Eric (Indiana University), Dru McGill (Indiana University)

[257] *Excavating the "Potter's House:" Possible Evidence for Craft Specialization at a 14th century Angel Mounds Structure*

In 2005, the Glenn A. Black Laboratory of Archaeology tested several structures identified during a previous magnetometry survey. In 2006, extensive excavation of one such structure yielded extremely high densities of a variety of materials associated with craft specialization, including pottery trowels, unfired clay, and shell, as well as high concentrations of groundstone tools. C14 samples date the structure to A.D. 1325-1375, placing it within the Late Angel phase. Such a concentrated presence in one structure of materials associated with craft production provides great potential for the discussion of craft specialization during the 14th century at Angel Mounds.

Stockett, Miranda [65] see McFarlane, William J.

Stockton, Trent (Tulane University), Mandy Munro-Stasiuk (Kent State University) and T. Kam Manahan (Kent State University)

[160] *The View from Xuenkal: Geoeological and Social Determinants of Settlement Location at an Ancient Maya Center*

The Northern Pitted Karst Plain of northeastern Yucatán, Mexico, presents numerous challenges for investigators exploring environmental and social factors that influenced past settlement locations. Traditional topographic analysis of DEMs (including slope, aspect, watersheds, viewsheds, etc.) is difficult because of low topographic relief. This paper explores multivariate analyses of georeferenced and geocoded high-resolution satellite imagery. These data are combined with geoeological and archaeological datasets, including ethnobotanical surveys, and spatial, temporal and architectural data on nearly 700 ancient structures, to reveal patterns of long-term human-environment interaction at Xuenkal and its hinterlands.

Stoll, Courtney [150] see Erickson, Luke W.

Stoll, Marijke (University of Arizona)

[13] *Es Nuestra Tradición: An Ethnographic Study of the Pelota Mixteca Ballgame and Its Archaeological Implications*

Analyses of ball courts tend to focus on their possible ritual meaning and function. However, the sociopolitical processes that made ball courts and associated ballgames so efficacious in Mesoamerica are still relatively poorly understood. Clearly, close archaeological, historical, and ethnographic investigation is needed in order to understand the implications of these prominent structures in political and community relationships. This paper will present the preliminary results of an archaeological survey and ethnographic study of the ball courts and the modern ballgame in the southern Mexican state of Oaxaca and propose further avenues of research.

Stoltman, James (Univ of Wisconsin- Madison), Jigen Tang (Institute of Archaeology, Chinese Academy of Social Sciences), Yue Zhanwei (Institute of Archaeology, Chinese Academy of Social Sciences) and Zhichun Jing (University of British Columbia)

[155] *Petrographic Analyses of Ceramics Used in the Production of Shang Bronzes at Yinxunter*

Bronze production in Shang society has been characterized as a co-craft, requiring sophisticated knowledge not only of metallic but also of ceramic materials. Through petrographic analysis, the material composition of ceramic artifacts essential for Shang bronze production—models, cores, molds, crucibles, and furnaces—have been determined for specimens excavated at Xiaomintun SE, a bronze foundry near Anyang. The results reveal a ceramic industry that was both diverse and sophisticated, with different recipes employed depending upon the functions the various artifact types were intended to perform.

Stoltman, James [251] see Hays, Christopher

Stone, Connie (Bureau of Land Management) and Kathy Pedrick (Bureau of Land Management)

[223] *Partnerships, Preservation and Research in the Agua Fria National Monument in Central Arizona*

Agua Fria National Monument protects a unique cultural landscape dominated by mesa-top pueblo settlements inhabited from A.D. 1250 to 1450. Management accomplishments have focused on resource protection; surveys and documentation; scientific research; public education and interpretation; and creation of a management plan. Partnerships with universities and organizations, like Friends of the Agua Fria National Monument, have been invaluable. Recent research has explored conflicting ideas about the role of warfare and alliances in prehistoric societies and has fostered an innovative collaboration among archaeologists and ecologists. These efforts by scientists and citizens have transformed our knowledge of the prehistoric Perry Mesa Tradition.

Stone, Connie [75] see Pedrick, Kathryn E.

Stone, Suzanne (HDR/e2M) and Brandy Hurt (HDR/e2M)

[165] *Artifacts and Buried Sites, Tailored Solutions*

HDR/e2M can address client challenges for a variety of needs. This is illustrated by two very different projects. Hurricane Katrina severely

impacted artifacts held by the University of New Orleans. Flooding, contaminants, and heat deteriorated artifacts and fostered mold infestation. The challenge was to clean and stabilize the diverse artifact types. Elsewhere, HDR/e2M was tasked with investigating a buried New Mexico site and to keep it intact. This required a non-invasive approach, delivered in a timely and efficient manner. In each case, HDR/e2M determined the best solution to meet the project challenges.

Stoner, Wesley (University of Kentucky)

[254] *Estimating Political Boundaries in the Classic Tuxtla Mountains*
Political economic models for the Classic Tuxtla region have been based entirely on archaeological excavation and survey at Maticapan and settlements within the Catemaco Valley. Recent survey in the neighboring Tepango Valley, which includes the large center of Totocapan, provides data to evaluate existing models of Tuxtla evolution from a broader scale perspective. One of the fundamental steps to arriving at a synthesis of Classic Tuxtla evolution is to delineate political boundaries within the broader Tuxtla region. In this paper, I present a GIS-assisted model of political boundaries that generates testable hypotheses for the political economic composition of the region.

[133] *Discussant*

Storey, Alice

[68] *The Pre-Columbian Chickens of Chile: Re-evaluating the Assumptions of European Introductions*

It was long assumed, due to the absence of pre-Columbian chicken bones in the archaeological record of the Americas, that the first chickens in the region were those brought by Europeans. Recently the recovery of chickens from the pre-Hispanic site of El Arenal 1 in Chile has demonstrated that chickens indeed reached South America before Columbus. Given this new evidence some of the old ethnographic reports, oral traditions and recovered artifacts should now be reconsidered. In this presentation I will discuss the mtDNA, radiocarbon and isotopic evidence establishing the antiquity of the El Arenal chickens and how they are thought to be related to prehistoric Polynesian chicken populations. Then I will present some observations of early Explorers and Ethnographers to encourage discussion and debate about the distribution of chickens in the prehistoric New World and other potential sites of introduction.

[68] *First Chair*

Storey, Rebecca [241] see *Marquez-Morfin, Lourdes*

Storozum, Michael, Nicholas Dunning (University of Cincinnati) and William Saturno (Boston University)

[139] *Geoarchaeological Investigations at Aguada Hormiguero, El Peten, Guatemala*

In the water deprived Maya lowlands, aguadas are one of the few perennial sources of water available. For this reason, many Maya sites are located near these aguadas. Aguadas can provide a wealth of information concerning settlement patterns, water resource management, climatic variability and local environmental change. Aguada Hormiguero, a small natural depression located outside of the archaeological site of Xultun, will be examined in this paper within its cultural and environmental context. Excavation and sediment analysis were used in order to determine the extent of anthropogenic modification and environmental change.

Stosel, Victoria (University of Alaska, Fairbanks)

[31] *Possible Applications of Optimal Foraging Theory On San Nicolas Island, California*

Optimal Foraging Theory provides a means to determine the relative importance of various shellfish and echinoderms in the San Nicolas Islander's diet. The nutritional content of shellfish and echinoderms remains fairly consistent among the various species. Other factors such as meat yield and collection times indicate that optimal choices exist. Examining collection times, meat yields and caloric content assist in determining if predation choices were optimal or preferential.

Stotts, Rhian (Arizona State University)

[184] *Least-Cost Path and Viewshed Analysis of Copper Trade Routes in Late Bronze Age Cyprus*

The extraction and movement of copper figure prominently in models of the development of urbanized economy and society during the Late Bronze Age (1700-1050 BC) in Cyprus. This study uses GRASS GIS software to determine least cost paths between mining areas and coastal centers. These paths logically correlate with trading routes throughout the island, and are used to assess the possibility that some inland settlements served as redistribution sites. The function of other sites as inland forts also is evaluated by determining whether the least cost paths, as inferred trade routes, would have been visible from these fortified sites.

Stout Evans, Rachel [217] see *Mehta, Jayur M.*

Stovel, Emily (Ripon College)

[121] *Looking Closely at One in the Face of Many: Characterizing San Pedro de Atacama Ceramics*

New technologies not only present interesting opportunities to examine ceramic difference, but also allow us to examine and characterize individual ceramics styles more intimately. This poster explores chemical (LA-ICP-MS and pXRF) variation within a collection of San Pedro Middle Period sherds and contributes to debates on production decisions with respect to functional and formal subtypes.

Stowe, Michael (Geo-Marine, Inc)

[213] *Preliminary Evidence for Ballgaming in the Jornada: Stone Balls from Fort Bliss and Beyond...*

This paper explores the ballgame tradition in the American Southwest, specifically, the discovery of numerous stone balls from prehistoric sites throughout the Jornada, with an emphasis on the Fort Bliss Military Reservation located in south central New Mexico. Due to a paucity of archaeological and ethnographic information regarding prehistoric gaming and gaming implements in this region, only limited inferences have been made regarding the function of these unique artifacts. This presentation will focus on the description of stone balls discovered on prehistoric sites throughout Fort Bliss and adjacent areas, and outline implications for future studies in the region.

Straus, Lawrence (University of New Mexico)

[177] *Human responses to Younger Dryas in Cantabrian Spain*
During the Late Glacial Interstadial the classic Upper Magdalenian of Cantabrian Spain with its famous cave and portable art came to a gradual end. With considerable continuity in settlements, subsistence and technology, it was replaced by the Azilian, an Epimagdalenian tradition with widespread artifactual similarities throughout Atlantic Western Europe. Changes during Younger Dryas were subtle and muted in this southerly sector of the oceanic middle latitudes, both in terms of vegetation/fauna and with respect to human adaptive reactions.

[177] *First Organizer; [177] First Chair*

Strauss, André (Strauss), Danilo Bernardo (Universidade de São Paulo), Pedro da Gloria (The Ohio State University -), Renato Kipnis (Universidade de São Paulo) and Walter Neves (Universidade de São Paulo)

[47] *High Variability of Paleoamerican Mortuary Practices in Lagoa Santa Region, Central Brazil*

Recently dated between 8500-7500 BP, most human skeletons from Lagoa Santa have been characterized as having a very homogenous mortuary practice (highly flexed bodies and graves covered by rocks). However, the exhumation of 27 burials from a new site in the region (Santo Rockshelter) shows a variable pattern of mortuary practice, including amputation of limbs and head, use of neurocranium as receptacles, and cremation. These results suggest that previous reports overlooked the variability of mortuary practices in Lagoa Santa. Other Early Holocene sites in South America also present funerary practices including body manipulation, suggesting some similarities across the subcontinent.

Strawhacker, Colleen (Arizona State University) and Frances Hayashida (University of New Mexico)

[138] *Prehispanic Irrigated Soils on the North Coast of Peru: Preliminary Results from Soil Sampling on Agricultural Fields*
During the 2009 field season, soil sampling across the Pampa de Chaparrí on the arid north coast of Peru was performed in order to develop methodology and understand the impacts on the soil of different field patterning in long-term irrigated systems. Because soil sampling has rarely been undertaken at a large scale in prehispanic irrigated environments, this project represents a pilot study into productive avenues for understanding the impacts and legacies of long-term irrigation on fragile desert soils. This poster will introduce a new methodology for sampling in irrigated environments and provide preliminary results from the 2009 field season.

Strezewski, Michael (University of Southern Indiana) and Robert McCullough (Indiana University-Purdue University Fort Wayne)

[219] *Investigations at Fort Ouiatenon and Kethitpecanunk, Two Fur-Trade Era Sites in Tippecanoe County, Indiana*
Fort Ouiatenon and Kethitpecanunk were sites integral to the eighteenth century fur trade in the central Wabash River valley. Fort Ouiatenon was constructed by the French in 1717 and was extensively excavated in the 1960s and '70s. However, little effort had been made to investigate the historic Kickapoo/Mascouten villages that surrounded the fort. Magnetometry survey in these areas indicates clusters of anomalies, including numerous large, circular anomalies that are likely Native winter houses. Kethitpecanunk was a fur-trading town occupied by the Wea. Magnetometry and excavations at Kethitpecanunk focused on defining the site's boundaries and investigation of a fur trader's house.

Strickland, Glenn

[24] *The Integration and Interpretation of Archaeological Data through Three Dimensional Multi-component Digital Spatial Modeling*
Parchman Place Mounds (22-Co-511) is a Late Mississippian mound group located in the Yazoo Basin of northwestern Mississippi. The area between the two largest mounds within the complex, identified as the A-B Swale, is digitally rendered into a three dimensional multi-component spatial model. The completed rendering merges data from archaeological excavations, geophysical prospecting, and artifact analysis. The combination of these diverse datasets into a single integrated model serves to substantially increase the capability of spatial analysis and archaeological interpretation.

Striker, Michael and Timothy King (Gray & Pape, Inc.)

[239] *Using Computer Modeling to Test and Explain Astronomical Alignments at a Mississippian Village*
For decades, archaeologists have attempted to document and explain the alignment of certain Native America architecture with astronomical events. However, while documentation is fairly simple, explanation is more complicated. Using computer modeling of astronomical events and three-dimensional GIS modeling, the authors tested the hypothesis that the builders of the Southwind site, a Mississippian village in southern Indiana, constructed their village to permit for the prediction and observation of events such as the solstice sunrise and sunset. The results indicated that while alignments existed, it is unlikely that such events could be observed as predicted.

[252] *Second Organizer*

Striker, Sarah (Arizona State University)

[25] *Reassessing Economic Dynamics of the Seventeenth Century Iroquois "Beaver Wars"*
The seventeenth century Iroquois "Beaver Wars" have been interpreted as attempts to gain control over the regional fur trade from Algonquian, Huron, and French groups. Although recent interpretations move away from purely economic motivations for these conflicts in favor of more nuanced explanations, "Beaver War" economics have not been received much rigorous attention. This study utilizes data from historic documents and archaeological

studies to find patterns in the movement of resources such as beaver pelts, European trade items, and captive and non-captive people to provide a more rigorous assessment of economic factors among the many that contributed to this conflict.

Stroud, Amanda (New Mexico State University)

[42] *GPR Data From Hermosa, New Mexico*
This poster will focus on Ground Penetrating Radar (GPR) data and ground truthing from the town of Hermosa, New Mexico. Hermosa, a mining community, reached its peak in the late 1800s, and was often plagued with damaging floods. The GPR data was taken in the floodplain, where houses are believed to have been built prior to the floods. The GPR data, coupled with the ground truthing, will help us better understand the cultural and geologic history of this town.

Stroulia, Anna and Susan Sutton (Indiana University Purdue University Indianapolis)

[106] *Greek Archaeological Laws, Sites, and the Chasm between Past and Present*
Greek Archaeological Laws codify a conception of sites deriving from the century of classically inspired travel and appropriation preceding them: sites as national, continental, even global emblems, far removed from their surroundings. Thus it is that the Laws encircle sites with zones in which no farming or construction may occur, and prohibit eating, singing, and loud talking within them. This paper explores how such mandates create a chasm between past and present that explains the alienation and indifference many local residents have toward places so valued by those more distant.

Struever, Stuart (Crow Canyon Archaeological Center) [215]

Discussant

Studnicka, Nikolaus [61] see Doneus, Michael

Stull, Scott (Ithaca College)

[219] *Houses and Identity on New York's Colonial Frontier*
Houses and their immediate landscape have long been recognized as being tied to identity and status. Two colonial houses, both National Historic Landmarks, in New York's Mohawk Valley will be discussed to reveal how identity was constructed using house form in the mid-eighteenth century. These two houses, Fort Klock and Old Fort Johnson, are both stone, fortified houses, but are markedly different in form and layout. These houses parallel the differences between their builders, and show both ethnic and status differences expressed through built form.

Sturm, Jennie (TAG Research)

[85] *Using GPR to Study a Historic Denver Neighborhood*
Ground-penetrating radar (GPR) surveys were conducted in a downtown Denver parking lot to assess the location and spatial extent of archaeological features prior to redevelopment. The surveys mapped the foundations of a number of domestic structures. Amplitude slice-maps and reflection profiles show distinct foundations at various depths, indicating re-building phases and modifications to the layout of these structures over time. By combining the analysis of slice-maps and profiles with historic Sandborn maps available for the area, it is possible to address questions related to the demographics and changing dynamics of a turn-of-the-century Denver neighborhood.

Styles, Bonnie (Illinois State Museum)

[173] *Impacts of Archeozoological Research in the Illinois River Valley*
The Illinois River valley is an innovative center for archeozoological research. By 1930, Frank Baker was already contributing his zoological expertise to studies of Native American resource use. Paul Parmalee introduced a strong ecological approach steeped in his understanding of animal behavior, and he also incorporated analyses of small-scale remains recovered through flotation. Archeozoological research in the lower Illinois River valley has contributed innovative approaches to the understanding of environmental change,

contributions of small-scale remains, quantification techniques, taphonomy and preservation bias, comparability of data, catchment and economic analyses, settlement and subsistence practices, and use of fauna beyond the food quest.

Styles, Thomas and Edwin Hajic (Self Employed Geoarchaeologist)

[173] *The Broader Influence of the Geomorphology and Geoarchaeology Program at the Center for American Archaeology*
In the middle 1970's, a Geomorphology program consisting of full time geologists, a lab and drilling equipment was established at the CAA as part of an overall program that emphasized the emerging interdisciplinary research approach in archaeology. In addition to program-wide contributions, the Geomorphology program influenced research further afield. Contributions include: moving geologists involvement forward in all phases of the archaeological investigative process, including pre-survey; developing a landscape-based approach, ranging from regional models of landscape evolution to geo-centric testing and excavation designs; and, demonstrating that the Holocene geology of large river valleys is not indecipherable, but rather ordered and predictable.

Sugandhi, Namita

[189] *The construction and Destruction of Chatrikhera: Archaeological Conservation in Southeastern Rajasthan*

The Chatrikhera Research Project is designed to explore the ancient remains located in the village of Chatrikhera in Rajsamand District, Rajasthan. Initial observation suggests that deposits at this site date from the Chalcolithic Period (c. 3rd-2nd millennia BCE) up until the Modern Period. The archaeological remains under investigation are primarily located within the modern village, complicating research efforts, but also providing an opportunity to examine the relationship between past remains and present needs. This paper explores the concept of archaeological conservation by introducing the project and discussing the issues of preservation and destruction that inform ongoing research at the site.

Sugiyama, Nawa (Harvard University)

[64] *Animals and the State: The Role of Animals in State-Level Rituals in Mesoamerica*

In Mesoamerica, animals participated in state level rituals which were active arenas where power relations were negotiated, constructed and embodied. Much of this negotiation was based on the symbolic and physical relationship humans established with these animals. Through a case study of a large offering cache discovered from the site of Teotihuacan and another example of an attempt by Maya kings to use animals in ancestor worship rituals at Copan, I will demonstrate zooarchaeological evidence of the ways in which the state controlled these symbolically loaded animals. Such fauna became central actors in the development state legitimation, warfare and sacrifice.

Sullivan, Alan (University of Cincinnati) [253] Discussant

Sun, Guoping [155] see Qin, Ling

Sun, Yan (Gettysburg College, PA) [95] Discussant

Sundstrom, Linea (Day Star Research)

[104] *The Shaman's New Clothes: The Limits of Neuroscience as an Interpretive Model for Rock Art*

Despite its current popularity, the neuroscience model of rock art interpretation reveals little of the ancient artists' motivations, cultural milieu, and history. Defining all non-bureaucratized religions as shamanism and then linking all hunter-gather art to this poorly defined über-religion leaves one to conclude that the art is shamanic because it was produced in a culture different from our own, albeit using universal images. This paper argues for a style-based interpretive model that uses the specifics of cultural context to unravel the specific meanings of rock art traditions. To quote Margaret Conkey, "Without style we have little or nothing to say."

[220] First Organizer; [220] First Chair; [220] see Greer, Melissa

Sunseri, Jun (University of California)

[154] *Get Away Closer: Buffer Village Foodways on a Spanish Colonial Frontier*

The casta label of *genízaro* requires a finer-grained perspective on what ranges and mixtures of practice persons bearing this designation may have enacted at Casitas Viejas (LA 917). By teasing apart the chaînes opératoires of foodway materials, it becomes apparent that households may have departed from the consumption practices of essentialized cuisine while drawing from multiple relationships among the various stages of production and consumption of foodways-related materials. In other words, at different temporal and spatial scales, behaviors reflected in the material record refute notions about a creolized community that tried to diminish differences within the village.

Sunseri, Jun [193] see Atherton, Heather N.

Supak, Karen (BHE Environmental, Inc.)

[236] *"You Want Me to Dig...Where?": New Methodologies and Revised Interpretations of Prehistoric Quarries and Localized Raw Material Procurement Areas at Fort Campbell, Kentucky*

Prehistoric quarries have long been a focus of archaeological research, though understanding of prehistoric lithic raw material acquisition patterns has been largely restricted to extensively exploited resources such as Dover, Tennessee, and Flint Ridge, Ohio. Excavations conducted at Fort Campbell, Kentucky, since 2002 have documented a widespread, smaller-scale, extremely localized lithic procurement pattern that provides new perspective on traditional interpretations of prehistoric raw material acquisition. This paper presents revised methodologies employed during excavations, defines lithic procurement site types identified, and proposes that the majority of prehistoric raw material acquisition took place in a significantly more opportunistic manner than previously hypothesized.

Supernant, Kisha (UBC)

[181] *Contemporary Community Disputes and the Production of Archaeological Knowledge: A Case from British Columbia, Canada*

In British Columbia, collaboration between archaeologists and First Nations is common. While this has many positive outcomes, including providing a more relevant and nuanced understanding of the significance of the past and the generation of archaeological knowledge, many of the areas in which archaeologists work is subject to contemporary disputes between First Nations communities. In this paper, I explore the ethical and epistemic challenges to archaeology when working in disputed zones, arguing that while building relationships in these situations is difficult, contemporary conflicts provide an opportunity for us to examine how we define identity in the past and present.

[163] see Blake, Michael

Surette, Flannery (University of Western Ontario), Christine D. White (University of Western Ontario), Fred J. Longstaffe (University of Western Ontario), Jean-François Millaire (University of Western Ontario) and Paul Szpak (University of Western Ontario)

[138] *Stable Isotope, Contextual and Functional Analysis of Early Intermediate Period Textiles from the Virú Valley (Northern Peru)*

In this study we use stable carbon- and nitrogen-isotope, contextual and functional analyses of wool textiles collected from two Early Intermediate period (200 BC- AD 800) sites in the Virú Valley, Peru, along with camelid (*Lama* sp.) tissues, to investigate the role of textiles in the economic, social, and political spheres of the pre-Hispanic Andes. Marked differences in the isotopic compositions of several textiles and camelids indicate non-local origins. We discuss the implications of these data for expanding the scope of textile research and understanding animal management practices and coast-highland interactions during this period.

Surface-Evans, Sarah (Michigan State University)

[225] *Inferring Agency from Landscape-Scale Modeling of Archaic Hunter-Gatherers*

A landscape perspective approaches the reconstruction of agency from the top down, essentially inferring individual decisions from the social use of space preserved in the archaeological record. Sophisticated, computer-based techniques for modeling past landscapes have the potential to help elucidate some of the complex factors that influenced how past peoples viewed and used their landscape. However, making the leap to individual actions from social landscape can be difficult in the absence of detailed site excavation data. The case study described here evaluates the use of landscape-scale contexts to provide a glimpse into past decision making among Shell Mound Archaic peoples.

Surovell, Todd [224] *see Holliday, Vance T.*

Surridge, Evan (UNC-Chapel Hill)

[98] *Domestic Economy and Lithic Technology in the Early Intermediate Period: A View from the Middle Moche Valley, Peru*
Despite increasing research on Moche social organization, little is known of the exchange and labor patterns that structured rural economies. Stone tools are a pertinent dataset in addressing such issues because they provide a window on varying productive activity between groups and through time. Here, I present research on lithic assemblages from three archaeological sites in the middle Moche Valley that demonstrate considerable variability between households and communities both prior to and after the emergence of the Moche polity. Positions within exchange networks, differences in status and ethnicity, and changes in the organization of agricultural labor are considered as contributing factors.

Sutton, Susan [106] *see Stroulia, Anna*

Swain, Todd (National Park Service) and Tim Canaday (Salmon-Challis National Forest)

[86] *ARPA Lessons From the Field*

Over the past 15+ years we have been involved in numerous criminal and civil ARPA cases. Some extremely successful; some disastrous. We focus on three issues that we believe are central to the future of ARPA: (1) Finding a trained, interested archaeologist to work on an ARPA case is difficult given competing management priorities and lack of funding; (2) The basic ARPA training that has been provided to patrol staff and archaeologists is inadequate and perhaps counter-productive; (3) Reactive investigation of ARPA violations has not been particularly successful. We discuss each of these issues in turn and offer potential solutions.

Swanson, Steve (Arizona State University), Karen Gust Schollmeyer (Arizona State University) and Margaret C. Nelson

[192] *The Postclassic Period in the Eastern Mimbres Region*
The Eastern Mimbres region of Southwest New Mexico lies between the Black Range and the Rio Grande, and experienced continued occupation for centuries prior to and following the Mimbres Classic Period (AD 1000-1130). Data from excavation at three large Postclassic (AD 1130-1450) sites (Animas and Roadmap Villages, Phyllis Pueblo) and recent surveys indicate a diversity of architectural and ceramic traditions, community configurations, and settlement shifts. We explore linkages among post-Mimbres communities in the area to one another, their ancestral ties to Mimbres culture, and their connections to contemporary traditions across the US Southwest.
[192] *Second Chair* [192] *Second Organizer*

Swanson, Steve [192] *see Schollmeyer, Karen Gust*

Swantek, Laura (Arizona State University)

[184] *Archaeology in the Classroom: Mediterranean Landscape Dynamics Educational Outreach*
The Mediterranean Landscape Dynamics project (Medland) was created by an interdisciplinary team to model the impacts of agro-pastoral land use from the Neolithic to the Bronze Age on

Mediterranean landscapes. Combining archaeological and environmental data, an agent based computer model was created to simulate the decisions early farmers made and the effects they had on the environment. The Medlands research includes K-12 educational outreach developed in conjunction with classroom teachers. The lesson presented on this poster enables students to use the computer model to answer the question: how can computer models of Neolithic farming communities help us understand sustainability today?

Swanton, Kristin [180] *see Salsgiver, Amy E*

Sweeten, Lena (Gray & Pape, Inc.)

[252] *A Cultural Landscape Across Time: The Mission Lands Historic District, Orange County, New York*

For many agricultural landscapes, the only constant is change. As a result, few historic architectural resources are likely to survive. Yet a landscape's lack of traditionally defined "historic resources" does not preclude its historic significance. By examining archival evidence and documenting the extant landscape through field survey, photography, and GIS analysis, the means for gaining a fuller understanding of the cultural landscape emerge. This paper examines the character-defining elements of the cultural landscape within the Mission Lands Historic District, and discusses the documentation methods used. A PowerPoint presentation accompanies the paper to illustrate the results of investigations.

Swenson, Edward (University of Toronto)

[145] *Moche Religious Conservatism, Wari Expansionism, and Sociopolitical Change in Middle Horizon Jequetepeque*
Most archaeologists agree that the Moche resisted foreign political influences and were never conquered by the Wari. However, the notion of Mochica cultural conservatism has been challenged by recent research, and the Late Moche Period is distinguished by its dynamism and diversity. Sociopolitical transformations in Jequetepeque during the Late Moche Period, including the adoption of Wari material culture at San José Moro and the revival of Moche religious ritual in the region, must be understood in terms of the varied interactions of Moche communities with highland polities including Wari and Cajamarca.

Swigart, John [41] *see Rogers, Alexander K.*

Swinney, Tyler [62] *see Tankersley, Kenneth B.*

Szeverenyi, Vajk (Archaeological Institute, Hungarian Academy)

[149] *Interregional Interaction and Social Change in the Carpathian Basin in the Third Millennium BC*
The aim of my paper is to investigate the nature and impact of interregional contacts in the third millennium BC based on a few case studies. While earlier migrationist/diffusionist approaches discredited the study of such contacts, the existence of object types, materials and technologies of ultimately distant origin is undeniable. We need to assess these within a new theoretical framework in order to understand their significance in the processes of social change. My approach is informed by recent theoretical developments in archaeology, originating in postcolonial theories, agency theory, and new discussions of exchange and personhood.

Szirmay, Jenica [258] *see Hall, Lauren*

Szpak, Paul [138] *see Surette, Flannery K.*

Szumik, Claudia [22] *see Scheinsohn, Vivian G.*

Tache, Karine (Universite de Montreal)

[60] *Be There or Be Square: A Long Tradition of Trade Fairs in Eastern North America*

While the sources, directions, and routes of exchange are unraveled by advances in archaeometric techniques, interactions themselves are seldom detected archaeologically. Using archaeological and

ethnographic data, this presentation reviews some of the localities favoured as the scenes of inter-societal contacts in prehistoric and protohistoric Eastern North America. The physical settings, as well as the social relations and activities carried out at these sites are discussed and compared to Late Archaic and Early Woodland sites bearing similar characteristics. The notion of trade fairs is proposed as a mechanism for better understanding hunter-gatherer exchange behavior.

[60] *First Organizer, [60] First Chair*

Tainter, Joseph (Utah State University)

[56] *Theories of Cultural Evolution: Implications for Sustainability*
Among Michael Glassow's accomplishments has been to teach generations of students to think broadly and comparatively. This opens the possibility for archaeology to join other sciences in a broad approach to clarifying issues not just of the past, but of the present and future as well. I present here archaeological theories of the evolution of cultural complexity, and show how they lead to different conclusions about future sustainability.

Talavera Zuniga, Rodolfo [188] *see Nigra, Benjamin T.*

Tang, Jigen [155] *see Jing, Zhichun; [155]* *see Stoltman, James B.*

Tankersley, Kenneth (University of Cincinnati), Andras Nagy (University of Cincinnati) and Tyler Swinney (University of Cincinnati)

[62] *Wind Cave: A Prehistoric Chert Quarry in Southeastern Kentucky*
A number of passages in Wind Cave, Jackson County, Kentucky, intersect a high-quality and petrographically distinct St. Louis chert. Nodules protruding from the floor of the cave have been removed and modified. The paucity of performs and absence of finished flaked-stone artifacts suggests that chert was removed from the cave and shaped into finished tools and weapons elsewhere. Artifacts manufactured from Wind Cave chert have been recovered from the midden deposits of nearby rockshelters, including Cliff Palace Cave. Radiocarbon dating demonstrates that the chert quarries in Wind Cave are penecontemporary with those in Wyandotte Cave, Indiana and Mammoth Cave, Kentucky.

[176] *Discussant*

Tankersley, Kenneth [30] *see Nagy, Andras*

Tartaron, Thomas (University of Pennsylvania)

[32] *Scalar Variability in Late Bronze Age Aegean Maritime Worlds*
This paper advocates a bottom-up approach to addressing issues of local variation and global interaction in the eastern Mediterranean Late Bronze Age (c. 1600–1100 B.C.). Before we can truly understand the "international" maritime relations that are deemed characteristic of the period, we need more comprehensive investigations of local and regional nodes, in order to reveal how they were articulated with and nested within larger systems. Two case studies from the Greek Late Bronze (Mycenaean) period focus on the variability of coastal "small worlds" and their role in the Mycenaean maritime political economy.

Tartaron, Thomas [101] *see Pullen, Daniel J.*

Tate, Carolyn (Texas Tech University)

[260] *Regalia and Individual Identity at La Venta Tomb C*
This paper focuses on the collection of artifacts associated with Mound A-3 at La Venta, including one of the five "pseudoburials" of La Venta, several surrounding caches of sculpture, and several stone monuments. The assemblage of several hundred objects centers on a stone figurine of a female (so identified by Follensbee 2000) and includes a variety of symbolic strategies: body markings, costuming, "jewelry," objects that may have been used in ritual and others that probably represent sacred processes.

Taylor, Amanda (University of Washington), Julie Stein (University of Washington) and Stephanie Jolivet (University of

Washington)

[207] *Shell Midden Research and Prehistoric Coastal Settlement Patterns in the San Juan Islands, Washington*

In this paper we present the results of a settlement pattern study based on radiocarbon dating of shells from auger samples collected during a survey of shell middens in the San Juan Islands, Washington. The survey was conducted from 2005 to 2008 and included sampling, investigation of site size and composition, impact of erosion, and public outreach. By integrating faunal and paleoenvironmental data with dating results, we present hypotheses regarding the development of a more sedentary lifeway during the late Holocene. We also discuss similarities and differences between settlement patterns proposed for the San Juan Islands with those proposed for adjacent regions.

Taylor, Amanda [232] *see Marty, Johanna V.*

Taylor, Christine and Eleanor King (Howard University)

[42] *Campsites in the Black Range Mountains, New Mexico - A Predictive Model*

During the late 1800's, many groups were vying for space and resources in the area near the frontier mining community of Hermosa, now a ghost town, in the Black Range mountains, New Mexico. Finding and exploring campsites used by both the military and Apache will allow us to better understand the interaction between the two groups. This preliminary model, created using geographic and archival data, traits of a few known campsites, and ESRI GIS software, predicts where these military and Apache groups may have camped.

Taylor, James [155] *see Lu, Hongliang*

Taylor, Robert (Arkansas Archeological Society) and Juliet Morrow (Arkansas Archeological Survey)

[146] *The Early Paleoindian Occupation of the Martens and Ready Lincoln Hills Sites*

The Clovis cultural complex is the earliest known occupation in the confluence region of the Illinois, Mississippi and Missouri Rivers. Located in the uplands adjacent to the Illinois River, the Ready/Lincoln Hills site (11JY46) is a multi-component habitation/workshop that has produced one of the largest surface assemblages of fluted points and fluted preforms in the state of Illinois. Located in the uplands adjacent to the Missouri River, the Martens site (23SL222) produced one of the largest surface collections of fluted points, fluted preforms, endscrapers, and flake tools in the state of Missouri. Clovis points and preforms, as well as formal flake tools were recovered during controlled excavations at the Martens site. Tool use wear, debitage analysis, and raw material utilization patterns are suggestive of a variety of behaviors during the Clovis era.

Taylor, Timothy (University of Bradford/Journal of World Prehistory)

[175] *Why Possibly or How Necessarily? A British Perspective on the Science - Archaeology Nexus*

Is archaeology science and, if so, what is archaeological science? I examine the nomenclature, content and forms of explanation encountered and expected by archaeology and archaeologists, making comparisons between the UK, US, and German-speaking Europe. The ultimate terms of debate, and a continuing source of confusion, are latent in the work of archaeologist and philosopher, R.G. Collingwood, whose status as a historicist or a praxeologist continues to be debated. Most confusions and misunderstandings of the science/art relationship (or lack of it) in archaeology must involve a consideration of the logical form of expected and acceptable explanations for social phenomena.

Teeter, Wendy (Fowler Museum at UCLA) and Desiree Martinez (Harvard University)

[127] *What is a Village: Preliminary Spatial Assessments and Patterns on Pimu/Catalina Island, California*

Thoughts about the most strategic sites on Catalina Island have been focused on the many protected coves that ring the island. The vast interior is little mentioned more than as lithic production sites. However, we have started to see that the coves have environmental, access, and view shed limitations that mesa tops don't. This isn't to doubt the importance of cove villages, but to add that villages on Catalina are more diverse and strategic than given credit. The goal of the paper is to discuss patterns that are emerging over three seasons of field work on the southern California Channel Island.

Tenorio, Dolores (Instituto de Investigaciones Nucleares), Olaf Jaime-Riveron (University of Kentucky) and Thomas Calligaro (Centre de Recherche et de Restauration des Musées, Musée du Louvre-CNRS)

[229] *Materiality of Stone: Jade During Formative Period as an Exchange Value in an Trade Route on the Western Maya Realm*
In this paper, we address the extension of a very important exchange route which connected different polities of Mesoamerica. The northern Verapaz and southern Pasión valley and river system linked to the Pasión and Chixoy lowland river highways and intersecting with the east-west Caribbean-to-Mexico "transversal". The particular varieties of rocks of the serpentinite mélange of this region (such as jadeite, omphacite, eclogite, etc) were precious goods that tied distant neighbors. Taking into consideration geochemical results of materials obtained from primary contexts and samples obtained from quarries, we could have a better understanding of the political economy of this network.

Tenorio, Dolores [147] see Jaime-Riveron, Olaf

Tercero, Geraldina [65] see Lopiparo, Jeanne

Terceros Céspedes, Zulema

[94] *Macrorestos Botánicos en el Valle de Cochabamba Un estudio preliminar de comparación en tiempo y espacio.*
El estudio de los macrorestos botánicos en el Valle de Cochabamba está cobrando más importancia y lanzando datos que pueden complementar las investigaciones, la presente ponencia mostrara los resultados preliminares del análisis de macrorestos realizado en distintos sitios arqueológicos, se enfocara en la presencia/ausencia de los mismos y su ubicación en cada sitio y en cada época, tomando de referencia el Formativo y el Horizonte Medio. Remarcando en las similitudes, las diferencias y en la significación de estas en lo que se refiere a dieta y agricultura. Y por último se realizará una comparación para determinar si hubo cambios en el uso de las plantas con la expansión de Tiwanaku a la zona durante el Horizonte Medio.

Terrell, John (Field Museum of Natural History)

[113] *Social Network Analysis (SNA) in the Historical Sciences: Applications using Material Culture and Molecular Genetics*
A focus of network research in the social sciences is on how individuals and groups maintain enduring associations, and on the social, economic, and practical consequences of alternative network configurations. Here, however, the focus is historical. One example summarizes an SNA study of material culture collections from the Sepik coast of New Guinea previous analyzed using other methods confirming that material culture and language do not significantly covary there. In a second example, SNA methods are used to evaluate the baseline hypothesis that isolation by geographic distance constrained by social networks largely accounts for molecular genetic variation in northern Melanesia.

Terrell, John Edward [121] see Golitko, Mark L.

Terry, Karisa [177] see Buvit, Ian

Terry, Richard (Brigham Young University), Bruce Dahlin (Shepherd University), Daniel Bair (Brigham Young University), and Timothy Hare (Morehead State university)

[20] *Soil Geochemical Analysis of Public Squares at the Postclassic*

City of Mayapan, Yucatan

Recent analyses of the spatial organization of Postclassic Mayapan have drawn attention to a possible marketplace. In Square K, a large rectangular plaza contains few domestic structures and could have accommodated large numbers of people or market activities. Soil research and detailed mapping have identified activity areas in the Square K plaza, which is currently in high ground cover. We used geochemical analyses to determine concentrations of phosphorus and heavy metals at this locality. These data may help identify market stalls and walkways and could give added support to the hypothesis that this area functioned as the city's principal marketplace.

Terry, Richard [160] see Balzotti, Chris

Tesch, Monika (INAH)

[195] *Campamentos Estacionales en la Zona Media Potosina (Noreste de México)*

En épocas prehispánicas la parte central, semidesértica, de la Zona Media potosina que se encuentra hacia el sureste de Aridoamérica, fue recorrida por grupos cazadores recolectores (semi)nómadas. Durante los últimos años, mediante recorridos sistemáticos de superficie se localizaron aquí grandes campamentos estacionales en los cuales se observan diversas áreas de actividad específica reconocibles por concentraciones líticas, principalmente de desechos de talla y áreas de trabajos específicos sugiriendo cierto tipo de especialización y división tanto de actividades como de trabajo dentro de los campamentos y aparentemente cierta interdependencia entre ellos de acuerdo a su ubicación geográfica.

Tesreau, Travis (Missouri Department of Transportation)

[187] *Remote Sensing (GPR) in St. Louis*

Beginning in 2005, MoDOT archaeologists began using GPR to conduct non-invasive testing on urban lots in St. Louis. The GPR data allows us to establish the layout of buildings and possible features, and helps in assessing potential integrity. This is critical on projects, such as the Mississippi River Bridge, in which archaeological testing cannot be conducted until late in the process. As with other areas, the productivity of the GPR in St. Louis varies lot to lot, with some properties displaying excellent visibility while others show virtually nothing.

Thacker, Paul (Wake Forest University)

[205] *Local Stone Resource Availability and the Evolution of Middle and Upper Paleolithic Raw Material Economies*

A series of Middle and Upper Paleolithic archaeological sites located near high quality raw material sources in central Portugal document major qualitative changes in prehistoric lithic economies. Comprehensive geological study of gravel deposits rich in chert, quartz, and quartzite contextualizes the local resource background for ecological resource use modeling at each site. Artifact assemblage variation across raw material types indicates that Late Middle Paleolithic populations were organized around local resource exploitation with little long distance raw material transport. In contrast, Upper Paleolithic groups employed more diverse reduction strategies with variation specific to different raw materials and tool types.

[205] First Chair; [214] see Price, Gypsy C.; [85] see Pereira, Carlos M.

Thakar, H.B. (University of California, Santa Barbara)

[81] *Reconsideration of Traditional Conception of Shellfish Intensification*

Throughout his career, Michael Glassow has focused the bulk of his research on elucidating the interrelationships of human subsistence, intertidal ecology and climatic variability. These research objectives persist in the work of his students, including myself. Methodological advancements, such as stable isotope analysis of marine mollusks, provide new lines of data which further reveal the intricacies of prehistoric human's ecological relationship with marine resources. My recent stable isotope research provides evidence of a species-specific manifestation of shellfish intensification that demands reconsideration of the traditional archaeological conceptualization of

shellfish intensification and a greater appreciation of the variability introduced by ecological factors.

Tharp, Wade (Illinois State University)

[125] *A Sequence of French Vernacular Architectural Design and Construction Methods in Colonial North America, 1690-1850*

This study examines published and unpublished historical archaeological research, historical documents, and datable extant buildings to develop a temporal and geographical sequence of French colonial architectural designs and construction methods, particularly the poteaux-en-terre and poteaux-sur-sol elements in vernacular buildings, from the Western Great Lakes region to Louisiana, dating from 1690 to 1850. Such an integration of architectural material culture data and the historical record could further scholarship on subjects such as how French colonists in North America used vernacular architecture to create and maintain cultural identity, and how this architecture carried with it indicators of wealth, status, and cultural interaction.

Thebaudeau, Benjamin [185] see Quinn, Colin P.

Theler, James [70] see Boszhardt, Ernie

Thi Lien, Le [189] see Sasaki, Randall J

Thibodeau, Alyson (University of Arizona), Joaquin Ruiz (The University of Arizona) and John T. Chesley (The University of Arizona)

[255] *Following the Coronado Trail through Artifact-Based Lead Isotope Analysis*

From 1540 through 1542, an expedition led by Francisco Vázquez de Coronado trekked across the present-day Southwest. However, the details of their route remain uncertain, and archaeological evidence of the expedition is rare. We seek to contribute to the identification of Coronado sites through lead isotopic analysis of early Spanish colonial metallic artifacts. We present evidence that much of the lead and copper metal used by the expedition has a limited span of lead isotopic signatures. This diagnostic range could provide a key line of evidence for researchers searching for archaeological sites related to Coronado.

[255] *Second Organizer*

Thibodeau, Alyson [255] see Thomas, Noah H.

Thieme, Donald (Valdosta State University), Dennis Blanton (Fernbank Museum of Natural History)

[259] *Landscape Changes and the Early Spanish Presence in Middle Georgia, USA*

Recent excavations by the Fernbank Museum of Natural History indicate a Spanish presence along the Ocmulgee River in middle Georgia during the 16th century CE. The local landscape features alluvial terraces incised by outsized meanders. The base of the T-1 at Coffee Bluff has been dated to greater than 30,000 years BP with two separate radiocarbon ages. Overlying alluvial strata register shifts from meandering to braided and then back to the current meandering channel pattern. Set back over a kilometer from the present river channel on a slightly higher T-2 terrace, the Glass site (9Tf145) was the location of a small village. An oxbow immediately adjacent to 9Tf145 was an active channel at the time that the site was visited by Spaniards and possibly as late as a 19th century historic map showing the Ocmulgee River floodplain.

Thieme, Donald M. [252] see Aiuvalasit, Michael J.

Thomas, Chad (Arizona State University)

[217] *Performance in Everyday Experience*

Performance has long been an important lens through which anthropologists view rituals. Recently, it has also become increasingly prominent in archaeologists' interpretations of ancient rituals, but in practice the concept often remains little more than a synonym for "public spectacle." This paper presents a broader concept of

performance grounded in folkloristics, material culture studies, and semiotics. It explores how such an approach can aid in understanding not just ritual, but the everyday experiences of ancient peoples. The utility of these ideas is briefly illustrated by applying them to artifacts from Mississippian mound centers in the US Southeast and Midwest.

Thomas, David (American Museum of Nat History)

[250] *Seasonality and Mobility on the Georgia Bight: Why We Should Care*

For the past three decades, questions about seasonality and mobility have dominated archaeological research along the Georgia Bight. For the Late Archaic period, inquiry has centered on whether the massive shell ring settlements represent episodic aggregations or long-term, year-round occupations (or both). For the Late Prehistoric period, the "Guale problem" has highlighted contrasting views of residential and logistic mobility for these coastal people. This paper discusses sampling and inferential problems raised in linking seasonality studies to our understanding of mobility patterns and paleoclimatic change.

[52] *Discussant* [250] *Second Organizer*

Thomas, David Hurst [228] see Thomas, Lorann Pendleton

Thomas, Jonathan (University of Iowa), Grant McCall (Tulane University) and Ted Marks (University of Iowa)

[35] *Stringing Together the Past: Experimental Replication of MSA/LSA Ostrich Eggshell Beads*

Ostrich eggshell (OES) beads are a common feature of the Late Stone Age (LSA) and, to a lesser degree, the Middle Stone Age (MSA) archaeological record of southern Africa. Although OES beads are of analytical value in terms of their variability, little is known about the effects of different tools and manufacturing techniques on this variability. This paper presents the results of experimental OES bead replication. Using microscopic analysis, we compare experimental beads to MSA/LSA beads recovered from the 2009 excavation of the Erb Tanks rock shelter, Western Namibia, and discuss the implications of this research for modern human behavior.

Thomas, Jonathan [35] see Horn, Sherman W.; [35] see Kettler, Kurtis H.; [35] see McCall, Grant S.

Thomas, Judith

[144] *Archaeological Investigations of WWII Internment Camps at Fort Hood, Texas*

Fort Hood, located in Central Texas, housed two World War II internment facilities for German prisoners-of-war, both of which are no longer standing. Extensive archival research and limited field investigation conducted for one of these facilities, North Camp Hood, revealed and/or confirmed aspects of the camp's operation which provides insight into basic camp layout variations and helps to document the nation's World War II homefront heritage. This case serves as an example of the benefits of archival research combined with highly selective and horizontally restricted excavations within a very large facility.

Thomas, Lorann (American Museum Nat History) and David Hurst Thomas (American Museum of Natural History)

[228] *The Higher You Get, the Higher You Get: Some thoughts from Alta Toquima (Nevada)*

This paper presents our most recent thinking about Alta Toquima, one of several residential sites located at roughly 11,000 feet on Mt. Jefferson (Monitor Valley, central Nevada). Evidence of high-altitude bighorn hunting abunds on the Mt. Jefferson tablelands, dating to at least 6000 cal B.C. The earliest extant houses at Alta Toquima were constructed by cal A.D. 500 (and likely earlier). This paper situates these high altitude occupations within the larger context of Monitor Valley archaeology and employs nearly 3000 14C dates to explore these relationships from a pan-Great Basin perspective.

Thomas, Noah and Alyson Thibodeau (University of Arizona)

[255] *Early Colonial Resource Appropriation: Sourcing Copper and Lead Ores from the Seventeenth Century Metallurgical Workshop at*

LA 162, Bernalillo County, New Mexico

The analysis of materials recovered from the seventeenth century metallurgical workshop at LA 162 has provided an archaeological perspective on the development of mining technology in frontier contexts of the Spanish Empire. Native American involvement in the practices represented at the workshop was initiated through Spanish colonial miners' interests in minerals used in indigenous technologies such as pigment and glaze production. This paper combines compositional and copper and lead isotope analysis from ore and sheet copper recovered from the workshop to explore how both local and regional resources were incorporated within the syncretic metallurgical technology at LA 162.

Thomas, Peter [60] *see Boulanger, Matthew T.*

Thomas, Sunshine (Texas A&M University) and Laura O'Halloran (Texas A&M University)

[163] *To Dig or Not to Dig: Researcher Access to Museum Collections*

We are all aware of the curation crises. Archaeologists understand the value of extant collections and often encourage students not to dig new sites. However, as most PhD hopefuls realize, this is not "sexy" archaeology—utilizing collections will not get the grants that pay for research, nor will it bring much in way of prestige. To add to the paradox, many students find it difficult to gain access to museum collections, where money, time and resources are dwindling. This paper presents our preliminary efforts at exploring and quantifying student access to collections in conjunction with the difficulties that museums face.

Thomas, Tiffany (University of Nevada, Las Vegas)

[211] *Maize in the Mojave: A look at Agriculture in the Mojave Sink*
Maize agriculture has long been considered a possibility for Late Prehistoric groups living in the Mojave Sink region of California's Mojave Desert. This flood plain agriculture, practiced on the Mojave River Delta, would have been supplemental to the use of wild resources. This paper presents the results of recent research conducted near the Mojave River Delta to address this possibility.

Thompson, Jason (University of Iowa)

[85] *Ground-Penetrating Radar and Imaging of Complex Subsurface Archaeological Materials*

Recent research (Audouze et al. 2007; Enloe et al. 2007) has demonstrated the applicability of using ground-penetrating radar (GPR) as a means of gauging the material configuration and areal extent in Upper Paleolithic open-air contexts. As a direct means of calibrating this research, actualistic, experimental studies were performed to test GPR's ability to image artificial, experimental material distributions of a simulated limestone hearth, a skeletal sheep, a lithic scatter, and a composite target composed of limestone, flint, and bone in a known sedimentological context, the final imagery and encouraging methodological results of which are summarized for this research report.

[85] *First Chair* [85] *Second Organizer*

Thompson, Kerry (Northern Arizona University)

[7] *Who is, or Was, Native American?: The Role of Archaeology in American Indian Identity*

There are myriad definitions of Native Americans at work in American society today. In spite of the benefits of NAGPRA it is an additional piece of legislation with more definitions for American Indians to juggle in facilitating the repatriation and disposition of ancestors, sacred objects, and items of cultural patrimony. Although NAGPRA is open to many lines of evidence, establishing cultural affiliation often depends upon archaeological knowledge. I discuss the role archaeologists play, for better or worse, in this particular facet of American Indian identity.

[198]. *First Organizer*

Thompson, Scott (Arizona State University)

[158] *Burial Performance and Interactions with the Dead in Pueblo*

Bonito, Chaco Canyon

Performance-based approaches to the mortuary record emphasize that burial practices are a social display. In some cases, the performance does not memorialize the social identity of the deceased, but instead creates a powerful display that transforms the identity of the dead. This paper argues that the elaborate burials placed in the oldest section of Pueblo Bonito, Chaco Canyon were part of a performance that was actively remembered. It examines the arrangement of human remains and objects in the burials and the sequence of deposition in the burial rooms to demonstrate that the deposits fostered continued relations between the living and dead.
[158] *First Organizer*; [158] *First Chair*

Thompson, Robert (University of Minnesota)

[23] *The Research Potential of Maize Cob Phytoliths in Food Residues with Examples from Ecuador*

Demonstrating the research potential of opal phytoliths from maize cob chaff requires an understanding of the process by which phytoliths become embedded in food residues. Deposition of phytoliths in maize cob chaff is largely controlled by the regulatory locus TGA1, interacting with other genes during the growth of the maize cob. Assemblages of maize cob phytoliths illustrate that this deposition is influenced by more factors than glume hardness. Processing of maize for food often requires removal of the kernels from the cob, and some bits of chaff are included in this process. One method of increasing the capability of unglazed ceramics to hold water was the deliberate baking of food residues onto the interior walls of the vessels. Examples from three sites in Ecuador illustrate the utility of phytoliths recovered from food residues.

Thompson, Victor (The Ohio State University), Amber VanDerwarker (University of California, Santa Barbara), Phillip Arnold (Loyola University, Chicago) and Thomas Pluckhahn (University of South Florida, Tampa)

[85] *Shallow Geophysics and the Analysis of Persistent Places*

We argue that productive applications of geophysics to anthropological archaeology necessarily involve a specific research question or agenda. We recognize, as with any technique, that not all questions can be addressed by shallow geophysics. That said, we suggest one research agenda, the investigation of "persistent places" which is rooted in anthropological inquiry, that can be investigated, at least in part, by these techniques. In order to illustrate our points, we provide two examples from Mexico and the United States where the use of geophysics contributes to our understanding of changes in the use of space and architecture through time.

Thoms, Alston (Texas A&M University)

[71] *Early Holocene Earth Ovens in South-Central North America: Evidence of Ancient Carbohydrate Revolutions With Bioanthropological Ramifications?*

Texas and vicinity was well settled by Clovis times but millennia would pass before cook-stone technology became established some 8-9,000 years ago. Hot-rock cooking features increased in density and morphological diversity thereafter, indicating significant land-use intensification. Charred geophytes and other food plants, recovered from the oldest through youngest cook-stone features, argue for punctuated, directional dietary changes—carbohydrate revolutions. Increased consumption of readily masticated, often starchy plant foods, coupled with decreased intake of comparatively tough meats, affords pathways toward changes in cranial morphology, facilitated by smaller teeth, as argued by C. L. Brace, and, possibly by better developed amylase glands.

[71] *First Organizer*; [71] *First Chair*

Thurston, Tina (SUNY Buffalo)

[11] *Political Ecology and Colonial Encounters: Some Examples from Northern Europe*

In Northern Europe's Late Iron Age and Early Medieval eras, human-environment relationships both aided and hindered the colonial ambitions of expansionary states. Ecological conditions, especially as exploited by local populations, often were silent partners in collusion

with resistors and rebels, while sometimes the same conditions betrayed them. The environment itself, as an 'enemy' of conquering forces, could also become the focus of violent subjugation. Examples from the author's research projects in Sweden, Denmark, and Northern Ireland illustrate how aspects of landscape influenced political sequences and their outcomes in a variety of critical ways.

Thurston, Tina [243] *see Brunton, Thomas F.*

Tiffany, Joseph A. [72] *see Lensink, Stephen C.*

Tilton, James (NASA GSFC), Douglas Comer (CSRM, Baltimore, MD), Kevin May (CSRM, Baltimore, MD) and Winston Hurst (Abajo Archaeology, Bluff, UT)

[160] *Towards Automated Detection of Archaeological Sites utilizing Remotely Sensed Imagery*

There have been numerous and noteworthy instances in which archaeological sites and other features of archaeological interest have been found by means of aerial and satellite imagery. However, the reported approaches require a great deal of human intervention to be effective. We will discuss our efforts toward developing an approach that automates the detection process to a high degree. Our efforts include meticulous care in the fusing of data from optical and radar sensors and other available sources, utilization of the latest advances in object-based image analysis and a rigorous statistical analysis protocol.

Tinsley, Clayton (Geo-Marine, Inc.)

[231] *Oasis in the Blackland Prairie: Riparian Subsistence Strategies in Prehistoric North-Central Texas*

Recent research data from a series of riparian contexts within Late-Archaic through Late Prehistoric north-central Texas are helping to address issues of subsistence strategy, environmental change and landscape utilization within the region. Well dated contexts from both the East Fork and West Fork Trinity River drainages, are the largest and best preserved faunal contexts excavated to date in the region and are allowing new insights from a data source that has been traditionally limited, due to poor preservation.

[231] *First Organizer*

Tisdal, Carey E [215] *see Pirkil, Mary E*

Todd, Brenda (University of Colorado, Boulder)

[235] *Excavations at Chimney Rock Pueblo (5AA83)*

Chimney Rock Pueblo (5AA83) is an L-shaped Chaco-style great house consisting of approximately 35 ground floor rooms, two kivas, a plaza and an elevated court. The pueblo is located at an elevation of 7,600 feet on a triangular-shaped rock platform southwest of two sandstone pinnacles. This poster summarizes work completed during the summer of 2009, including research questions developed and available analysis results. This field project is especially unique given the rarity of modern day excavations in large and significant Chacoan great houses, the astronomical implications of Chimney Rock Pueblo, and the potential for contributions to existing understanding of the Chaco Regional System.

[40] *see Hartmann, Gayle*

Tokovinine, Alexandre (Peabody Museum, Harvard University)

[99] *"As Twenty Eight Lords Witnessed": Group Identities in the Classic Maya Political Landscape*

Classic Maya political landscape is often described as a network of opportunistic alliances and dependencies that kept evolving in response to the changing fortunes of political actors. This paper based on a comprehensive survey of Classic Maya place names considers a very different picture: a landscape of several social entities which crossed political boundaries. Membership in these groups was not affected by changes in one's political networks. Quite the opposite, it was one of the factors which determined one's political networks. This observation has important implications for future archaeological and epigraphical studies of ancient Maya polities.

Tolmie, Clare (University of Iowa)

[102] *Through the Woods and into the Creek: Floral and Faunal remains from New Lenox (11-Wi-213)*

The archaeobotanical and faunal remains from New Lenox (11Wi213) provide an opportunity to compare subsistence behavior during the Langford, Oak Forest and New Lenox Upper Mississippian phases. All three components utilized corn, beans and squash supplemented by locally available wild plant foods. Faunal exploitation focused on white-tailed deer and aquatic resources. A strong preference for local exploitation of woodland and aquatic environments is evident, with seasonal use of prairie resources. Variation in subsistence behavior over time is subtle and may reflect differences in duration of occupation, site function and/or anthropogenic landscape change.

Tomasic, John and Tricia Waggoner (Kansas Historical Society)

[73] *Reexamining Spindle Whorls in the North American and Mesoamerican Archaeological Records*

Spindle whorls are tools used in spinning - the process of transforming raw fiber into twisted thread. Ethnohistoric evidence suggests spinning and weaving were household activities performed by women in domestic contexts in North America and Mesoamerica. In this poster, we reexamine the original interpretations of a series of artifacts from North American and Mesoamerican archaeological sites, and we suggest that these previous interpretations have overlooked their potential function as spinning tools used by women in domestic contexts. Furthermore, we argue that previous interpretations have not been particularly sensitive to evidence of female domestic activities in the archaeological record.

Tomaskova, Silvia (UNC Chapel Hill)

[104] *Archaeological Magic*

The thesis that rock art may derive from shamanistic rituals achieved popularity in the 1990's and remains attractive to lay as well as scholarly audiences. The interpretation has also met critical voices from archeologists who object to the absence of local historical accounts and the reductionism of such models. My research on the incorporation of Siberian shamans into archaeological narratives shows that our image of the shaman is a composite of changing disciplinary history, colonial narratives and past practice. Efforts to imagine universal roots for art, religion, and science in prehistoric magic have erased or overwritten gender. When seeking to study questions of art, religion and magic archaeologists should pay attention to history of their own field and the history of the region in question.

Tomka, Steve (Center for Archaeological Research-UTSA) and Eric Oksanen (Center for Archaeological Research-The University of Texas at San Antonio)

[231] *Patterns in Archaic and Late Prehistoric Raw Material Procurement and Mobility*

An analysis of Late Archaic through Late Prehistoric stone artifact assemblages identified a variety of lithic materials that occur unevenly in quantity and distribution in the landscape and which have different working and structural traits. Access to, and utilization of, raw material types vary through time and recent excavations at several sites are used to evaluate local temporal trends and re-examine regional hunter/gatherers mobility models. By identifying, characterizing, and quantifying local and non-local lithic resources, preferences and variability in the material composition of the lithic assemblages and methods of lithic reduction are used to infer changing mobility strategies.

Toney, Elizabeth (University of Oklahoma) and Thomas Gruber (University of Oklahoma)

[235] *Comparison of Geometric Design Combinations on Style I and Style III Bowls in the Mimbres Valley, Southwestern New Mexico*

This poster explores patterns in geometric design combinations on Mimbres Style I and Style III bowls and the implications for those patterns in understanding technological systems and the social relations of production in the Mimbres area of southwestern New Mexico. We argue that the use of geometric design patterns could be

used to identify clan and/or familial relationships over time. Specifically, individual and framing elements were used by Mimbres people to structure painted designs on Mimbres Black-on-white bowls. These geometric combinations are evaluated both within and between large sites within the Mimbres Valley.

Toohey, Jason (Department of Anthropology)

[127] *Contested Landscapes in the Cajamarca Highlands of Peru: Viewshed and Location at the Late Intermediate Period (AD1000-AD1476) Site of Yanaorco*

Strategic places on the landscape were contested in many regions of Peru during the late prehispanic period. Special locations on the landscape were valued for political, economic, and religious reasons. The village of Yanaorco in the Cajamarca highlands was one of these important points on the landscape. It was a focus of conflict through the Late Intermediate Period (AD1000-AD1470). Partially due to its strategic location on the continental divide, its occupants may have been forcibly removed by the Inka Empire in approximately AD 1465. Yanaorco serves as a case study in the study of strategic locations during this period.

Toom, Dennis (University of North Dakota)

[171] *A Sharp Little War: Initial Coalescent Intrusion into the Middle Missouri Subarea of the North American Great Plains*

The heavily fortified villages of the Initial Coalescent variant of the Great Plains Middle Missouri subarea offer clear and unequivocal evidence of human conflict, or warfare, during the middle period of the Plains Village tradition. The evidence for Initial Coalescent warfare and defense is reviewed, mainly utilizing data from the Whistling Elk and Crow Creek village sites, and the overall pattern of conflict is examined from the perspective of frontiers and boundaries. It is concluded that intertribal warfare between Initial Coalescent invaders and resident Middle Missouri groups best explains this example of late prehistoric American Indian militarism.

Topic, John (Trent University)

[96] *Andean Accounting Systems in Light of The Chimú System at Chan Chan*

The Chimú developed an accounting system that was in many respects parallel to the better known Inca quipu. Both utilized a combination of attributes and positions to record information. In this presentation, I will explore in more detail the role of position as part of the information recording system. Position seems to be a critical component of Andean recording systems. In other systems, attributes, symbols, or tokens may well have more importance. In the Andes, position not only demarcates the decimal values of the quipu (as indeed is also the case with Arabic numerals), but it also establishes the categories used in the Chimú accounting system, the values used in the Andean abacus, it structures Inca and Chimú storage space, and perhaps is reflected in more esoteric ways in concepts such as pacha, chaupi, tinku, yanantin, etc.

[18] *Discussant*

Topic, John [67] see Topic, Theresa

Topic, Theresa (Brescia University College) and John

Topic (Trent University)

[67] *Spondylus Use in the North Sierra of Peru*

This paper reviews reports of *Spondylus* from the Huamachuco, Cajamarca and Callejon areas, comparing the temporal and contextual information from these relatively well studied areas. Throughout the area *Spondylus* finds are rare, and almost invariably in contexts associated with burial and/or ritual activities. The evidence for temporal variability in the flow of *Spondylus* is considered, and indications for coast-wise or sierra movement of raw material and finished product at different periods.

Topping, Peter (English Heritage) [147] Discussant [147] Second Organizer

Torres, Josh (University of Florida/SEARCH, Inc.)

[116] *Complex Socialities and the Construction of Communities in the Ancient Caribbean*

Traditional perspectives of socio-political development in the Caribbean, and in particular the Greater Antilles, rely heavily on the chiefdom model for explaining social organization and trajectories of social change. Problematically, the concept is often used as an explanatory destination rather than a point of departure for understanding the engagements of people at local levels within larger social fields, networks, arenas, structures and landscapes. This paper discusses some of these issues and examines sociality and community as concepts for developing new interpretive frameworks for the regions ancient past.

[116] First Organizer; [116] First Chair

Torres-Rouff, Christina (The Colorado College), Francisco Gallardo (Museo Chileno de Arte Precolombino) and William J. Pestle (University of Illinois at Chicago)

[122] *Movements of People, Foods, and Ideas: Chemical and Bioarchaeological Analyses of Human Remains from the San Salvador Cemetery, North Chile*

San Salvador is a tributary of the Loa, the only river that traverses the Atacama Desert from the mountains to the Pacific. Recent investigations at a village and cemetery over 100km inland on the San Salvador revealed the presence of a population enclave functioning as an intermediary for coast/highland relations during the Middle Formative (500BC-AD100). Evidence indicates surplus economies and a network of exchange for foods, prestige goods, and ideas. These ties were not circumstantial, but part of a regional economic structure that remains only partly explored. Osteological and isotopic analyses suggest a strong coastal tie consistent with archaeological evidence.

Torres-Rouff, Christina [122] First Organizer

Torvinen, Andrea (Arizona State University)

[57] *Multi-Scalar Analysis of Ceramic Exchange at a Regional Center in Northwest Mexico*

La Quemada, Zacatecas, was part of a regional network of centers known to have interacted through ceramic exchange during the Epiclassic period (A.D. 600-900). This study utilizes a clustering method to determine if different sectors of the site interacted differently with distant areas and whether the connections maintained by social constituencies residing in these sectors matched those observed at the site-wide level. Evidence for the repetition of differential use patterns regarding public vs. private space was found at multiple scales and supports the conclusion that La Quemada may have served as a ceremonial center for the Malpaso Valley and beyond.

[57] First Chair [57] Second Organizer

Tosello, Gilles [104] see Fritz, Carole

Tostevin, Gilbert (University of Minnesota) [157] Discussant

Toth, Jay

[70] *Bird Effigy Mounds: Native Aeronautics*

Over 800 years ago native people who practice the effigy mound culture in Wisconsin and Iowa understood the physics of flight. The native aeronautic engineers designed bird effigy mounds as flyable symbols of their religious beliefs. Not only do the scale models of these bird effigies fly, but the native landscape architects placement of these mounds both reflect the local prevailing winds and the flight path of the represented bird above.

Towner, Ronald (Tree-ring Lab) and Stacy Galassini (Cibola National Forest)

[213] *Cambium-Peeled Trees in the Zuni Mountains, New Mexico*

Cambium-peeled trees are relatively common in ponderosa pine forests of the intermountain west. Found from British Columbia to southern New Mexico, cambium-peeled trees have been interpreted as (a) a response to famine conditions related to climate, (b) a

response to conflict-related food shortages and scheduling issues, (c) a sweet or delicacy, and (b) a medicinal product use to treat various internal and external ailments. This paper uses dendrochronology, archaeology, ethnohistory, and oral history to examine three spatially discrete groups of peeled trees in the Zuni Mountains of New Mexico in terms of their relationships to climate, conflict and cultural practices.

[152] *Discussant* [213] *First Chair*

Towner, Ronald [223] *see Herhahn, Cynthia L.*

Trabert, Sarah (University of Iowa)

[72] *Dismal Regional Interactions: Re-Evaluating Ceramics from the Scott County Pueblo*

The Scott County Pueblo site (14SC01) in Scott County, Kansas likely represents the dual occupation of Dismal River (Plains) and Southwestern groups. Ceramics from a 1939 excavation were re-examined to collect data on vessel form which may shed light on the culinary practices and ethnic identity of the site's inhabitants. Future research will include the re-examination of Dismal River ceramics from the central-northern plains region, sourcing studies, and a more in-depth look at regional interactions between people in the Southwest and those living on the Plains.

Trader, Patrick (Gray & Pape, Inc.)

[150] *Living on the Edge: Examining a Late Woodland Frontier Settlement in West-Central Illinois*

Data recovery efforts at Site 11ST547, were undertaken to mitigate adverse affects from the REX-East pipeline. Site 11ST547 is located in an upland interior interfluvial summit. Thirteen radiocarbon assays were recovered from nine features dating from 1280 to 1080 B.P., suggesting a Late Woodland occupation. Ceramic analysis suggests they share traits with several ceramic traditions, including Bauer Branch, Maple Mills, and Adams variant. Site 11ST547 falls within a boundary zone and represents a nexus between several cultural traditions. This paper examines Site 11ST547 within the chronological and settlement patterns for the Late Woodland period in west-central Illinois.

Trampier, Joshua (University of Chicago)

[92] *From Holes in the Ground to Lines in the Sand: Landscape Archaeology in Light of Bureaucratic and Academic Dimensions of Egyptian Cultural Heritage*

For two centuries, Egyptology and the Egyptian heritage management framework have developed in tandem, entrenching a vision of site based on monuments and the recovery of antiquities (athar). Artifacts and land have been artificially segregated and mapped based on overlapping bureaucratic and academic priorities and processes. This conceptualization has directly impacted research in the country, leaving much of the Nile floodplain unexplored. Addressing this legacy with a case study in the western Delta, this work emphasizes a broader behavioral definition of site grounded in dynamic human-environmental interactions, integrating analyses of ceramic density, remote sensing observations, and subsurface lithology.

Tratebas, Alice (Bureau of Land Management)

[111] *Survey and Mapping of Little Missouri Antelope Trap*

After six field seasons of survey and mapping on the Little Missouri Antelope Trap in northeastern Wyoming, we have not yet identified the full extent of the trapping complex. Initially we mapped the most obvious structures, a pit trap and a corral. More recently we began tracing juniper drive wings along the margins of old growth junipers which border open valleys that were used to move antelope over passes into traps on the opposite slope. Some drive structures have multiple parallel wings that indicate repeat drives using the same drive strategy. Habitation remains directly associated with the juniper trap structures span Middle Archaic through Late Prehistoric.

Trein, Debora (University of Texas at Austin)

[112] *Preliminary Research on Monumental Architecture at the Site of*

La Milpa, Belize

This paper is aimed at providing an overview of data collected from preliminary research carried out during the 2009 field season at the site of La Milpa in northwest Belize. Excavations have focused on monumental architecture in Plaza A, the largest plaza at the site, more specifically Structure 3. This research is part of a long-term project geared towards an analysis of the socio-political factors entailed in the conceptualization, undertaking and subsequent use of large-scale architectural projects, as well as an examination of possible differential elite sponsorship of monumental structures in the Maya area.

Tremayne, Andrew (University of Wyoming)

[79] *An Analysis of Faunal Remains from a Denbigh Flint Complex Camp at Matcharak Lake (AMR-186), Alaska*

Excavation of a 4000 year old Denbigh Flint Complex camp at Matcharak Lake, located in Gates of the Arctic National Park, Alaska, uncovered preserved organic remains including some exceedingly rare bone and antler tools. Six bone points or prongs, cut antler, and one decorated fore-shaft support hypotheses of a heavy reliance on organic technology. Remains of caribou, Dall sheep, small mammals, birds and fish show they exploited a wide variety of species, suggesting a broad based diet, and an intimate familiarity with their environment. Juvenile caribou bones indicate at least one occupation occurred in late summer or early fall.

Tribbett, Alysha (Vanderbilt University) and Tiffany Tung (Vanderbilt University)

[137] *Corn and Coca in the post-Wari Era: Dental Health, Diet, and Subsistence Practices after State Collapse in the Highland Andes*
After the collapse of the Wari state, sectors of the urban capital—Huari—were occupied well into the Late Intermediate Period (1000–1400 CE). Did later occupants continue to use nearby agricultural lands to maintain Wari-era food production and consumption patterns? Were maize and coca commonly ingested? To address these questions, we examined the dental health of 85 adults and 19 juveniles. Results show that slightly more than half experienced antemortem tooth loss and a third suffered from at least one dental abscess or carious lesion, suggesting a continuation of agricultural practices. CEJ caries suggest some may have consumed coca.

Trigg, Heather (Univ Massachusetts Boston)

[193] *Politics, Trade, and 19th-century Vecino Identity: An Archaeological Examination of a Small New Mexican Ranch*

The 19th century represented a time of political upheaval for New Mexico. First as part of the Spanish Empire, then the Mexican State, and finally as a territory of the United States, New Mexico experienced changes in economic and social relationships with shifting centers of political control. Increased social and economic contacts with Anglo-Americans accompanied the opening of the Santa Fe Trail and incorporation into the United States. These economic, social, and political relationships influenced vecino identity and how it was expressed in material goods and practices. This paper explores these relationships at one vecino site in northern New Mexico.

[154] *see Peles, Ashley A.*; [246] *see Patalano, Marisa*

Trimble, Michael [163] *see Riordan, Jennifer L.*

Trimmer, Alyssa [179] *see Duncan, Richard B.*

Tripcevich, Nicholas (UC Berkeley)

[222] *Onward to Apurímac: A Llama Caravan Journey in Southern Peru*

In 2007 Ilamero Fidel Cruz Anco and three members of his extended family retraced the path of his earlier salt caravans in the company of archaeologists and ethnographers. This talk will discuss the 230 km journey from the Huarhua salt mine in Cotahuasi (Arequipa) to the town of Calcauso (Apurímac) over a fifteen-day period. This ethnoarchaeological research project was designed to document the travel strategies of llama caravans and map their journey with current

GPS technology, but we also observed many other features of llama caravan organization in this Quechua speaking community. The talk will explore the link between regional exchange and long-distance family ties, the relationship between herders and farmers, and the daily routine on the trail.

Troccoli, Ruth (D.C. City Archaeologist) and Shagun Raina (University of Wisconsin, Madison)

[163] *GIS and Archaeological Data Management in the Nation's Capitol*

Conversion from paper-based archaeological data management to a GIS has streamlined review and compliance in the DC SHPO, providing sophisticated land-use analysis in place of gut instinct. Standard and custom layers inform recommendations for survey type, location, and depth. A 17-acre parcel considered too disturbed to warrant testing in 1990 was reviewed using GIS and three acres with high potential were identified. An eligible Late Woodland campsite with a lithic quarry/ workshop was located during testing. Data layers with historic shoreline and stream course reconstructions, former cemetery locations, and Late Pleistocene paleosols are used to target specific types of resources.

Trombold, Charles (Washington University in St. Louis)

[13] *Recent Excavations on the La Quemada Agricultural Terraces, Zacatecas, Mexico*

Based on pollen and phytolith profiles from our first test excavations on the terraces in 2000, it appeared that the terraces were possibly a late response to climatic deterioration. The extended excavations in 2008 and 2009, however, unequivocally demonstrate their earlier construction during the La Quemada phase (ca. AD 600 – 800) at the time of greatest population growth and political centralization. The uniform construction style of terraces and the contiguous 12 meter wide causeway indicate centralized labor coordination and contemporaneity. This paper discusses aspects of terrace and causeway architecture, associated artifacts, labor investment and an associated village site ("La Jabonera").

Trombold, Charles D. [13] see *Schuermann, Ryan T.*

Tromp, Monica [175] see *Dudgeon, John V.*

Trowbridge, Meaghan (University of Arizona), Barbara J. Mills (University of Arizona), Deborah L. Huntley (Center for Desert Archaeology), Jeffery J. Clark (Center for Desert Archaeology) and Wm. Randall Haas, Jr. (University of Arizona)
[200] *A Social Network Approach to Macroregional Ceramic Distributions in the Greater Southwest*

Applying methods and theories of social network analysis to the archaeological record, the Southwest Social Networks Project seeks to reconstruct prehispanic social network dynamics from A.D. 1200 to 1550 across the Southwest. Our project is integrating material and architectural data to an existing geographic database of over 1,500 late prehispanic sites to create a high-resolution dataset that cross-cuts more traditional socio-physiographic boundaries within the Southwest. We report the progress of our ceramic data compilation efforts and present regional case studies to demonstrate how these data can inform our understanding of regional interactions and network dynamics in the past.

Trowbridge, Meaghan [113] see *Mills, Barbara J.*

Trubitt, Mary Beth (Arkansas Archeological Survey)

[140] *Cahokia and Mississippian Warfare in the 13th Century*
Based on past and recent excavations at Cahokia, we have a better understanding of the Central Palisade as part of a political shift around A.D. 1200 that is materialized in the site's monumental public constructions. The timing of the building and rebuilding of the palisade is reviewed. Archaeological evidence from the site itself is used to evaluate current models about the increased concern with defense of the central ritual core and the motivations for warfare in and around Cahokia during the 13th century A.D.

[140] Third Organizer

Trubitt, Mary Beth [115] *First Organizer*; [140] see *Kelly, John E.*

Trudel, Stephanie E. [203] see *Lewarch, Dennis E.*

Truong, Nhi [81] see *Bowser, Brenda J.*

Truongchau, Thomas M. [259] see *Blackwell, Bonnie A. B.*

Tschaunert, Hartmut [145] see *Isbell, William H.*

Tsesmeli, Lia (Southern Methodist University)

[77] *The Dynamic Landscape at El Perú-Waka': Visual and Temporal Representations*

The landscape at El Perú-Waka' and its periphery has been recorded methodically and intensively since 2003 in an effort to account for the settlement's size, outline and configuration. A direct result of such survey, the Waka GIS combines architectural and landform features, excavation unit information, and contextual excavated material evidence into a coherent, dynamic information system that aims to represent and study the spatial and temporal components of the settlement. This paper briefly outlines the methodology for recording and managing the existing dataset, and presents an analytical example of temporal and visual integration at the site.

Tsomo, Tenzing [8] see *Skinner, Anne*

Tucker, Bryan D. [214] see *Krigbaum, John*

Tung, Tiffany (Vanderbilt University), Katharina Schreiber (University of California, Santa Barbara)

[122] *Morbidity Patterns in Ancient Nasca, Peru: A Bioarchaeological Study of Skeletal Health and Trauma*

Prehispanic populations in the Nasca drainage of central Peru buried their dead in large, open cemeteries, and although they are looted, there are thousands of analyzable commingled human remains. We present skeletal health data on at least 80 individuals from eight cemeteries: two from the Nasca valley and six from the Taruga valley. The cemeteries date to Nasca (AD 1 – 750), Wari (AD 750 – 1000), and the Late Intermediate Period (AD 1000 – 1400). We examine differences in community health through time and relate these to changing socio-political contexts, like autonomous rule in Nasca era and the rise and decline of Wari influence.

Tung, Tiffany [137] see *Tribbett, Alysha L.*; [137] see *Sharp, Emily A.*

Turnbow, Christopher (Office of Contract Archeology, UNM) and Jim A. Railey (SWCA-Albuquerque)

[87] *Intensive Farming in Southern New Mexico: Earlier Than We Thought*

Large-scale excavations for two highway projects in southern New Mexico have pushed back the beginnings of intensive farming and storage in the region from ca. AD 500 to sometime in the first millennium BC. These discoveries suggest that intensive farming in the region first took hold in well-watered highland settings, while more mobile hunting and gathering persisted as the dominant pattern in the lowlands until later Formative times. These findings challenge at least one model of subsistence-settlement patterns previously proposed for the region, and suggest a complex integration of upland and lowland economic systems in the region.

Tuross, Noreen (Harvard University), Antonio Martinez Tuñón (INAH), Christina Warinner (Harvard University), Dylan Clark (Harvard University) and Nelly Robles Garcia (INAH)

[103] *Between Yagul and Mitla*

Within the context of a major project aimed at the protection of more than 100 cave and rock shelter sites in the Valley of Tlacolula, Oaxaca, we have investigated the floral biome of the region to aid in, extend and develop new archaeological interpretations. We report a complex isotopic pattern in contemporary flora that has likely

persisted for thousands of years. The diversity in carbon and nitrogen floral isotopic values will impact, and at times alter, interpretations of plant domestication and trophic level. In the excavation of Cave A-54, we document remnant agave remains and report a new biomarker that supports the interpretation of pulque starter storage as a major use of this small, isolated space.

[103] *Second Chair*

Turq, Alain (Musée national préhistoire (France)), Dennis Sandgathe (Frazier University Vancouver), Harold Dibble (University of Pennsylvania), Jean Philippe Faivre (PACEA Université de Bordeaux) and Shannon Mac Pherron (Max Plank Institut)

[8] *The Quina Occupations at Roc de Marsal (France)*

The recent excavations of the Quina Mousterian occupations at Roc de Marsal have yielded abundant and reliable evidence of this Middle Paleolithic industrial variant. In this paper, we compare the Roc de Marsal Quina assemblages to those from other sites in southwest France, demonstrating the uniqueness of this industry in terms of technological behavior and overall economy. On the basis of this study, a new definition of the Quina Mousterian is presented.

Turq, Alain [8] see Dibble, Harold L.; [8] see McPherron, Shannon P.

Tushingham, Shannon (University of California, Davis), Diana Nguyen (University of California, Davis), Jelmer Eerkens (University of California, Davis), Jimmy Nguyen (University of California, Davis) and Oliver Fiehn (UC Davis Genome Center)

[4] *Gas Chromatography-Mass Spectrometry Analysis of Alkaloid Residue in Ancient and Experimental Pipes*

Though archaeological pipes are typically assumed to be associated with tobacco (*Nicotiana* sp.) smoking, a variety of smoke plants were used for ritual and medicinal purposes in ethnographic North America. The goal of this study is to determine which plants were smoked by Californian hunter-gatherers, if there is any correlation between plant species and pipe attributes, and whether different plants were emphasized at different points in time. A range of modern plants were characterized using GC-MS, "smoked" in experimental pipes, residues extracted as if archaeological specimens, and compared to residues extracted from archaeological pipes dating to between 3500-1200 years old.

Twiss, Kathryn (Stony Brook University) [48] *Discussant*

Twiss, Kathryn [74] see Henecke, Jennifer L.

Tykot, Robert (U. of South Florida), Darko Komšo (Archaeological Museum of Istria), Emil Podrug (City Museum of Šibenik)

[9] *The Spread of Obsidian in the Adriatic during the Neolithic: New Evidence from Dalmatia and Istria*

Obsidian sources in Europe and the Mediterranean are well known, yet other than for Italy, little work had been done on obsidian artifacts found at archaeological sites along the Adriatic. In this study, more than 150 obsidian artifacts from Neolithic sites in Croatia were analyzed using a non-destructive portable Bruker X-ray fluorescence spectrometer. The artifacts come from eight sites in Istria, and three in southern Dalmatia (Danilo, Pokrovnik, Krivace). Their attribution to specific geological sources and subsources provide for statistically supported interpretations regarding trade and exchange directions and socioeconomic organization for the Neolithic period in the Adriatic.

Tykot, Robert [123] see Freund, Kyle P.; [126] *Discussant*; [175] *Discussant*; [184] see Waterman, Anna J.; [251] see Hays, Christopher

Tyler, James [91] see Wrobel, Gabriel D.

Tynan, Collins (College of the Holy Cross), Casey McNeill, Ian

Kuijt (University of Notre Dame), Jillian Brems (University of Maryland) and Jillian Brems (C-Board Films, Bofin Island, Ireland)

[185] *Resurrecting the Island Way: Oral History and Life-Ways on 19/20th cent Inis Air, Co. Galway, Ireland*

The integration of interviews, oral histories and historical records, provides an important means of documenting past island lifeways. This poster addresses the process employed in June 2009 to document 1940-1960 life on InisAric island, off of western Ireland. This involved taking three villagers back to Inis Air, conducting on-camera interviews in their abandoned homes, taking them to fields areas, and getting them to reflect upon issues of place, identity and landscape, within this coastal community. This research will be expanded in the next two years and will serve as a record of island life.

Tyson, Erin, Lauren Meyer (Bandelier National Monument, NPS), Molly Ray (Bandelier National Monument, NPS) and Stephen Merkel (Bandelier National Monument, NPS)

[235] *In Response to Vandalism: Ten Years of Graffiti Mitigation at Bandelier National Monument*

During the 2009 field season at Bandelier National Monument a conservation program was implemented, focusing on graffiti mitigation among cliff dwellings at Tsankawi Mesa, an ancestral Puebloan site. Historic and modern markings, symbols, and letters carved into the original earthen plaster, soot finishes and tuff substrate are defined as vandalism. While preservation efforts prioritize prehistoric resources, remnants from subsequent periods of occupation must also be considered, posing a philosophical dilemma. The poster will discuss principal objectives of the graffiti mitigation program, theoretical considerations for selecting graffiti to treat, the methodology employed, and examples of treatments since the program's inception.

Ullah, Isaac (Arizona State University, SHESC)

[73] *Assessing the Accuracy of Microrefuse Sampling Techniques*

Spatial analyses of microrefuse recovered from ancient living surfaces can reveal the location and character of activities that occurred on those surfaces. How microrefuse samples are taken, however, greatly influences the outcome of these spatial analyses. This paper advocates a new strategy of collecting many small microrefuse samples from the nodes of a triangular lattice as opposed to several commonly used microrefuse sampling techniques, including grid-based, purposive bulk, and random bulk sampling. Each strategy is tested and ranked according to how accurately it can predict the real spatial variation present in several sample microrefuse scatters simulated in a GIS.

[184] *see Bergin, Sean M.*

Underhill, Anne (Field Museum) [155] *First Chair*

Urban, Patricia (Kenyon College)

[258] *Can Specialized Ceramic Production be Seen through Slight Variations in Ceramic Formation?*

In this presentation, I discuss tests of the hypothesis that variation in the finishing of lip forms may be one way to see specialized ceramic production. Fundamental is the idea that lip finishing is a product of habitus, that is, once learned, it is largely unconscious. In an earlier test of this proposition, contrary to my expectations, finishing was more variable in areas where production was concentrated, and fairly uniform at sites where production was small-scale and/or intermittent. This result will be further tested in other situations of neighboring small- and larger-scale manufacturing.

[65] *see Schortman, Hayden N.; [258] see Dillon, Jennifer M.; [258] *Second Organizer**

Urban, Thomas (University Of Oxford), John Hermance and Krysta Ryzewski

[123] *Cumberlandite: Using Residual Gravity to Delineate an Historically Important Ore Body*

Cumberlandite, the state rock of Rhode Island, may have played a

major role in the early iron industry of colonial New England. The magmatic titaniferous ore is believed to have been exploited as a natural resource in the 18th century by industrious colonists, including the Brown brothers, namesakes of Brown University. Because cumberlandite is much denser than the granites and metamorphic rocks common to Rhode Island, it creates a detectable gravity anomaly. This poster describes the procedure used to map the cumberlandite ore body with a LaCoste & Romberg gravimeter, including field procedures and corrections for elevation and tidal effects.

Urquhart, Gerald [4] *see Lovis, William*

Urton, Gary (Harvard University)

[96] *The Paradigm of the Knotted String as a Model for the Structure and Organization of Storage Facilities in the Inka Empire*

To date, we have a wealth of studies, both archaeological and ethnohistorical, of Inka storage facilities, as well as an equally extensive collection of works dealing with the Inka knotted-string recording device, the khipu (or quipu; Quechua: "knot"). While we know that the khipu was used to record information on the contents and disposition of the storehouses located in state administrative centers, we have not to date developed a comprehensive theory that would allow us to articulate the nature of the connection between the structural characteristics and account recording principles of the khipu, on one hand, and the structural and organizational features of Inka storage facilities, on the other. This study argues that there was an intimate link – both formal and conceptual -- between these two institutions of Inka statecraft.

Urunuela, Gabriela (Universidad de las Americas) and Patricia Plunket (Universidad de las Americas, Puebla)

[156] *The Standardization of the Thin Orange Ceramic Tradition: The Formative to Classic Transition*

Evidence from the site of Tetimpa in the state of Puebla, Mexico, demonstrates that Thin Orange emerges as a trade ware during the Late Formative. Although goblets and drinking vessels dominate the assemblages, the specific shapes vary widely, reflecting the individualized exchange relations that characterized this period. We suggest that Teotihuacan's selection of this ceramic type as a major component of its long distance commercial networks resulted in the standardized morphology and paste found during Classic times.

Uruñuela, Gabriela [136] *see Robles-Salmerón, Amparo*

Utrilla, Pilar [177] *see Aura, J. Emili*

Uunila, Kirsti (Calvert County MD Department of Planning) [3]
Discussant

Vail, Gabrielle (New College of Florida), Christine Hernandez (Tulane University)

[178] *The Dynamic Duo: Rain and Fertility Rituals in Postclassic Yucatan Featuring Chaak and Chak Chel*

Data from Maya codices and murals provide important information for interpreting artifact assemblages excavated from cave and cenote contexts throughout the Yucatán peninsula. Our analysis of these materials—in particular, incensarios, effigy vessels, and metates—in conjunction with scenes depicted in painted imagery suggests that these loci were used for the performance of rituals dedicated to a complex of rain and fertility deities. Of special interest is the inclusion of artifacts linked to female deities having associations with fertility and the events of creation, an aspect of these collections that has received little attention in the past.

[178] *First Chair*

Valcarcel Rojas, Roberto [97] *see Laffoon, Jason E.; [97]* *see Mickleburgh, Hayley L.*

Valdez, Fred (University of Texas At Austin) [91] *Discussant*

Valencia, Mauricio [195] *see Garza, Silvia*

Valencia, Robert [225] *see Darling, J Andrew*

Valentín, Norma [64] *see López Luján, Leonardo*

Valentine, Benjamin (University of Florida), John Krigbaum (University of Florida) and Richard Meadow (Harvard University)

[189] *Isotopic Perspectives on Harappan Mobility: A Faunal Baseline*
Isotopes of strontium, lead, and oxygen can give a high-resolution perspective on broad changes in human mobility suggested by protohistoric South Asian archaeology. Comparison between Harappan and Late Harappan mortuary populations at the sites of Farmana and Sanauli in northwest India will show how migration patterns varied with apparent changes in a broader Indus ideology. We present the results of faunal enamel and sediment analyses from Harappan sites dating between the late 3rd millennium BC to the early 2nd millennium BC. These data allow the characterization of 'local' isotope ranges and are a first step towards tracking ancient Harappan migration.

Vallieres, Claudine (McGill University)

[245] *Living with Garbage and Ancestors: The Case-study of Mollo Kontu in Tiwanaku, Bolivia*

This paper presents the result of an intra-site analysis of the faunal remains found in garbage pits, both in a residential and mortuary area of the urban center of Tiwanaku, Bolivia. These areas, separated by approximately one hundred meters, were occupied roughly from AD 600 to 1100. Though their architectural remains differ markedly, these areas are strikingly similar in their ubiquity of garbage pits. A detailed analysis of the faunal data from each pit aided with data from ceramics and paleoethnobotany allows a discussion of residential life, burial practices and garbage disposal in Tiwanaku.

Van Buren, Mary (Colorado State University) and Claire Cohen

[255] *Technological Diversity and Stagnation: The Political Economy of Small-scale Silver Production in the Southern Andes*

Spanish mine owners relied on indigenous technology for the production of silver in the southern Andes immediately following the conquest, but declining ore quality resulted in the introduction of mercury amalgamation in the 1570s. This technology required large amounts of capital and was thus controlled by Europeans who dominated the industry for the next two centuries. However, the archaeological record at Porco, a mining center in southern Bolivia, indicates that this period was characterized by a diverse array of techniques used to produce silver, rather than the disappearance of small scale production. This paper examines the conditions that fostered technological diversity in Porco and the processes that led to its eventual decline.

Van Der Elst, Judith (University of New Mexico) and Heather Richards-Rissetto (University of New Mexico)

[24] *Rethinking Digital Data Collection and Dissemination from a User Perspective*

We are immersed in a data-rich environment, however many archaeologists still emphasize data collection rather than making use of existing data. We argue that simultaneous changes in database/digital data repositories and methods and educational goals are needed in order to create digital environments that encourage archaeologists to take advantage of existing datasets. While digitization has become an integral part of archaeology, the ability to integrate large digital datasets for analytical purposes is in the formative stages. Our work focuses on using geospatial technologies to address issues of data utility from multiple angles including data collection, databases, methods, and digital tools.

Van Der Leeuw, Sander (SHESC) [113] *Discussant*

Van Dyke, Ruth (Binghamton University)

[14] *Art "To Think With:" Toward an Aesthetic Southwest Archaeology*
Building upon theoretical insights of LaTour and others, some

colleagues have collapsed the boundaries between “art” and “science,” recognizing that archaeologists use both aesthetic and analytical methods when interpreting the past. Science serves us well in many respects, but to connect with the lives, decisions, and experiences of ancient Southwest peoples, we must embrace intuitive, aesthetic forms of data-gathering, interpretation, and representation. Methods range from phenomenological fieldwork to film, narrative, hypertexts, and fiction. Art “to think with” can challenge and expand our understandings of the ancient Southwest, illuminating what we know well, where we need work, and what dimensions we have yet to consider.

Van Dyke, Ruth [51] *see Baxter, Erin*

Van Galder, Sarah, Justin Lev-Tov (Statistical Research, Inc.) and Richard Ciolek-Torrello (Statistical Research, Inc.)

[154] *Consuming Ethnicity and Producing Hybridity in Dietary Decisions of Native Americans in post-contact southern California*
In southern California, contact between the Hispanic and aboriginal populations greatly altered indigenous subsistence strategies. In this talk we compare pre- and post-contact zooarchaeological remains from sites in the Los Angeles basin. The introduction of foreign foods and technologies coincided with changes in animal processing and procurement for both native and introduced species. Aboriginal fishing yields increased whereas large mammal yields decreased, despite the introduction of domesticates. Additionally, the condition of many post-contact specimens suggests that mammal remains were not as intensively processed as earlier. This evidence provides insights into the adjustment of the area's Native populations to Hispanic colonization.

Van Nest, Julieann (New York State Museum)

[140] *Cahokia's Landscapes: A Geoarchaeological View From the Mound 34 Area*

This paper explores the diverse landscapes in the Cahokia area, as backdrop to tapping the rich, primary sources of geoarchaeological data informing us about earthen architectural details. Cores and profiles highlight the complicated history of both pre-mound and mounding events at Mound 34. Soils were deeply truncated in the mound area. One fill unit, containing feasting debris, was quarried from elsewhere, signaling symbolic significance attached to its source. In the copper area, water and soil was intimately mixed, then sealed. A case is made for the need to create and curate a soil and sediment archive fostering basic comparative research.

Van Nest, Julieann [259] *see Arntzen, Kristen*

Van Pool, Todd (University of Missouri), Christine VanPool (University of Missouri—Columbia) and Gordon Rakita (University of North Florida)

[235] *Excavation of the 76 Draw Site, Luna County, New Mexico*
Donald Brand reported that 76 Draw, a site about 10 miles southwest of Deming, New Mexico, was the northernmost Casas Grandes settlement he encountered. This past summer, students affiliated with the University of Missouri and the University of North Florida surveyed, mapped and began excavations at the site. Although the site is not in the condition it was when Brand visited it in the 1928, it still has intact deposits and is large relative to other Jornada Mogollon and Medio period settlements. We discuss our preliminary findings based on the excavation, which indicates that the artifact assemblage contains Mogollon plainwares, Chihuahuan polychromes and El Paso Polychrome, and architecture that shares affinities with Casas Grandes and Jornada Mogollon architecture.

Van Zandt, Tineke (Pima Community College) and David Stephen (Pima Community College)

[235] *Archaeological Survey North of Bagdad, Arizona*
In contrast to much of the rest of the Southwest, the western periphery of the Prescott Culture remains poorly known. The area is remote and has suffered from a general lack of scholarly attention. The Burro Creek/Pine Creek Archaeological Survey began in 2003 as

a joint venture between Pima Community College and the BLM. This is the first comprehensive archaeological survey within a greater study area encompassing over 500,000 acres of BLM, USFS, Arizona State Trust, and private lands. This poster summarizes the research goals of the project and describes the sites located, dating from the Archaic through Historic periods.

VanderVeen, James (IU South Bend)

[97] *Evaluating Classic Taino Culture History: An Interesting Intersection of Carbon Dating, Cholesterol, and Ceramics*

Archaeologists traditionally use decorated ceramics as indicators of cultural differences. The conventional wisdom regarding the pottery made by the Tainos of the Caribbean hints at a distinct, linear timeframe and exclusive ethnic influences in their designs. But recent excavations in the Dominican Republic are challenging this assumption with evidence of two separate decoration styles present in the same sites, at the same time, and with the same food content. The spatial, temporal, and functional distribution of recovered pottery sherds is more homogeneous than expected, suggesting that the diverse forms of surface ornamentation may potentially reflect small scale social distinctions.

[97] *First Chair*

VanDerwarker, Amber [85] *see Thompson, Victor D.*; [254] *see Wilson, Nathan D*

Vandiver, Pamela [240] *Discussant*

VanPool, Christine (University of Missouri-Columbia) and Todd VanPool (University of Missouri)

[128] *Materiality of Water at Paquimé*

The materiality of ritual dedication, continuing, and closure of architectural features is evident at Paquimé (Casas Grandes), Chihuahua, Mexico. Important places for the animation of beings were associated with water, as mostly clearly discerned with the reservoirs, Walk-in-Well, canals, and the site's placement and layout. We discuss the various cases of ritual dedication and closure at Paquimé, and describe their social importance. Ultimately we proposed that the inalienable objects used in ritual dedication and closure keep water animated, helping make Paquimé the center place of the Casas Grandes World.

VanPool, Christine [200] *see Oswald, Chris M.*; [235] *see Van Pool, Todd L.*

VanPool, Todd [128] *see VanPool, Christine S.*; [200] *see Oswald, Chris M.*

Vargo, Barbara and Katherine Kelly (Army Corps of Engineers Seattle, Washington)

[108] *A Comparative Analysis of Projectile Point Types from the Duwamish and Marymoor Sites, Puget Sound Region, Washington.*
Recent studies of projectile point types in the Pacific Northwest suggest that type variability and distribution are more complex than previously thought. The comparative analysis of projectile points from the Duwamish (45KI23) and Marymoor (45KI9/A - 45KI9/B) sites with other sites in the region suggest that although a high rate of variability in the morphological attributes of these points exists, this variability does not signify new point types, but rather, an expansion of the influence of existing styles. This paper outlines the continuing analysis of Pacific Northwest point types and raw material variation.

[108] *First Chair*

Varien, Mark (Crow Canyon Archaeological Center)

[19] *The Village Ecodynamics Project: Modeling Long-Term Interaction Between Pueblo People and Their Environment in the Northern Southwest*

The Village Ecodynamics Project (VEP) is a long-term, multidisciplinary study that examines the interaction between Pueblo Indians and their environment using a computer simulation and the analysis of an archaeological database with over 15,000 sites. Phase

I of the VEP was recently completed. Phase II began in 2009; it doubles the size of the study area in southwestern Colorado, and it includes a second study area of comparable size in the Rio Grande valley just north of Santa Fe, New Mexico. This paper presents the results of the Phase I of the VEP and outlines the objectives for Phase II.

[130] *Discussant* [19] *First Chair*

Varney, R. (PaleoResearch Institute), Chad Yost (PaleoResearch Institute) and Linda Scott Cummings (PaleoResearch Institute)

[172] *Paleoenvironment: Pollen, Phytoliths, and Models for the Avenue of the Saints Corridor, NE Missouri*

Archaeoclimatic models were run for the north and south ends of this linear project in northeast Missouri. Stratigraphic samples representing most of the Holocene and accumulated from several sites within the project area combine to create a record of early Holocene forests and middle Holocene (Archaic) thinning of the forests. Changing composition of the forest from Early to Middle Holocene, as well as changing frequencies of persistent members of the vegetation community provide an indication of the context in which people lived. Human activity appears to have created a cultural landscape that included more nut trees and open areas.

[10] *First Organizer*, [10] *Discussant*

Vasilev, Sergey (Institute for the Material Culture History)

[177] *Old Traditions, New Tendencies: The Final Paleolithic Culture Development in Siberia*

The paper deals with the study of culture manifestations in Siberia during the Younger Dryas. In spite of the relative scarcity of data and lack of detailed paleoenvironmental reconstructions for the time span under consideration, we could argue about the continued dense human population at all main drainage areas in Southern Siberia. The Final Paleolithic saw the important changes in subsistence activities manifested by the diversification of hunting practices and increase in specialized reindeer procurement, especially in the Yenisey valley. At the same time the huge area around the Lake Baikal witnessed the increase in fishing and the dispersal of harpoons and fishhooks.

Vasquez, Javier [87] *see Condon, Peter C.*

Vaughan, David

[255] *Slavery, Mining and Interaction in Colonial New Mexico*

The debate over whether Spanish miners compelled Pueblo Indians to work in New Mexico's silver mines is reexamined through comparisons of the written and archaeological records of mining interaction during the early colonial period. The results reveal previously unseen aspects of the story of colonial mining on New Spain's northernmost frontier, as well as clear changes in the nature of mining interactions over time. Further insight is gained suggesting a relationship between these changes in interaction, technological syncretism, and the development of a new, multi-ethnic mining tradition in New Mexico.

Vaughn, Kevin (Purdue University), Laure Dussubieux (The Field Museum), Ryan Williams (The Field Museum) and Sarah Cross (Purdue University)

[121] *Changing Political Economy in Nasca: A Pilot Compositional Analysis of Ceramics from the Kroeber Collection*

We report on LA-ICP-MS of a sample of Nasca ceramics collected by Kroeber in the 1920's and curated at the Field Museum. The analysis was conducted for two principal reasons: (1) to add chronological depth to a growing database of compositional data of Nasca ceramics, especially by including samples from Middle Nasca through the Middle Horizon; and (2) to test the efficacy of LA-ICP-MS when compared to INAA. The results have implications for our understanding of changes in Nasca political economy over time and also demonstrate that LA-ICP-MS is an effective alternative to INAA when considering compositional techniques.

Veerawan, Sutee (University of Arizona)

[121] *Technological Variation of the Production of Glazes on Khmer*

Ceramics from Ban Kruat, Thailand

Khmer stoneware was made by groups of potters in Cambodia and northeastern Thailand between the 9th and 14th centuries CE. Scholars have previously recognized important variations in pastes, glazes, and forming techniques among different stoneware types. The research presented in this poster use LA-ICP-MS to examine differences in the production of glazes on Khmer stoneware from 13 kiln sites located in Ban Kruat area, northeastern Thailand. The analysis reveals that chemical compositions vary markedly within and between glaze groups. Reasons for these variations will be considered, and the implications for understanding technology and production organization will be explored.

Vehik, Susan (University of Oklahoma)

[220] *Conflict and Fortification on the Southern Plains*

Indicators of violence among Plains peoples increases steadily after AD 700. However, the use of fortification to protect against rising violence develops much later on the southern Plains compared to more northern areas. This study concludes that southern Plains peoples first use aggregation rather than fortification as a defense mechanism. After AD 1450, lifestyle changes and epidemic disease bring about the use of fortification on the southern Plains.

[171] *see Drass, Richard*

Velazquez, Adrian (INAH) and Emiliano Melgar (INAH)

[67] *Tapachtli and Mullu in Mesoamerica and the Andean Region*

In Mesoamerica and the Andean Region shells of the genus *Spondylus* were very important for the production of elite and votive objects. The shells had to be dived in the sea and transported to the inland sites, where the objects were made using different techniques. Its importance resided in the symbolism conferred to them by the cultures of both areas. In the present paper a comparison between Mesoamerica and the Andean Region is presented, in relation to the use, production and meaning of *Spondylus princeps* and other related species.

Vellanoweth, Rene [31] *see James, Steven R.*; [232] *see Marty, Johanna V.*

Venables, Barney [4] *see Barker, Andrew L.*

Venter, Marcie (University of Kentucky)

[254] *Innovations in Cooking Technology: The Implications of Comal use in the Late Postclassic Tuxtla Mountains*

When examining Postclassic changes in the Tuxtla Mountains of Veracruz, few differences so readily distinguish the Late Postclassic from earlier periods than the introduction and rapid adoption of comals (tortilla griddles). While the particular timeline of their introduction varies somewhat throughout the Gulf lowlands, it is generally agreed that they are characteristic of late prehistory and have their likely antecedents in highland Mesoamerica. In this paper, I discuss the comal assemblage at Totogal, a Postclassic center in the western Tuxtla Mountains, and evaluate the possible mechanisms that resulted in their rapid implementation in the region.

[133] *First Organizer*; [133] *Discussant*

Vermeersch, Pierre

[177] *The Human Occupation of the Benelux during Younger Dryas*

After the Federmesser groups disappeared in the Benelux a hiatus in occupation seems to start with the Younger Dryas. The Ahrensburgian groups are new immigrants in the area. An overview of their presence will be presented.

Vermilion, Mary (Saint Louis University/Umsl)

[140] *The Loyd Site: A Moorehead Nodal Site*

This paper examines the Loyd site (11 MS 74), a Moorehead phase nodal site, located about 5 km northeast of Cahokia Mounds. Existing theories on nodal site function in the region were evaluated as were temporal changes in the sociopolitical climate during the Mississippian period. A general comparative analogy was employed

as a bridging argument to demonstrate some universal human behaviors that might be applied to the Cahokia/nodal site relationship. It is suggested that resistance to the polity may have been the reason for the existence of such sites at this critical juncture in the Mississippian period.

Vermilion, Mary [140] *see Iseminger, Bill*

Versaggi, Nina (Binghamton University (SUNY)), Michael Jacobson (Binghamton University (SUNY)), and Richard Kastl (Binghamton University (SUNY))

[180] *Balancing the Interests of Competing "Publics": A Critique of the "Pragmatic Approach" in CRM*

In academic archaeology, pragmatic approaches have involved descendants and descendent communities in formulating research, interpretation, and preservation plans. CRM encounters challenges to using this approach as archaeologists balance interests of multiple, sometimes competing, entities. This paper discusses a case study of community outreach from the Gilboa Dam Project that forms a critique of a pragmatic approach, and suggests ways to negotiate with competing "publics" in archaeological outreach.

Versaggi, Nina [180] *see O'Donovan, Maria*

Verslype, Laurent [123] *see Woods, William*

Veth, Peter [104] *see McDonald, Josephine*

Vicari, Mary Ann (Washington University in St. Louis)

[215] *Investigating Environmental Change and Population Movement at the Archaic/Woodland Transition in the Lower Illinois Valley*

Throughout much of eastern North America, Early Woodland cultures can be distinguished from Late Archaic cultures on the basis of lower population densities and an overall reduction in trade, settlement type diversity, and mortuary architecture. The tendency to downplay the Early Woodland as nothing more than "Archaic with pottery" ignores increasing evidence for environmental change and population migrations during this period, indicating a highly dynamic context for the development of Middle Woodland Hopewell culture. This paper examines existing Early Woodland archaeological and environmental datasets from the Lower Illinois Valley to assess evidence for increasing landscape instability and population movement.

Vicent Garcia, Juan (Instituto de Historia, CCHS CSIC (Spain))

[143] *Second Organizer*

Vierra, Bradley [248] *see McBrinn, Maxine E.*

Vigliani, Silvina (Postgraduate in Archaeology, ENAH)

[242] *Landscape Entities as Social Agents*

In many traditional societies, certain rocks or mountains, plants or animals can be understood as part of the social world. In that sense, landscape is something alive and dynamic, which, as social agent, structure the human action and is structured by it. Here I will adopt a relational perspective where the shared experience of dwelling is basic to understanding the process of incorporating the landscape. In this presentation, I will analyze the notion of landscape from the agency theory and identities negotiation perspectives in hunter, fisher and gatherers societies (central coast of Sonora, México), through the rock art study.

[242] *Third Organizer*

Villalpando, Elisa (Instituto Nacional de Antropología e Historia, Sonora)

[14] *Borderlands Archaeology: Viewing North from South*

Northwest Mexico archaeology confronts several problems. It is not part of the US Southwest as a political and ideological entity but northwestern archaeologists recognize a closer relation with Southwestern theoretical and methodological approaches than with Mesoamerican. Dissimilar legislation exists to move toward many issues both sides of the border, some for good some for bad. Ten

years from now borderland economic disadvantages will be astonishing, a broader collaboration will be needed in order to preserve and do research in archaeological sites.

Villamil, Laura (University of Wisconsin - Milwaukee)

[225] *Lowland Maya Post-Collapse Communities in south-central Quintana Roo, Mexico*

This paper examines the widespread reoccupation of abandoned Classic Maya sites in south-central Quintana Roo, Mexico, and explores the ways in which memories and vestiges of the past shaped social activity in the wake of the so-called Maya Collapse. I discuss how post-collapse communities formed by appropriating and transforming the built environment while at the same time rejecting the old spatial order. For populations displaced by the socio-political upheaval of the time, abandoned sites served as fertile ground in which new social strategies—including novel experiments at community organization—were adopted.

Vining, Benjamin (Boston University)

[85] *Assessing the Complexity of Built Archaeological Environments: A Multi-data Geophysical Approach*

The refinement of geophysical applications enables detailed resolution of internal site structuring, allowing archaeological inferences on the behavioral aspects contributing to site formation. Magnetometer and site-scale digital elevation data from four sites—Kota-Rentang, Indonesia; Mersa Gawasis, Egypt; Witz-Cah-Akal, Belize; and Kaymaçki, Turkey—characterize the sites' degree of organization and spatial variance. These data reveal variable site formation behaviors, ranging from the growth of ephemeral features through repeated use and accumulation, to the planning and construction of organized monumental sites. Such indices of spatial organization derived from remotely-sensed datasets ultimately describe the social mechanics that differentiate aggregated versus built archaeological environments.

Vint, James (Desert Archaeology, Inc.)

[44] *Persistence of the Las Capas Canal System, 950 B.C.-800 B.C.*

Recent excavations at the site of Las Capas in the Tucson Basin revealed extensive canal-irrigated fields that date from about 1250 B.C. to 800 B.C. The stratigraphic record documents superimposed canals and fields that remained consistent in layout from about 950 B.C. to 800 B.C., within floodplain deposits over a meter thick. Clusters of field houses likely represent households or "smallholders" who owned fields and were responsible for maintenance of canal segments within the overall system. The persistence of the system, and associated field house infrastructure, are testament to a well-developed, dedicated investment in farmland and early sedentary village life.

[44] *First Organizer*

Vivanco, Cirilo [18] *see McEwan, Colin*

Vlcek, David (BLM Pinedale Wyoming) and J.D. Drucker (BLM Pinedale Wyoming)

[72] *Research Opportunities in the Upper Green River Basin*

Research opportunities are available on BLM land and resources in the Upper Green River Basin. Our objectives for this poster are to encourage and inform professional archaeologists of these opportunities. Research funding may come from several available sources. Our million acres of public land contains a plethora of archaeological resources numbering over 6,000. Our presentation highlights a rich Early Archaic through Late Prehistoric site base. Rock Art sites, life-way analysis, settlement patterns, communal big game procurement sites and paleo-environmental reconstructions are available for your research.

Vogel, Gregory (Southern Illinois University Edwardsville)

[215] *The Utility of Historical Sources in Reconstructing Prehistoric Environments and Site Use*

Archaeological sites are commonly disturbed by historic modifications. Current landscapes and overall environments are

easily misinterpreted as "natural" or the result of slow changes over long periods of time. Historical sources such as aerial and ground-based photographs, early maps, illustrations, and text-based resources are often overlooked as vital resources of landscape information key to reconstructing prehistoric environments and site use. This paper demonstrates the utility of understanding historic landscape change through examples from Mound House, a Middle Woodland period mound center where historical sources have aided in interpreting archaeological information gathered through excavation, surface collection, and geophysical remote sensing. [162] see Lorenzini, Michele; [215] see Berg Vogel, Michelle A.; [173] First Organizer; [215] Second Organizer

Vogel, Kristen (Texas A&M) and Laura Gongaware (Texas A&M)
[80] *Protecting Against Destruction: The Failed Salvage Attempt of a Nineteenth-Century Steamboat and the Missouri State Legislation that Followed*

The early nineteenth-century steamboat Missouri Packet, one of the earliest to ply the Missouri River, sank in Missouri in the 1820s. It was rumored that specie was onboard. In 1988, the potential to find this cache led a salvage company to unearth the wreck. The site was crudely dug up. No silver was found. The hull remains were severely damaged in the process. Scant records of the site were kept. This case study explores the damage caused by treasure hunters to a site and demonstrates how the public and archaeologists can use such examples to encourage protective legislation.

[80] Second Chair [80] Second Organizer

Vogel, Kristen [80] see Gongaware, Laura L.

Vogel, Melissa (Clemson University)

[114] *Who's Intruding Now? Intrusive Burials, Looting, and Archaeological Investigations at El Purgatorio, Peru*

The archaeology of intrusiveness inevitably raises the question of subjectivity. Who is the intruder and according to whose perspective? Burials considered intrusive by modern archaeological standards may have been considered common practice from the perspective of the ancient people who interred them. Looting activities deemed destructive by archaeologists may be perceived as inconsequential or even a cultural norm by local communities. In fact, these same communities may consider archaeological projects to be intrusive into their daily lives and priorities. To illustrate, this paper will present evidence of intrusiveness at the site of El Purgatorio in the Casma Valley of Peru.

Volf, William (NRCS)

[249] *Pastures and Pitstructures: Applying Geophysical Techniques in a CRM Setting*

Southwestern Colorado is well known for its Ancestral Puebloan archaeological resources that can often be identified, mapped, and evaluated based on surface observations. When prehistoric cultural locations have been converted to modern agricultural fields, the surface expression of the sites is often eliminated, limiting the information that can be gleaned from surface observations. A non-invasive manner to investigate these sites is through the use of geophysical instruments. This paper will discuss the application of geophysical techniques at archaeological sites found in agricultural fields in Southwestern Colorado.

von Cramon-Taubadel, Noreen (University of Kent, Canterbury) and Ron Pinhasi (University College Cork)

[82] *Craniometric Data Supports Demic Diffusion Model for the Spread of Agriculture into Europe*

The question of whether agriculture spread into Europe primarily as a result of human migration (demic diffusion) or the diffusion of culture has been heavily debated. It has been shown that human craniometric variation is a reliable proxy for neutral genetic data. Therefore, we employ a large Mesolithic and Neolithic craniometric database to test alternative population dispersal scenarios based on a null evolutionary model of isolation-by-geographic and temporal distance. Partial Mantel test comparisons of craniometric distance

and each alternative scenario demonstrate that the craniometric data fit a model of demic diffusion significantly better than a model of cultural diffusion.

Vonarx, Amy Jo (University of Arizona)

[110] *Cycles and Events: Methodological and Interpretive Tools for Placing Fires in Time*

Sites with significant burning present the researcher with great methodological opportunities and interpretive challenges. One important arena of discussion: the possibilities for dating architectural fire events through relative and chronometric means. Recent work in early aggregated villages around the world highlights the potential for using microstratigraphy, micromorphology, archaeomagnetic and radiocarbon dating techniques to place fires in time. These studies emphasize that village landscapes display complex fire histories composed of cycles of practice and events. As such, architecture and locales should not be assumed to have burned contemporaneously, or only once, prior to analysis.

Waber, Nicholas [207] see Cooper, H Kory

Waggoner, Tricia [73] see Tomasic, John J.

Wagner, Friedrich E. [184] see Wagner, Ursel

Wagner, Gail (University of South Carolina)

[154] *Native American Plant Remains from Colonial South Carolina*
Beginning in 1526, the Spanish, English, and French attempted settlements along the South Carolina coast, and beginning in 1540 some expeditions reached the interior regions. By the 1660s, trade in Indian slaves and deerskins drove South Carolina Indian movements. Following the founding of Charles Towne in 1670, South Carolina Indians were involved in political maneuverings between the English to the north and Spanish to the south. I report on macrobotanical plant remains recovered from a number of interior and coastal Indian sites dating from 1500-1759, including sites associated with Cofitachequi, the Catawba, the Etiwans, and the Lower Creek.

Wagner, Mark (Southern Illinois University Carbondale), Heather Carey (US Forest Service, Shawnee National Forest)

[22] *The State of the Art: Recent Developments in Illinois Rock Art Studies*

Prior to 1995 it was believed that only a handful of Native American rock art sites survived in Illinois. Research conducted over the past 15 years, however, has resulted in significant new information regarding the rock art of the state. These include an increase in the number of known sites, the discoveries of the first charcoal drawings identified in the state, and the identification of two small caves containing prehistoric rock art designs. This paper summarizes these and other discoveries as well as presenting an overview of the numbers, locations, and types of sites and motifs contained within the state.

Wagner, Ursel (TU-Muenchen), Friedrich E. Wagner (TU Munich), Josef Riederer (Rathgen Forschungslabor Berlin), Rupert Gebhard (Archaeologische Staatssammlung Munich) and Werner Haeusler (TU Munich)

[184] *A Mössbauer Study of Celtic Pottery Production in Central Europe*

A long lasting study of Celtic pottery making during the heydays of Celtic Culture in Central Europe (300-15 BC) yields a rather uniform picture. The methods we have employed to study firing techniques and provenance are Mössbauer spectroscopy, neutron activation analysis, thin section microscopy and X-ray diffraction. Large numbers of original sherds, clays and technical ceramics have been investigated. Additionally test materials treated in the laboratory were used for comparison in the interpretation of properties observed in the original specimens. It turns out that the pottery from many settlements was strongly influenced by the Celtic Culture but produced locally.

Wake, Thomas (Cotsen Institute of Archaeology at UCLA),

Michael Davis (University of Kansas) and Tomas Mendizabal (INAC-DNPH-Panama)

[226] *Mortuary Feasting at Sitio Drago, Bocas del Toro, Panama*
Recent field work at has located a distinct cemetery mound among several low anthropogenic mounds visible across the 15 ha of Sitio Drago. To date the cemetery consists of 3 excavated coral slab cist tombs containing 4 sets of human remains. Another tomb has been identified and awaits excavation. The area immediately surrounding the tombs contains several dense concentrations of artifacts and faunal remains. The patterning of the contents of these concentrations differs from others found across the site. Results of laboratory analysis are discussed in the context of understanding ritual behavior associated with the dead.

[226] *First Chair*

Walker, Clifford J. [232] *see Binning, Jeanne Day*

Walker, Danny [22] *see Bies, Michael*

Walker, Phillip [122] *see Eng, Jacqueline T.*; [122] *see Schwarcz, Henry P.*; [122] *see Kuzminsky, Susan C.*; [122] *see Sholts, Sabrina B.*; [122] *see Erlandson, Jon McVey*

Walker, Renee (SUNY College at Oneonta) and Cynthia J. Klink (State University of New York, College at Oneonta)

[162] *Teaching Archaeology as Anthropology in Upstate New York*
Students in the anthropology curriculum at Oneonta take courses based on three levels, including introductory, area and laboratory/seminar courses. We also teach a local archaeological field school and conduct travel seminars to places of archaeological interest. Rather than having separate tracks, students are advised on course selection on an individual basis, which is one of the great benefits of a small program. We believe that this broad range of opportunities prepares our students for a wide array of career opportunities in archaeology and this is supported by an ever increasing number of our students that pursue graduate studies.

Walker, William (New Mexico State University)

[192] *A History of Practice in New Mexico's Borderlands*
This paper presents a practice based synthesis of the changing cultural landscape of southwest New Mexico's late prehistoric (A.D. 1000-1450) borderlands. This region was characterized by three periods and associated phases: early (A.D. 1000-1130); middle (1130-1300) and late (A.D. 1300-1450). Practice theory suggests that these periods track how artifact histories were shaped by emergent properties of changing systems of practices. This paper examines those practices and properties in order to understand the relationship among Mimbres people and others between the 11th and 15th centuries. Crucial themes in these relationships include climate changes, artifact agency, and rise of new religious movements.

[128] *Discussant*

Walker, William H. [158] *see Burt, Chadwick*

Wallace, Henry [44] *see Lindeman, Michael W.*; [128] *see Elson, Mark D.*

Walls, Gina [22] *First Organizer*

Wallis, Neill (University of Florida)

[225] *Distributed Objects and Distributed Persons in Ceramic Technologies of the Southeastern United States*

In the Eastern Woodlands, the widespread incorporation of wooden paddles, cordage, and fabrics into the earthenware vessel manufacturing process allowed for new indexical qualities among portable objects. Based on recent sourcing and technofunctional analyses, this potential for indexicality was expanded during the Woodland period in the Southeast when Swift Creek Complicated Stamped vessels were apparently exchanged as gifts among descent groups. This paper elaborates the ways that social persons were constituted and distributed through the manufacture and exchange of

earthenware vessels and how the integrated technologies of wood and earthenware may have transformed the dimensions of social space and time.

Walsh, Rory (University of Oregon)

[183] *Morphological and Statistical Analysis of Millet Tribe Taxa in Neolithic North China*

Sedentism and social complexity in the Neolithic in the Yiluo River Valley of Henan gave rise to early Chinese states. Farming of broomcorn and foxtail millet was essential to this process, but continued exploitation of wild and weedy millet species is evident even after the use of domesticated strains was firmly established. Modern references of domestic and wild species are examined for comparison to archaeological seed remains from multiple cultural stages. Magnified seed images will help taxonomical identification of millet species (demonstrating features used for identification), and statistical tests on morphological data may reveal population trends in the domestication process.

Walz, Gregory (University of Illinois at Urbana-Champaign), Christopher Flynn (University of Illinois at Urbana-Champaign) and Michael Smith (University of Illinois at Urbana-Champaign)

[219] *Recent Research at Fort Sully (14LV165), a Civil War Fortification Constructed to Defend Fort Leavenworth from Confederate Attack, Leavenworth County, Kansas*
NRHP site evaluation investigations were recently undertaken at Fort Sully (14LV165), a Civil War-era fortification located within Fort Leavenworth, Leavenworth County, Kansas. This paper summarizes the results of the evaluation investigations undertaken. Archival research indicates the fortification was constructed in 1864; however, Fort Sully was not called upon to defend Fort Leavenworth. The fortification was subsequently abandoned and has remained essentially undisturbed since 1865. The archaeological investigations indicate that the site, estimated to extend over approximately 2.5 hectares, is very well preserved and does contain subsurface deposits relating to the Civil War use of the fortifications in 1864 and 1865.

Wandsnider, LuAnn (University of Nebraska-Lincoln), and Simon Holdaway (Auckland University)

[119] *Lewis Binford and the Time-Space Continuum: Binford's Critique of the Pompeii Premise 25 Years On*

In 1981, Lewis Binford published "Behavioral Archaeology and the 'Pompeii Premise.'" While nominally a critique of early Behavioral Archaeology, the paper also introduced concepts that were fundamental to the development of what we term the "formational metaphysics." Here, we situate Binford's 1981 work, commenting on how we as students perceived it, and reflect on the implications of this paper today.

Wanzenried, Michael (University of Montana)

[108] *Landscape and Lithic Technologies in the Mid-Fraser: Procurement, Manufacture, and Use*

This paper takes a critical stance on how previous studies of lithic economies on the Canadian Plateau have lead to potentially false perceptions about the role of lithic materials in prehistoric societies. Using insights from human behavioral ecology and minimum nodes analysis, I examine the transport strategies and use patterns of lithic materials from the Bridge River Village. I then contrast the implications of those results with pre-existing hypotheses concerning the relative worth of particular lithic materials, their role in explanations of land use patterns, and their potential importance in Plateau socio-economies.

Wanzenried, Michael [39] *see Schirack, Maggie*

Ward, Christine (Statistical Research, Inc) and Shaun Phillips (Statistical Research, Inc.)

[87] *Early Formative Period Villages in the Tularosa Basin: The View from LA 152064*

The Mesilla phase (A.D. 200/400 to 1000) in the Jornada region is

known from the excavation of a few villages and other residential and logistical sites. LA 152064, low on an Organ Mountains' alluvial fan, appears in ways similar to other early villages in the region. Cotton and maize, a dense concentration of structures and other aspects of the site and its landscape provide a broader view of this period. In this paper, we compare and contrast this village with others, and begin the process of reconstructing an Early Formative period landscape in the Organ Mountains and adjacent basins.

Ward, Timothy [78] *see Galaty, Michael L.*

Warden, Robert (Center for Heritage Conservation, Texas A&M)
[91] *3D Documentation Methods for Artifacts and Architecture*
Since 2008, the Center for Heritage Conservation at Texas A&M has worked closely with the Maya Research Program in the Blue Creek region of Belize to develop fast and accurate recording methods at archaeological sites of varying complexity and extent. This presentation will show some of the results of our fieldwork in 2008 and 2009 that utilized photogrammetry, photography, structured-light scanning, laser scanning, and total station work in documenting several Mayan sites. The discussion includes information about the capabilities of these tools with our comments on and questions about their relevance to field and laboratory archaeology.

Warinner, Christina (Harvard University) [103] *see Tuross, Noreen C.; [151] First Chair [151] Second Organizer*

Warmlander, Sebastian [122] *see Sholts, Sabrina B.*

Warner, John (University of Kentucky)
[225] *The Selective Representation of the Past in Architecture: An Example from the North Coast of Peru*
Recently archaeologists have examined the many links between social memory, landscape, and architectural expression, demonstrating that the architectural mediation of social memory actively shaped sociopolitical relationships through reified acts of "remembering" and/or "forgetting". This paper will examine some of the ways in which specific architectural canons associated with Peruvian North Coast sites were politically manipulated as a means of consolidating power through both the selective acknowledgment and purposeful severing of ties to the immediate and distant past.

Warner, Vincent (AMEC Earth & Environmental)
[150] *REX East Excavations, Prehistoric Pottery Analysis from Site 23PI1344, Pike County, Missouri*
Recent investigations associated with the east portion of the Rockies Express Pipeline has identified site 23PI1344 located in the Mississippi River flood plain, northwest of Louisiana, Pike County, Missouri. This Middle to Late Woodland site yielded ten radiocarbon dates from features, which range from the Central Valley phase through the Ralls phase (AD 420 - 980). This paper discusses the ceramic assemblage and impact on local and regional ceramic interpretations.

Warwick, Matthew (University of Wisconsin, Milwaukee)
[245] *Zooarchaeology of the Rio Pukara Valley: New data from the northern Lake Titicaca basin Formative*
The Early to Late Formative period (ca. BC 2000 / 1500 – AD 350) within the Lake Titicaca Basin are marked by the rise of village life, the emergence of regional ritual and economic interaction, and increasing social complexity. My recent zooarchaeological analysis of the Huatacoa and Pukara sites shed light on human-animal interaction amongst two major, northern-Basin Formative societies: Qaluyu and Pukara. This paper summarizes the results of an intra-site, diachronic study of animal use and camelid herd management recovered from domestic, public and ritual contexts.

Waselkov, Gregory (University of South Alabama)
[250] *Making a Case for Coastal Subsistence Seasonality*
Coastal archaeologists are honing their interpretations of subsistence remains that reflect changing means of environmental exploitation,

resource intensification, and seasonalities of exploitation and settlement. Seasonality, in particular, is coming to be understood as far more complex than earlier seasonal round models once suggested. Unfortunately, archaeological methods to document and interpret subsistence seasonality (which is our principal portal to the multiple facets of residential mobility and sedentism) have many shortcomings. Even our best available methods have real limitations on seasonal resolution. Nevertheless, higher standard of analysis can provide a firm basis for models of coastal sedentism and mobility.

Washington (Siemthlut), Michelle [198] *see Welch, John R.*

Waskiewicz Pugh, Christina (Washington University in St. Louis) and Stanley Ambrose (University of Illinois, Urbana-Champaign)
[214] *Turkey Management and Bison Trade at T'aitōna (Pot Creek Pueblo)*

Turkey and bison bone collagen from the prehistoric pueblo region of Taos, New Mexico was analyzed for carbon and nitrogen isotopes. These samples date to roughly AD 1100-1326. The data show that early regional turkeys were likely wild, and that later in time the residents may have been beginning to practice turkey husbandry before leaving T'aitōna (Pot Creek Pueblo). Bison from earlier time periods come from a much smaller number of herds, suggesting that later Pueblos had increasing contact and trade networks with nomadic bison hunters.

Waskiewicz Pugh, Christina [214] *First Organizer; [214] First Chair*

Watanabe, Shinya (Nanzan University, Japan)
[145] *Social Dynamics and Cultural Continuity in the Peruvian northern Highlands: A Case Study from Middle Horizon Cajamarca*
In this paper, I use excavation data from the sites of El Palacio and Paredones to evaluate the social and cultural changes that occurred in Cajamarca during the Middle Horizon period. These data demonstrate the sporadic presence of Wari, Tiwanaku, and North Coast related material culture in this region of the Peruvian northern highlands. While excavation data suggest that the region was directly dominated by the Wari Empire during this period, it appears that the people of Cajamarca managed to maintain their own cultural traditions while engaging with Wari and other outside groups.

Waterman, Anna (University of Iowa) and Robert, H. Tykot (University of South Florida)
[184] *Evidence of Dietary Variability and Breadth at Los Millares (Almería, Spain) (c. 2700-1900 BC) Based on Stable Isotope Analysis of Human Remains*

The archaeological record for the Spanish Chalcolithic settlement site of Los Millares provides evidence of increasing political centralization and social stratification during the 3rd millennia BC. One special feature of Los Millares is its expansive cemetery complex from which human remains of numerous individuals have been recovered. This poster details the results of stable isotope analysis of human bone from 12 individuals recovered from tombs in the Los Millares cemetery. The goal of this study is to evaluate the dietary importance of aquatic resources and domesticated animals during this time of societal transition. Directions for further study are discussed.

Waters, Michael (Texas A & M University)
[224] *Geomorphic and Human Response to the Younger Dryas at the Buttermilk Creek Site and other Localities in Central Texas*
The Buttermilk Creek site, Texas, has a continuous occupation from 16,000 cal yr B.P. to the present. Archaeological evidence is present in channel margin and floodplain deposits. Multiple proxy data sets from the well-dated floodplain deposits contain evidence of the Younger Dryas. These data agree with the regional evidence for the Younger Dryas in Central Texas. Archaeological evidence from the Younger Dryas age deposits at Buttermilk Creek show no change in the intensity of occupation at the site.
[120] *see Keene, Joshua L.*

Watkins, Christopher (Arizona State University) and Sophia Kelly (Arizona State University)

[100] *Exchange Spheres and Social Boundaries in the Central Arizona Uplands: An Evaluation of the Verde Confederacy Model using Plain Ware Provenience Data*

The recently proposed Verde Confederacy model argues that 14th century settlements in central Arizona were part of a defensive alliance marked by persistent connectivity across the region. This paper evaluates the model with ceramic exchange data. Temper and clay characterization of plain ware pottery identified distinct compositional differences in pottery produced at different settlements, and allow us to track the movement of pots between villages. Preliminary data indicate the presence of two exchange spheres focused on Perry Mesa and settlements in the Verde River valley. These patterns hint at social boundaries among groups instead of a single, coordinated alliance.

Watkins, Joe (University of Oklahoma)

[7] *'Naturalizing' the Native, Appropriating the Ancestors: Kennewick and an Unintended Impact of Repatriation*

While the American military thought its way was the best means of handling the "Indian problem", and the American government felt legislating Indians out of existence would work, perhaps American archaeologists have a better idea. The ex post facto imposition of "American" on the earliest inhabitants of this continent has created the widespread idea that these first cultures are totally unrelated to Indigenous ones. This creates a bizarre version of cultural affiliation between the "Paleopeople" and the archaeologists who study them. This unintended impact of repatriation can become a potent means of disenfranchising Native cultures from their deep past.

[63] *Discussant [63] Second Chair*

Watson, Adam (University of Virginia)

[64] *Ritual, Cuisine, and Commensal Politics at Bc 57 and Bc 58, Chaco Canyon, NM*

The role of periodic pilgrimages and large-scale communal events figures prominently in several models of Chacoan sociopolitical dynamics. While these interpretations are partly based upon patterns of faunal procurement and consumption that may reflect commensal feasting in Great House settings, the possibility of similar practices in non-Great House contexts has not been thoroughly investigated. This paper presents the preliminary results of an analysis of the animal remains from two Chacoan small sites (Bc 57 and Bc 58) located in proximity to Casa Rinconada and explores the political implications of communal hunting, food preparation and distribution, and ritual use of fauna.

Watson, April [178] see Brown, Clifford T.

Watson, Brett (University of Calgary)

[202] *Technological Change In The Bagaces - Sapoa Transition, El Rayo, Nicaragua*

Excavations at the site of El Rayo in Pacific Nicaragua have yielded new information about tool variation and use during the Bagaces and Sapoa periods. Distinctions in chosen materials and forms are indicative of subsistence and lifestyle change. The results of a new micro-trace study on chipped stone tools will also be discussed.

Watson, James (Arizona State Museum, University of Arizona) and Jessica Cerezo-Roman (University of Arizona)

[158] *The Performative Transition of Mortuary Ritual in the southern Southwest*

A major change in the performance of mortuary ritual occurred in the southern Southwest in the first millennium A.D. Early Agricultural burial programs entailed non-patterned inhumation burial, expressing individual identity based on age, sex and shared socio-religious cosmology. Hohokam burial programs entailed patterned distribution of secondary cremations, expressing of vertical and horizontal social position in addition to age, sex and shared group cosmology. We propose that the emergence of patterns in the performance of mortuary ritual among the Hohokam reflect changes in social

expression whereas the shift to cremation reflects changes in the beliefs surrounding the disposition of the soul.

Watson, Patty [222] Discussant

Wattenmaker, Patricia (University of Virginia) [64] Discussant

Wauters, Valentine and Mafalda Martins (Université Libre de Bruxelles, Belgium)

[98] *Feasting for the Dead: Funerary Practices and Ancestor Veneration at Panquilma, Peruvian Central Coast*

In the Andes, since the first Spanish chronicles were recorded, one of the most prominent activities where ideology, economy and politics interacted in the configuration of social power is ancestor veneration rituals. This paper explores this relationship at the site of Panquilma. Panquilma is a Late Intermediate/ Late Horizon site located in the Peruvian central coast at less than a day's walk from one of the most important religious centers of the Andean world: Pachacamac. Recent research at the site has focused on the relationship between the different types of funerary structures registered along the site and remains of feasting activities located in the elite domestic sector of this community. In this paper we will present evidence about how the performance of ancestor veneration rituals and feasting activities were central in the political competition for prestige and authority among elite factions at the site.

Waweru, Veronica (National Museums of Kenya)

[129] *Aquatic-Based Economic Intensification During the Holocene at Lothagam, Turkana Kenya*

The Lothagam site in Turkana, Kenya has assemblages dominated by aquatic fauna, bone harpoons, ceramics, and lithic tools. Human remains are interred in cemeteries. The site's contents suggest changes in hunter/gatherer socio-economic organization not present in contemporary grassland or Late Pleistocene societies. The revised chronology of the Lothagam site presented here provides new dates on the timing of intensive extraction of aquatic resources, possible sedentism, and the earliest use of ceramics by fisher/hunter/gatherers at Lothagam. The new dates also allow temporal comparisons with other Early Holocene sites in the Turkana basin, and in regions further west and north.

Waweru, Veronica [53] see Hildebrand, Elisabeth

Way, Annie (Washington University, St. Louis)

[217] *Mound Mad: New Insights into the Sociopolitics of Settlement in the Late Prehistoric Lower Yazoo Basin*

Settlement evidence indicates that along Deer Creek in the western Lower Yazoo much of the late prehistoric population would have lived in a series of mound sites rather than in dispersed smaller farmsteads. Most models of spatial and sociopolitical organization for late prehistoric societies in the southeast are based on less top-heavy settlement patterns. This paper, however, examines the sociopolitical and spatial relationships between sites with and without mounds in this area. The environmental settings of sites and their ceramic assemblages provide possible clues to local late prehistoric land use and sociopolitical organization.

Way, Michael and David Landon (University of Massachusetts, Boston)

[48] *Turtle Soup in a Sea of Mutton: African-American Foodways in the Northeast during the 18th and 19th Centuries*

This study explores the foodways of African Americans in the Northeast during the 18th-19th centuries. The African-American experience in New England followed unique social and economic trajectories, and foodways provide an entrée into these experiences. Faunal data from the Higginbotham House in Nantucket, Massachusetts, a late 18th century African-American household, is compared with other Northeastern African-American sites to establish broad and site-specific patterns. While many New England sites emphasize beef, pork, and mutton as staples, idiosyncratic dietary elements illustrate the interplay between foodways and identity. Food

had situational meanings that allowed for the maintenance of cultural heritage while challenging inequalities.

Weaver, Sarah (Ohio University), AnnCorinne Freter (Ohio University), Elliot Abrams (Ohio University) and Paul Patton (The Ohio State University)

[30] *Hopewell Sedentism and Food Production: A View from the Patton Site, Southeastern Ohio*

The settlement patterns, degree of sedentism, and subsistence strategies of Ohio Middle Woodland populations, heuristically termed Hopewell, have been greatly debated. The Patton site (33AT990), a Middle Woodland habitation located within the Hocking River Valley of Southeastern Ohio, provides evidence of a transition to sedentary food producing communities. Excavation uncovered a rectilinear wattle and daub house surrounded by domestic activity areas, evidence of burning and rebuilding, well preserved refuse and storage pits, macro-botanical data, and an artifact assemblage indicative of a continuous long-term, or sedentary, site occupation.

Webb, Elizabeth [5] see Prentice, Andrea

Weber, Mara-Julia (Zentrum für Baltische & Skandinavische Archäologie) and Sonja B. Grimm (Forschungsbereich Altsteinzeit des Römisch-Germanischen-Zentralmuseums)

[177] *Impact of Dryas III on Human Behavior in Germany and Austria*

Following a thorough review of high-resolution environmental archives, the paper examines archeological implications of human adaptation to changes in the natural environment. Of special interest are two divergent biotic regions, within which two different traditions (tanged point complex and curve-backed point complex) of Dryas III in Germany and Austria are found. Settlement discontinuity during Dryas III is questioned and the potential further existence of established social networks, expressed by comparable developments such as microlithization is considered. It is discussed whether Dryas III acted as an accelerator or a brake in the process of regional diversification of the Mesolithic.

Webster, David (Penn State University)

[153] *A Chinese Traveler Among the Maya*

Zhou Daguan, a Chinese traveler, visited Angkor in 1296-97 and left us the only lengthy "historical" description of Khmer society. Imagine that Zhou Daguan was later magically transported to the northeastern Peten region of the Classic Maya Lowlands. What might he see that he found similar to Angkor? What would strike him as very different? What might his observations imply about the parallel (or not) evolution of tropical forest civilizations?

Webster, Laurie (University of Arizona)

[37] *Cordage Twist and Cultural Identity: A Cautionary Tale from Basketmaker Culture*

Several recent studies have used cordage-twist direction as a point of departure for exploring cultural identity in the archaeological record. Despite the strong contributions of this research, most studies fail to distinguish between cords used as ropes or ties and the yarns used in fabric construction. Using Basketmaker textiles as a case study, I compare the patterned variability in the twist direction of cordage and the warp and weft elements of sandals, aprons, tumplines, and twined bags to show that correlating twist direction with Basketmaker culture is not as simple as it seems.

Weed, Carol (Vanassee Hangen Brustlin, Inc.) [252] Discussant

Weeks, William (University of Arkansas)

[104] *Antiquity of the Midewiwin: Early Documents, Origin Stories, Archaeological Remains, and Rock Paintings*

From the northern Woodlands to the Great Plains, the Midewiwin is a Native American sodality of Central Algonquian and some Western Siouan peoples emphasizing health and longevity through attention to holistic medicine. Its origins remain uncertain. Four data sets are analyzed to evaluate whether the Midewiwin originated historically or prehistorically, including 1) 15 early, colonial written documents, 2) 55

traditional, indigenous origin stories, 3) excavated artifacts and features from 12 archaeological sites, and 4) imagery from 388 rock paintings. Results indicate a general correspondence among the four bodies of evidence that something like the Midewiwin probably originated in remote antiquity.

Wegener, Robert (Statistical Research, Inc.), Karry L. Blake (Statistical Research, Inc.), Richard Ciolek-Torrello (Statistical Research, Inc.) and William M. Graves (Statistical Research, Inc.)

[33] *Data Recovery at Christiansen Border Village: Nonriverine Late Archaic/Early Agricultural Period Archaeology and Mid- to Late-Holocene Cienega Environments in the Borderlands of Southeastern Arizona*

Data recovery efforts by Statistical Research, Inc., at Christiansen Border Village documented 3,000 years of aboriginal land use and included a regional study of Mid- to Late-Holocene cienega environments throughout southeastern Arizona. This work expands our understanding of Late Archaic/Early Agricultural land use with evidence of maize cultivation at 980–800 cal B.C. and likely cultivation of cotton at 820–510 cal B.C. The Late Archaic/Early Agricultural remains at the site are interpreted as the result of a rich hunter-gatherer heritage that flourished during the rigors of the mid-Holocene and ultimately incorporated Mesoamerican domesticates in nonriverine Borderlands locales.

Wehrberger, Kurt (Ulmer Museum) and Nicholas Conard (Universität Tübingen, Institut für Ur- und Frühgeschichte)

[157] *Lion Man and Waterbird - Art and Symbolism in the Swabian Aurignacian*

One of the main cultural elements of the Swabian Aurignacian is the appearance of sculptural art. About 45 figurines, mainly fragments, are known. The tiny sculptures were carved out of mammoth ivory and represent large animals such as horse, mammoth and feline. Others depict animals such as waterbird or fish. Unique is an archaic female figurine. Nearly all figurines exhibit incisions, often strung together forming complex patterns. A few figures represent fantastic creatures, which combine zoomorphic with anthropomorphic elements. Especially the lion man implies a spiritual aspect to the figurines.

Weinstein, Richard [251] see Hays, Christopher

Weinstein-Evron, Mina [16] see Bar-Oz, Guy

Weir, Donald (Commonwealth Cultural Resources Group Inc.), Charles Moffat (Commonwealth Cultural Resources Group Inc.), Katherine Guidi (Commonwealth Cultural Resources Group Inc.), Kathryn Egan-Bruhy (Commonwealth Cultural Resources Group Inc.) and Michael Hambacher (Commonwealth Cultural Resources Group Inc.)

[150] *A Walk Through Time Across Illinois: An Overview of Phase I and Phase II Investigations Along the REX-East Pipeline*

Archaeological survey of a nearly 200 mile long corridor across central Illinois identified 483 archaeological sites. Test excavations were conducted at 63 of these sites. These investigations provided a wealth of information regarding prehistoric land use patterns through time across the state. This paper will provide an overview of these results particularly highlighting aspects of the Early Archaic, Middle Archaic and Late Woodland periods. The results of this linear survey have significant potential to shape current understandings of cultural sequences, land use patterns, and predictive modeling within Illinois and the greater midcontinental United States.

Weisler, Marshall (University of Queensland) and Roger Green (University of Auckland)

[68] *Rethinking the Chronology for Colonization of Southeast Polynesia*

The dating evidence for the colonization process of southeast Polynesia (Mangareva, Pitcairn Group and Rapa Nui or Easter Island) is reviewed. We consider the stratigraphic context of the 14C determinations, their calibration, and the island, archipelago and

regional settlement patterns. We conclude that Mangareva and the Pitcairn Group were settled before A.D. 1000, Rapa Nui about A.D. 1000, Hawai'i about A.D. 800-900, and the Marquesas about A.D. 700-800. The earliest direct dates on sites will always be at the tail of any normal distribution illustrating a radiocarbon dating corpus for the overall colonization process, and not at its chronometric centroid.

Weisler, Marshall [68] *see Weisler, Marshall I.*

Weisman, Brent (University of South Florida)

[170] *Front Yard, Back Yard: Neighborhood Archaeology in Urban Tampa, Florida*

Doing archaeology right where people live brings immediacy to the processes of site interpretation and heritage making not usually present in more remote projects. When people can peer down into their buried history or the history of their neighborhood as they move about in the course of their daily lives, public archaeology suddenly becomes very personal. Memory and imagination blend together to create connections to a past that are both highly idiosyncratic and of the political present. Three projects in Tampa aimed at unearthing the forgotten history of the recent past will be examined as case studies.

Welch, Daniel (Texas A&M University) and Daniel Welch (Texas A&M University)

[161] *Dispersal of Volcanic Glass Resources in Ceramic-Period Samoa: Resource Control and Long-Distance Trade*

Geochemical analyses of volcanic glass artifacts from the Samoan Archipelago suggest that ceramic period inhabitants acquired the raw material from a single, currently unknown source. In light of this understanding, additional highland and coastal sites across the archipelago are tested under EDXRF and support the consensus that raw volcanic glass originated from a single outcrop that provisioned ceramic making inhabitants for over 2000 years. To understand the organization of lithic resources during the ceramic period, theoretical models regarding potential archaeological correlates of ceramic period resource control as well as probable direction of resource dispersion are discussed.

Welch, Daniel [4] *see Pevny, Charlotte D.*

Welch, John (Simon Fraser University), Dana Lepofsky (SFU) and Michelle Washington (Siemthlut) (Sliammon Treaty Society)

[198] *Assessing Collaboration in a Community-Based Heritage Stewardship Program in British Columbia*

Many archaeologists tout the benefits of working with descendent communities, and rightfully so. But how is collaboration being defined and evaluated? Our archaeology and stewardship field school with the Tla'amin First Nation on the British Columbia coast offers one means for harmonizing historically divergent interests on the part of First Nations, Canadian society, and researchers. The program provides contexts for advancing academic, community, and societal goals in research, education, and outreach. Our application of common-sense partnership principles suggests qualitative and quantitative measures of collaborative success and raises questions concerning the prospective value of shared collaborative standards and criteria.

Welch, Paul (Southern Illinois University) [257] *Discussant*

Wells, Benjamin [73] *see Lemke, Ashley K.*

Wells, E. Christian (University of South Florida)

[123] *Alkaline Earth Metals as Human Activity Markers in Archaeological Soils*

Soil phosphates have long been recognized to indicate past human activity in the archaeological record. Only with recent advancements in analytical instrumentation have archaeologists begun to consider other chemical elements. The significance of alkaline earth metals (especially Mg, Ca, Sr, Ba) as markers of ancient human activity has been recognized recently, but very little research has been done to understand their interrelationships in chemical residues. Their

usefulness in archaeological soil chemistry has therefore been limited. This poster considers acid-extractable alkaline earth metals characterized with ICP-OES from a range of archaeological soil surfaces in Honduras to determine their relevance for interpreting ancient human activity patterns.

[65] *see Moreno-Cortes, Jose E.*; [204] *Third Organizer*; [259] *see Rothenberg, Kara A.*; [258] *see Darley, Zaida*

Wells, Joshua (Indiana University South Bend) [24] *First Organizer*; [24] *Second Chair*; [24] *see Kansa, Eric C.*

Wendrich, Willeke (UCLA)

[24] *W.M. Keck Program in Digital Cultural Mapping at UCLA*

Over the past decade, digital humanities at UCLA has distinguished itself by developing cutting-edge research in geo-temporal mapping using a wide-range of digital information archives. The undergraduate curriculum in digital cultural mapping represents the next phase of development for digital humanities. The program enables undergraduate student research, especially in archaeology. Spin off classes concentrate on mapping and spatial analysis of archaeological village-, city-, and landscapes. The curriculum builds upon projects that have been tested in the classrooms and labs at UCLA, including the Digital Roman Forum, the digital Encyclopedia of Egyptology, Hypermedia Berlin, and HyperCities.

Wendt, Carl (Cal State University - Fullerton) and Jason De Leon (University of Washington)

[156] *The Political Economy of the San Lorenzo Polity: A View from the Countryside*

Long-distance monument transport, large scale public construction, and works of art are often cited as evidence that Olmec leaders wielded a great deal of political and economic power over local followers and often over large regions. Using data from excavations at the site of El Remolino in the San Lorenzo hinterlands, we argue that power in the San Lorenzo polity was largely confined to the ideological realm. Moreover, our analysis indicates that the San Lorenzo Olmec elite and leaders did not exhibit the degree of economic control over commoner households that elites in later state societies typically wielded.

Wendt, Carl [133] *Discussant*; [156] *First Organizer*

Wentz, Rachel (Florida Public Archaeology Network) and Michele Williams (Florida Public Archaeology Network)

[236] *Medicinal Plant Usage among the 7,000-Year-Old Windover Population*

The Windover site is an Archaic mortuary pond located near the east coast of Florida. It produced the well-preserved remains of 168 individuals, allowing a comprehensive look at life and health 7,000 years ago. This research examines medicinal plant usage among the people at Windover. Historical accounts and ethnographies provide details as to how aboriginal populations have utilized local flora for specific conditions. By correlating medicinal plants identified among the Windover burials with the pathologies identified on their remains, we may infer medicinal plant usage among this population during Florida's Archaic.

Wenzel, Jason (University of Florida)

[170] *Historical Archaeology as Public Archaeology in Orange County, Florida*

Originally chartered as Mosquito County in 1824 and renamed Orange County in 1845 after its chief agricultural product, the county along with its seat, Orlando, attracted some of Florida's early inland settlers, agriculturalists and vacationers. Today, Orange County encompasses a very dynamic and diverse community. Research collaborations among students from four regional colleges have brought together neighbors and descendent communities through archaeological fieldwork at select local historic sites and cemeteries. Partnerships with the Florida Public Archaeology Network, the Oakland Nature Preserve and the Orange County Library System have provided venues for disseminating the research to a broad and

diverse audience.

Wernecke, D. Clark [38] *see Collins, Michael B.*

Wernke, Steven (Vanderbilt University), Ericka Guerra Santander (Universidad Nacional de San Agustín) and Steven Wernke (Vanderbilt University)

[188] *Colonial Commonplaces: Household Archaeology at an Early Doctrinal Settlement in the Colca Valley, Peru*

Very little is known of how the material world and habitual routines of everyday domestic life changed among Andean communities during the tumultuous early years following the Spanish invasion. Here we present a close-in view of household organization at a Franciscan doctrina in the Colca Valley, established between the 1540s and 1560s and abandoned during the 1570s. Drawing on extensive excavations from several domestic structures, we analyze variation in the organization of domestic space and differences in their artifact assemblages to infer how households of distinct status and identity responded and adapted to the convulsive changes around them.

Wernke, Steven A. [138] *see Yim, Ronald*

West, Allen, Albert Goodyear (University of South Carolina), David Anderson (University of Tennessee), James Kennett (University of California, Santa Barbara) and Thomas Stafford, Jr. (Stafford Research, Inc.)

[224] *Multiple Lines of Evidence for a Human Population Decline during the Initial Younger Dryas*

Three analytical methods are used to test whether human demographics changed near the Younger Dryas (YD) onset: (1) frequency analyses of projectile points, using the Paleoindian Database of the Americas (PIDBA, <http://pidba.utk.edu>), (2) summed probability analyses of radiocarbon dates, and (3) analyses of usage patterns at Clovis-age quarries. The results strongly suggest that across parts of North America, Europe, and Asia, a major human population decline and reorganization occurred near 12.9 ka and continued through the early part of the YD. These changes include replacement of Clovis-age peoples by regional-scale cultures, potentially reflecting decreased range mobility and increased population isolation.

West, G. James [56] *see Johnson, John R.*

Weston, Tim [28] *see Weston, Timothy*

Weston, Timothy (Kansas Historical Society)

[28] *The Kansas Anthropological Association, Stewards of Kansas Archeology*

Starting in the 19th century, amateur archeologists were instrumental in accomplishing serious archeological research in Kansas. Avocational contributions to the discipline expanded greatly with the organization of the Kansas Anthropological Association in 1955. During the last 55 years KAA members, both as individuals and in groups, have contributed to archeological study of Kansas in a variety of ways: offering expertise in specific topics, recording sites, doing field and laboratory work, publishing reports, and performing public education/outreach. Preservation of sites and artifact collections by documentation and by raising public awareness is a long-term goal of the organization.

Wheeler, Derek [166] *see Gaylord, Donald A.*

Whelan, Carly (UC Davis)

[6] *Prehistoric Subsistence-Settlement Patterns of the West-Central Sierra Nevada Foothills*

The Sierra Nevada was one of the last regions of California to experience systematic archaeological excavation and remains one of the most poorly understood, particularly the region's western foothills. Though subsistence-settlement patterns have been of longstanding interest to archaeologists working in the area, few systematic studies of prehistoric subsistence change or diachronic change in land use

have been carried out. I have recently excavated several sites in the west-central Sierra Nevada foothills in order to clarify the prehistoric subsistence-settlement patterns of the region and determine how they have changed over the course of the last several thousand years.

Whitaker, Adie (Far Western Anthropological Research Group, Inc.) and Jeffrey Rosenthal (Far Western Anthropological Research Group)

[197] *What Turned the Tide? Late Prehistoric Shifts to Energy Maximizing Economies in the Mountains and Rugged Coastline of California*

The record in California is replete with examples of sudden shifts in subsistence economy, particularly within the past 1500 years. The tacit assumption is that shifts from simple forager adaptations to highly intensified, energy-maximizing economies occurred similarly across the state. However, studies in the Great Central Valley, the San Francisco Bay Area, and along the Southern Coast document intensive subsistence economies going back several thousand years. Why, then, were other regions so slow to adopt intensified subsistence economies? We attempt to answer this question through an examination of the ecological and historical differences between "Early Intensifier" areas and "Late Intensifier" areas.

[197] *Second Chair*

White, Andrew (University of Michigan)

[88] *A Computational Exploration of the Effects of Network Size and Structure on the Outcomes of Cultural Transmission Processes*

Mathematical models of cultural transmission often assume that information transfer occurs within an unstructured, "global" pool of individuals. Human cultural systems, however, are comprised of individuals connected to one another through overlapping, ego-based networks of social connections. I use a simple computational model to (1) represent ego-based networks of varying size and structure and (2) explore how variation in a single "stylistic" variable is related to the attributes of the networks mediating the transmission of the variable. Results suggest that network properties may have important implications for understanding spatial and temporal patterns of archaeological artifact variability.

White, Christine [5] *see Prentice, Andrea*

White, Christine D. [138] *see Surette, Flannery K.*

White, Devin (Integrity Applications Inc.)

[235] *Customizing Google Earth for Archaeological Research and Education*

Crow Canyon Archaeological Center has embarked on an effort to use Google Earth to support a wide array of internal research and education activities. The main goal of this effort is to provide researchers and participants with ways to interactively explore the rich material culture and archaeological landscapes of the northern Southwest. This is done by creating and publishing multiple custom layers in Google Earth that provide over 400,000 square kilometers of recent orthoimagery and other remotely sensed data; historical imagery; vector data—including locations of known prehistoric roads; site maps, photos and descriptions; and 3D models of reconstructed buildings.

White, Devin A. [160] *see Coffey, Grant*

White, Jonathan [20] *see France, Elizabeth L.*

Whitehead, William (Ripon College)

[123] *Using pXRF to Identify Local versus Non-local Wood Use in the Lake Titicaca Basin*

This poster will present the data from a growing database of pXRF elemental analysis for wood and other botanical materials from the Tiwanaku culture site of Tiwanaku in the Lake Titicaca Basin, Bolivia. The procedures and methods used to collect the data will be presented and ways of integrating this data across South America will be emphasized. Ideas for integrating this data with other material

types will also be highlighted.

Whitley, Carmen M.T. [104] see *Whitley, David S.*

Whitley, David and Carmen M.T. Whitley (Stirling University)

[104] *Add Madness and Stir? Cognitive and Emotional Difference and the Origins of Behavioral Modernity*

Meg Conkey has made many contributions to archaeology, not the least involving feminist theory and Upper Paleolithic research.

Motivated by third-wave feminism, we consider recent studies on cognitive and emotional difference and their implications for the emergence of modernity, including schizophrenia as the possible inspiration for ritual action; high-functioning autism and its implications for leadership; and affective diseases and their correlation with artistic creativity. These studies suggest that human cognitive and behavioral evolution involved more than our traditional Cartesian rationalist model has assumed.

Whitley, David S. [104] see *Whitley, David S.*

Whitley, Tamara (Bureau of Land Management)

[223] *Managing Sacred Landscapes: Native American Consultation and Painted Rock*

The Carrizo Plain National Monument contains the largest concentration of pictograph sites in California. Painted Rock, the most renowned of the Carrizo sites, is a sacred site to the Chumash and Yokuts peoples. The Native American values associated with Painted Rock have played a pivotal role in site management. The Carrizo Native American Advisory Committee has been a central element in planning and management, especially with regard to developing guidelines for cultural tourism at Painted Rock. Painted Rock provides an example of the kinds of Native American concerns and roles vital in the management of sacred sites.

Whitlow, Raymond (SUNY Buffalo)

[117] *Linking Spatial Theories and Archaeological Data with the help of Formal Ontology*

As information systems have become increasingly specialized, GIS users have adopted formal ontology to ensure semantic interoperability between subfields. Formal ontology has two advantages for archaeologists concerned with spatial analysis: first, the metatheoretical definition of spatial concepts in archaeology and archaeological theory, and second, the development of geodatabases which accurately reflect those concepts. Using Basic Formal Ontology's SNAP-SPAN, a modular and spatio-temporal ontology, I discuss the appropriate level of representation for a set of archaeological data and demonstrate the utility of formal ontology to archaeology by linking space-time geography concepts to a geodatabase of Neolithic sites in Romania.

Whittaker, William (University of Iowa)

[85] *Limitations of Expectations: Ground-Penetrating Radar Survey of Five Frontier Forts*

Ground-penetrating radar (GPR) survey of five frontier forts in the Upper Midwest reveal that expectations about the location and survival of fort-era features can affect interpretation of GPR results. Discussed are GPR survey results from Fort Johnson (1814), Second Fort Crawford (1829), Fort Atkinson (1840), Fort Des Moines No. 2 (1843), and Fort Dodge (1850). Two of these fort surveys produced no useful data, the remaining three produced different levels of coherence and conformity to expected features.

Whittington, Stephen (Wake Forest University), Beverly Hancock (Museum of Anthropology, Wake Forest University), Kyle Bryner (Museum of Anthropology, Wake Forest University), and Tina Smith (Museum of Anthropology, Wake Forest University)

[76] *The Museum of Anthropology's Online Artifact Database as a Tool to Support Teaching and Research*

The Museum of Anthropology at Wake Forest University is developing and implementing a database system and online

information service to promote and preserve its collections and make information contained within its digital database freely accessible. The museum has received three federal grants to address high-priority collections stewardship activities aimed at maintaining and improving the management of archaeological, ethnographic, and archival collections to fulfill its educational mission and strategic goals. The overall goal of the three-phase project is to provide broad public access through the Web to cataloging information and digital images for all objects and archival records in the collections.

Whittle, Alasdair (Cardiff University)

[61] *The Language of Difference: Early Neolithic Society in Southern Britain in the First Half of the Fourth Millennium Cal BC*

How do we go about characterising the nature of social relations in early Neolithic (first half of the fourth millennium cal BC) societies in southern Britain, and elsewhere? Top-down evolutionary approaches seem to carry too much generalising baggage and too many prior assumptions, and we end in a mire of diversity, with imprecise and unspecific terms like 'pre-chieftdom' or 'transegalitarian'. A bottom-up approach may be much more fruitful, though that may still require us to pull in terms like 'lineage' or 'descent group' or 'community' from a wider, generalising literature. Combined, however, with the new chronological framework provided by the completion of a recent major dating project, in conjunction with Bayesian modelling, such an approach offers the opportunity to examine the emergence of specific variation in time and space in new detail. This paper concentrates on the 38th and 37th centuries cal BC in southern Britain.

Whittlesey, Stephanie

[248] *The Middle Archaic Period in the Tucson Basin*

Maize appeared in late Middle Archaic contexts in the Tucson Basin as early as 2100 B.C. Farming features such as ditches, architectural structures, and other evidence of long-term residential stability are absent, however, and the population was extremely small. This supports models that suggest maize did not transform lifeways initially (e.g., Wills 1988) and calls our attention to processes that produced the irrigation systems, formal architecture, and high population density of the San Pedro phase. This paper offers some possibilities for explaining this rapid and extraordinary transition.

[141] *Discussant*; [158] see *Reid, J Jefferson*

Wiant, Michael (Illinois State Museum--Dickson Mounds)

[173] *Deep Site Methodology: A View from Koster*

At Koster site, archaeologists discovered 13 stratigraphically distinct middens: the deepest of which is 8.6 m below ground surface, the most extensive of which has an area of at least 1,000 square meters. During a decade of investigation, methods of discovery, excavation, documentation, recovery, and analysis evolved, as did understanding of the archaeological potential of landscapes. These developments ushered in profound changes in archaeological methods, especially those applicable to the discovery and excavation of deep, stratified, multi-component deposits. Despite these advances, there remain stiff challenges in deep site archaeology, not the least of which is that posed by thick middens.

[176] *Discussant*

Wichienkeo, Aroonrut [153] see *Buckley, Brendan M*

Widga, Chris (Illinois State Museum, Landscape History Program)

[214] *Paleoecology of the Pleistocene Extinctions: Stable isotopes and Landscape-Use of Mammoths, Mastodons, and Bison*

This paper presents isotopic results (C, O, Sr) from Midwestern *Mammuthus*, *Mammot*, and *Bison* to understand patterns in late Pleistocene landscape-use of both extinct and surviving taxa. Serial enamel samples of *Mammuthus jeffersonii* and *Bison* from late Quaternary contexts exhibit similarities in overall landscape-use. However, regardless of geological age, *Bison* show limited migration and highly flexible diets. Furthermore, isotopic analyses of Midwestern proboscideans (collagen) show an increase in inter-taxonomic niche overlap post-LGM. Although preliminary, these

results demonstrate the potential of isotopic research in furthering our understanding of late Quaternary landscapes and the potential of human impact on faunal populations.

Wiederhold, James [4] *see Pevny, Charlotte D.*

Wiemann, Michael [139] *see McKillop, Heather*

Wiens, Clifton (Editorial Story Development) [141] *Discussant*

Wilcox, David (Museum of Northern Arizona) [152] *Discussant*

Wilcox, David [40] *see Herr, Sarah A.*

Wilcox, Michael (Stanford University)

[7] *Genes and Cultural Identity: Boundaries, Boundary Makers and the Cultural Mythology of DNA*

What is the relationship between DNA and Culture? Are Native Americans and other Indigenous Peoples held to a different standard in the formulation of ancestry, identity and affiliation? This paper reviews the cultural significance and symbolic meaning of DNA within American society and examines the premises and processes of DNA as an agent of cultural clarification.

[66] *First Chair* [66] *First Moderator*

Wilkinson, Brenda (Bureau of Land Management, Socorro) and Andrew Duff (Washington State University)

[223] *Research Partnerships in Wilderness Study Areas: the Archaeology of Chaco Period Communities and the Challenges of Collaboration*

The Mesita Blanca and Eagle Peak Wilderness Study Areas in western New Mexico are central to understanding the Chacoan system's southern frontier. A partnership between Washington State University and the BLM's Socorro Field Office has produced new understandings of two Chaco period (A.D. 1050-1130) great house communities, especially related to the identity of community residents and interactions between distant great house communities and Chaco Canyon. The project has included collaboration with local Native communities to incorporate their interests and to communicate project results. Here, we summarize research results, describe Native involvement, and touch briefly on the challenges associated with partnerships.

Willems, Willem (Faculty of Archaeology, Leiden University)

[227] *Discussant*

Willerslev, Eske (Prof Eske Willerslev, Centre for GeoGenetics)

[62] *Ancient DNA and Early Peopling of the New World*

Two recent ancient DNA studies affect views of the early peopling of the New World. Analysis of coprolites from the Paisley Caves in south-central Oregon revealed Native American presence c. 14,600 years BP. A second study of the first complete mitochondrial DNA of an early inhabitant of Greenland suggests that an independent migration from Siberia took place c. 4000 years BP, independently of the earlier Native American migration and the later Inuit migration. The results from these two studies will be presented with progressing work on human migration into the New World including Greenland Vikings, Inuit and pre-Clovis.

Williams, Bryn (Stanford University)

[48] *Bao Yu and Chop Suey: Archaeology and Chinese/American Food*

Chop Suey, General Tso's Chicken, Chinese Chicken Salad. Inarguably American Chinese dishes such as these can be found in Chinese restaurants across the United States. On the other hand, dishes made with foods such as bao yu (abalone) and you yu si (dried squid) are rare indeed. This paper asks how archaeology can help untangle the genesis of American Chinese food. Were individuals living in urban Chinatowns preparing different foods for their families than Chinese American cooks serving non-Chinese? What can culinary patterns such as these tell us about ethnogenesis and culture change in 19th Century North America?

Williams, Craig [22] *see Jansen, Susan*

Williams, Emily (University of Kansas) and Jack Hofman (University of Kansas)

[72] *Distribution of Folsom Artifacts in Nebraska*

This study is part of a Plains-wide investigation of Folsom archaeology. Private, public, and government agencies provided the basis for the ongoing development of the database used in this study. The occurrence of Folsom points, performs, fragments, and channel flakes in Nebraska are summarized. Artifact distribution maps and tables were created by county, lithic material, and physiographic region with the general goals of documenting the variability and patterning in Folsom artifact occurrences. Special attention is paid to Keith and Lincoln counties and the North and South Platte drainages where the greatest numbers of Folsom artifacts were found.

Williams, Gregory (University of Colorado Denver & Aims Cmty. College)

[111] *Rock Art and Ritual Behavior in West-Central Colorado - Visual, Landscape, and Acoustic Indicators*

By employing Roy Rappaport's detailed criteria for distinguishing various types of ritual behavior this presentation expands on previous work to examine the rock art of the Uncompahgre Plateau of western Colorado utilizing visual and acoustic indicators of prehistoric ritual behavior in a landscape context. This research suggests that not all rock art can be attributed to ritual behavior and identifies a new combination of several objective measures to establish a link to ritual behavior in the study area which includes visual imagery, landscape context, and acoustics.

Williams, J. Craig [62] *see Campbell, Peter B.*

Williams, Justin (Washington State University)

[190] *Variability within Nodule Choice of Modern Flint Knappers*

Ten Flint Knappers were asked to examine ten flint nodules and asked to assess the suitability of each nodule for reduction into several pre-designated lithic tool types. The ten nodules were of the same raw material and approximately the same weight. There were significant differences in the opinions of the flint knappers pertaining to the suitability of the nodules for various types of reduction. This suggests that the source of variability in lithic tools and debitage lies not only in the production of the tool, the shape and size of raw materials, but also the perceptions of various flint knappers.

Williams, Justin [120] *see Andrefsky, William*

Williams, Mary (Heritage Program Manager, Bitterroot Nat'l Forest)

[43] *Challenges of Remote Site Investigation and Management in the Frank Church Wilderness, Bitterroot National Forest*

Designated Wilderness comprises nearly one-third of the Bitterroot National Forest's 1.6 million acres, with the most remote lands lying within the Frank Church River of No Return Wilderness. Cultural sites within "the Frank" present the Forest's one-person Heritage program with a diverse set of management problems, ranging from accomplishment of Sec. 110 surveys in the back country to restoration of historic buildings within the parameters of Wilderness regulations. This poster illustrates the management issues and physical obstacles involved in managing Wilderness sites, from locating and recording a high-elevation cairn assemblage in the Clearwater Mountains to restoration of a 1930s miner's cabin deep within the Salmon River canyon.

Williams, Michele [236] *see Wentz, Rachel K.*

Williams, P. Ryan [121] *see Sharratt, Nicola O.*

Williams, Patrick (Chicago Field Museum), Augusto Cardona (CIARQ), Kirk Costion (U. Pittsburgh), Robin Coleman (Northwestern U.) and Veronique Belisle (U. Michigan)

[145] *Obsidian as a Commodity of Interregional Exchange in Wari sites of Southern Peru*

We present new obsidian sourcing data from four regions in southern Peru where Wari influence was present: Moquegua (Cerro Baul and Yaway), Arequipa, Chuquibamba, and Cusco. The data highlight changes in obsidian exchange patterns outside of major Wari administrative centers. Results indicate disparate patterns of Wari influence on interregional exchange during the Middle Horizon.

[159] *Discussant* [188] *Discussant*

Williams, Patrick R. [121] *see Dussubieux, Laure*

Williams, Ryan [121] *see Brum, Misty CM; [121]* *see Vaughn, Kevin J.*

Williams, Veronica (CONICET- UBA)

[23] *Pottery Manufacture, Proveniences, and Pigments of Pre Inca and Inca Archaeological Sites in Southern Andes*

Interdisciplinary in Archaeology put together different kinds of scientific methods, techniques or approaches in order to know human behavior in the past. In this opportunity I will try to offer a set of result about pottery production and use during pre-Inca and Inca times in Northwest Argentina and North of Chile. Fragments from a couple of archaeological sites of those regions were analyzed by INAA; Raman microscopy x-ray powder diffractometry and x-ray photoelectron spectroscopy to determine the pigments used in the decoration.

Williams-Beck, Lorraine A. [241] *see Anaya Hernandez, Armando*

Williamson, Ronald F. [60] *see Birch, Jennifer*

Willis, Kevin

[168] *Decomposition of Child-Sized Remains in Dumpsters*

Research on the decomposition of child-sized remains has been done by depositing pigs in a variety of ways; however, a comprehensive literature review showed there is not much study, if any, on the decomposition of child-sized remains in a dumpster. Three small pigs were used as a substitution for child-sized remains. Two pigs, one in a black plastic bag, were placed in commercial dumpsters and the third placed on the ground as a control. The data suggests the decomposition rate of remains placed in a dumpster will be noticeably inhibited when compared to remains outside dumpsters.

Willis, Lauren (University of Oregon), Andrew R. Boehm (Southern Methodist University) and Metin I. Eren (Southern Methodist University)

[74] *Fish Bones, Cut Marks, and Burial: Implications for Taphonomy and Faunal Analysis*

In a previous study, we demonstrated that butchering fish can result in upwards of 500 cut marks per fish. However, cut marks are rarely observed on fish bone from archaeological sites, despite various ethnographic studies that describe fish butchering techniques for consumption and drying. To test the discrepancy between the experimental results and archaeological observations, we buried 13 butchered fish skeletons for 27 months to observe whether the cut marks are still visible after exposure to post-depositional taphonomic processes. These results contribute to the understanding and interpretation of taphonomy, aquatic faunal assemblages, and prehistoric butchering practices.

Wills, Wirt (University of New Mexico)

[131] *Formation Processes and the Pueblo Bonito Mounds*

A preliminary reconstruction of the formation history is presented of two earthen mounds at Pueblo Bonito in Chaco Canyon. This reconstruction incorporates new stratigraphic descriptions and geoarchaeological interpretations of trench profiles originally exposed by National Geographic Society excavations in the 1920s, as well as previously unpublished stratigraphic data from the late 19th century and remote sensing data obtained between 2007 and 2008. Mound history reflects a complex interplay between floodplain processes and the growth and occupation of Pueblo Bonito.

[118] *Discussant; [132]* *First Organizer*

Wilshusen, Richard (University of Colorado Museum) and Scott Ortman (Crow Canyon Archaeological Center)

[235] *Big Gatherings to Big Pueblos: Using Architecture, Rock Art, and Linguistics to Study Organizational Change*

We suggest that a common change in many Early Formative societies is the redefinition of relationships between individuals, households, the community, and the landscape. We focus on these conceptual realignments in the northern Southwest between AD 600 and 940 and look for evidence of this transformation in rock art, architecture, and Tanoan languages. We illustrate several findings. Among them is that ritual knowledge appears to have been distinct from, but correlated with, household status in the economic and political realms. In contrast, during the period of early village formation knowledge and status came to be associated with specific lineages.

[128] *Discussant*

Wilson, Andrew [92] *see Fatkin, Danielle S*

Wilson, Carrie

[15] *Cahokia – More than You Would Think*

Cahokia encompasses more than just that site proper. In order to really think about the totality of Cahokia, sites on the west side of the Mississippi River and elsewhere also have to be considered. In my observations from an indigenous perspective, Cahokia consisted of pre-tribal people – the Dhegiha and perhaps the Chiwere Sioux—and, as in any river city, people brought goods for trade and distribution. Not only was Cahokia a place for exchange of goods but for ideas. In this paper I will explore those topics as well as the importance of the sites to American Indian people today.

Wilson, Christopher (Flinders University, Australia)

[63] *discussant*

Wilson, Gregory (UC-Santa Barbara) and Dana Bardolph (UCSB)

[110] *Up in Smoke: The Mode of Abandonment of Mississippian Burned Structures in Western Illinois*

The occurrence of burned buildings in the Mississippian American Bottom and Central Illinois River Valley dramatically increased after A.D. 1100. A comparative analysis of floor artifact assemblages is offered to evaluate the mode of abandonment of burned buildings in both regions. Variability among floor assemblages suggests there were different modes of abandonment leading to building incineration.

[83] *Discussant*

Wilson, Gregory D. [115] *see Steponaitis, Vincas P.*

Wilson, Jeremy (Indiana University-Purdue University, Indianapolis), Dawnie Steadman (Binghamton University, SUNY) and Jennifer Bauder (Binghamton University, SUNY)

[83] *Modeling Mississippians: The Orendorf Skeletal Sample, Understanding Regional Population Dynamics, and the Relationship to Recent Theoretical and Methodological Advancements in Bioarchaeology*

Socio-political reorganization in the central Illinois River valley during the late 12th and 13th centuries renders the Orendorf skeletal sample critical to understanding the population dynamics of late prehistoric societies in the region. The current paper highlights the previous research on warfare at Orendorf (Steadman, 2008), stresses critical theoretical and methodological shifts in bioarchaeological research, and presents more recently completed examinations of 1) the relationship between childhood survivorship patterns and porous skull lesions, and 2) sex differentials in adult mortality patterns. These findings are further contextualized in comparisons to recent re-analyses of Dickson Mounds, Morton, Norris Farms, and Crable.

Wilson, Matthew [215] *see Brugam, Richard B.*

Wilson, Nathan (Arizona State University), Amber VanDerwarker

(University of California-Santa Barbara) and Philip J. Arnold III (Loyola University-Chicago)

[254] *Recent Research at Teotepac, Veracruz, Mexico: New Insights from a Regional Center*

The archaeological site of Teotepac is a discontinuously occupied Prehispanic center in the Tuxtla Mountains of southern Veracruz, Mexico. Recent surface and subsurface testing by the Proyecto Arqueológico Teotepac (PAT) suggests occupation at the site was primarily Middle Formative and Late Classic/Epiclassic. Preliminary interpretations of the data provide new insights into Teotepac's local sequence, as well as into regional Classic/Postclassic transitions and possible unique linkages to the surrounding Gulf Lowlands.

Wilson, Nathan [133] *Discussant*; [254] *First Organizer*

Wilson, Wayne [147] *see Hauser, Neil*

Wilson Marshall, Lydia (University of Virginia)

[53] *Improvising Identity, Creating Community: Fugitive Slave Settlements in 19th-century Kenya*

This paper explores how fugitive slave settlements in 19th-century Kenya can contribute to broader anthropological understandings of community formation. Improvised under stress by people of dissimilar cultural backgrounds and social experiences, such groups provide useful examples of how cultural heterogeneity affects community creation. In 2007-2008, I conducted a year of archaeological fieldwork on fugitive slave communities in Kenya's coastal hinterland. This doctoral research was household-focused and specifically considered settlements' economic organization and internal cultural diversity. Using my dissertation research results as a springboard, this paper considers what insight into community and identity such newly formed groups offer.

Wilton, Derek [90] *see Loring, Stephen*

Windes, Thomas [84] *see Lipe, William D.*

Winemiller, Terance (Auburn University at Montgomery) and Virginia Ochoa-Winemiller (Auburn University at Montgomery)

[65] *Shared Cultural Identity at Chichicaste and Dos Quebradas, Olancho, Honduras*

In the past, many researchers have interpreted the physical and cultural geography of Olancho in terms of degrees of acculturation. Cultural materials recovered at Chichicaste and Dos Quebradas suggest that the ancient inhabitants were neither subordinate nor peripheral to high civilizations west and south of Honduras. Instead, these groups appear to have maintained unique cultural identities while involved in local and regional interactions with groups living in and beyond the Intermediate Area. We discuss how our research has relevance in the lives of local community members and can influence their perceptions of a shared responsibility for preservation of cultural patrimony.

[65] *First Chair* [65] *Third Organizer*

Wingfield, Laura (Georgia State University)

[260] *Barely There but Still Telling: Ancient Nicoyan Dress, Body Decoration, and Jewelry and Possible Roles for All the Sexes, c. 800 BCE-300 CE*

Female, male, gender-ambiguous, and intersexed earthenware figures from Greater Nicoya were barely adorned. Their costume was usually limited to a pubic covering for females and the gender-ambiguous and headwear, body decoration, and jewelry for all sexes. Body decoration spirals in visionary patterns, perhaps representing images seen in shamanic trance. Nicoyan jewelry depicted on these figurines is mirrored in actual finds of greenstone pendants--likely Mesoamerican imports--and shell necklaces and ceramic earspools. Analysis of dress, body decoration, and jewelry will be presented, particularly in relation to suggested sexual and politico-religious identities for ancient Nicoyans of c. 800 BCE-300 CE.

Winkler, Daniel (University of Wisconsin-Milwaukee)

[46] *Plainview Lithic Technology and Late Paleoindian Social Organization in the Western Great Lakes*

The focus of this paper is human use of Plainview lithic technology as represented by lithic debitage and tools from two sites in southern Wisconsin. This work takes an assemblage approach to understanding the structure of the lithic economy in use at the site, in order to examine mobility, site structure, household makeup, and ritual in the western Great Lakes during the early Holocene (circa 8600 BP). The study is focused on the structure of the Plainview lithic economies, examining tools and debitage to determine how groups in the western Great Lakes created, modified, and maintained their tool kits.

Winter, Jr., Eugene C. [38] *see Crowley, Suanna Selby*

Winterhalder, Bruce [197] *see Culleton, Brendan J.*

Wiseman, James [34] *see Ostovich, Marta E.*

Wisner, Meredith (University of Iowa)

[234] *Bison Subsistence at Cherokee Sewer, IA: Toward a More Complete Picture*

The Cherokee Sewer is a late Paleoindian to Middle Archaic archaeological site located in northwest Iowa. It is one of the eastern most bison localities for the plains. The site was originally excavated in 1976 and results were published in the early 1980's. More recent studies of the collection have examined bison dentition and fetal remains. A large portion of the collection is highly fragmented and was largely overlooked in previous analyses. Change in subsistence habits involving bison exploitation between the Paleoindian and Archaic assemblages will be reassessed using modern quantitative methods on the complete bison collection.

Witschey, Walter (Longwood Univ / Tulane Univ-MARI) and Clifford T. Brown (Florida Atlantic University)

[178] *5,000 Sites, and Counting: The Inspiration of Maya Settlement Studies in 2010*

From inspiration comes involvement and creative insight. Where half a century ago budding archaeologists were infused with excitement by "Gods, Graves, and Scholars," today the wealth of free aerial imagery, satellite photos, and space shuttle datasets provides an unprecedented opportunity for self-directed learning and personal pursuit of young dreams. This paper provides results from the Electronic Atlas of Ancient Maya Sites, illustrates 70 years of progress since the MARI map of the Maya area was last updated and published, and provides examples of student-directed settlement pattern activities with the 5,000 sites in the Maya area.

Witt, David (SUNY Buffalo)

[235] *Remote Sensing at Ancestral Pueblo Sites: The Use of ASTER & Hyperion Imagery in Determining Site Locations*

Remote sensing has proven to be a valuable tool in archaeological surveying. This project incorporates imagery obtained from the ASTER and Hyperion space-borne instruments to develop hyper-spectral signatures for known surface sites in the San Juan River Basin of northwestern New Mexico. These sites include larger complexes such as Aztec Ruins and Salmon Pueblo, as well as smaller sites throughout the region. The resulting signatures are then applied throughout the surrounding area in an attempt to determine the locations of currently unknown surface sites. The predicted locations of these sites will be ground-truthed to determine the validity of the model.

Wobst, Martin (University of Massachusetts) [174] *Discussant*

Wojtczak, Dorota [58] *see Hauck, Thomas C.*

Wojtowicz, Rob [60] *see Birch, Jennifer*

Wolf, Marc (GWE Corp.) and Thomas Guderjan (University of Texas at Tyler, Texas)

[91] *Maya Settlement Patterns in Northwestern Belize: Environmental Relations, Resource Availability and Local Site-Planning Traditions*
 Nearly two decades of formal and informal survey work in northwestern Belize, combined with similar detailed research in adjacent portions of Mexico and Belize have yielded a large database of Maya settlement patterns. In this discussion, we argue that the locations of centers with public architecture as well as smaller communities can best be understood in terms of their relationship to critical resources—particularly agricultural lands. Also important in regards to these settlements is the relative degree of continuity between the built Maya world and the natural environment. Further, the locations of some macro-centers within the Northwestern Belize area can only be understood in relation to other local settlements.

Wolf, Marc [229] see *O'Mansky, Matt*

Wolf M.A., Sibylle

[157] *Personal Ornaments and Ivory Working Technology in the Ach and Lone Valleys*

Researchers found numerous ivory artifacts including personal ornaments during excavations at Hohle Fels Cave (Swabian Jura) between 1997 and 2009. Here I present the Aurignacian pendants and ivory pieces, focusing on the operational sequence and comparing the Hohle Fels assemblage with others from nearby Vogelherd and Geißenklösterle. This study focuses on the technological aspects of ivory working as a means to address the use of symbolism and social organization in the Aurignacian.

Wolff, Christopher (Smithsonian Institution), Robert Speakman (Smithsonian Institution) and William Fitzhugh (Smithsonian Institution)

[161] *The Utility of pXRF in the Assessment of Slate Procurement and Exchange by the Maritime Archaic of Newfoundland and Labrador*

Slate was used frequently by Maritime Archaic peoples of Newfoundland and Labrador; however, the procurement and movement of this material has been little studied beyond generalized typologies. This poster presents a study utilizing a portable x-ray fluorescence (pXRF) instrument to analyze slates used by Maritime Archaic groups. This technique was tested because it is non-destructive and can directly analyze artifacts. The results are mixed, with some success at discerning broad patterns in slate distribution and identifying preferred use of certain slates for specific tool types, but limited in the evaluation of exchange of materials from specific procurement locations.

Wolff, Christopher [60] see *Holly, Donald H.*; [123] *First Organizer*; [161] *Second Organizer*

Wolff, Nicholas (Boston University)

[259] *Living Spaces and the Micromorphological Perspective: Recent Examples from the South Italian Bronze Age*

In recent years soil micromorphology has emerged as a powerful tool in understanding uses and concepts of space, as well as site formation processes more generally, and has provided critical insight into our understanding of the domestic built environment in a variety of archaeological settings. In this paper I discuss recent results from several new Bronze Age residential sites in Calabria and Sicily. Through micromorphological study of occupation deposits, living surfaces, and building materials I will demonstrate how this technique allows a unique means of approaching the social process of creating, inhabiting, and eventually abandoning the locus of everyday life.

Wolverton, Steve (University of North Texas), Lisa Nagaoka (University of North Texas) and Scott Ortman (Crow Canyon Archaeological Center)

[19] *Assessing VEP Productivity Predictions with Zooarchaeological Relative Abundance Data in the Mesa Verde Region*

Habitat modeling under the umbrella of the Village Ecodynamics Project (VEP) produces spatio-temporal predictions about crop/land productivity. Prey animals are known to respond to high crop

productivity in modern settings in a variety of ways, usually positive ones for the animal populations. Zooarchaeological relative abundance data are used to assess whether or not productive areas of the Mesa Verde region produce catchments with high foraging (hunting) efficiency through time and across space in the region.

Wolverton, Steve [235] see *Hoffman, Amy*; [4] see *Barker, Andrew L.*; [235] see *Randklev, Charles*

Wolyne, Renata (Edinboro University of Pennsylvania)

[50] *The 1970s: The Impact of Koster Site Media Relations on Press Coverage of other Archaeological Projects*

The 1970s saw the Koster Site publicized in nationally popular and prestigious print media. Koster staff worked closely with reporters to ensure the accuracy of information by providing them with detailed textual and visual sources. Public interest was aroused thereby demonstrating the allure of the far past in North America. Was the success manifested by Koster a 1970s aberration or was this the start of a trend toward growing interest by the press in North American archaeology?

[141] *First Organizer*; [141] *First Chair*

Wood, W [220] *Discussant*

Woodfill, Brent

[229] *Rediscovering Early Classic Trade Patterns at the Highland-Lowland Frontier: A New Case for Cave Archaeology*

The unexpected discovery of stone coffer with Early Classic lowland sculpted images and inscriptions in a cave in the northern Guatemalan highlands has had great implications for our understanding of highland-lowland interaction. This discovery proved to be the "tip of the iceberg," however, in terms of the importance of subterranean evidence in this region. For the past decade, cave investigations been an essential part of regional investigations in central Guatemala, and through cave research it has been possible to push back the known period of intensive use of the western trade route by several hundred years, to the mid-Early Classic.

[229] *Second Organizer*

Woods, Alexander (University of Iowa)

[184] *Quantifying Quality: Mechanical Knapping Revisited*

This study examines the relationship between a number of raw material characteristics and the dimensions of experimental blades produced on a hydraulic test stand. The ultimate goal of this research is to develop a meaningful way to quantifiably measure the quality of a lithic raw material.

Woods, Julie (University of Massachusetts, Amherst), David V. Hill (Center for Big Bend Studies, Sul Ross State University), Elizabeth S. Chilton (University of Massachusetts, Amherst), and Matthew T. Boulanger (Missouri University Research Reactor)

[161] *Giving Voice to Choice: Integrating Scientific, Ethnographic and Historical Analysis to Understand 17th Century Native Pottery from Western New England*

Native ceramics from the 15th through 17th centuries from Western New England exhibit a tremendous diversity of stylistic elements and technical attributes. With minimal ethnographic data and historical documentation available, archaeologists must rely on analytics to understand potter's choices in vessel production. We contrast the results of three different approaches to analyzing ceramic assemblages—vessel lot analysis, ceramic petrography and neutron activation analysis—from three Algonquian sites in the Middle Connecticut River Valley Region. This case study illustrates how archaeometry can be used to evaluate hypotheses derived from more traditional analyses of material culture.

Woods, Marilee [121] see *Cisse, Mamadou*

Woods, William, Bailey K. Young (Eastern Illinois University), Ines Leroy (Centre de Recherches d'Archéologie Nationale),

Laurent Verslype (Université catholique de Louvain), and Paul Hudson (University of Texas-Austin)

[123] *Geoarchaeological Investigations of a Medieval Castle and Outer Bailey (Walhain, Belgium)*

In the village of Walhain in central Belgium stand the ruins of a feudal fortress and its associated outer bailey and moat complex. Ongoing excavations begun in 2003 not only revealed important medieval structures in place, but substantiated that much of the site was the result of medieval engineering. A coring program begun in 2005 and analysis of recovered soil samples has allowed us to better understand the preconstruction local environment, the history of the initial construction and subsequent transformation of the site, and the differential use intensities of its raised earthen platforms.

Woodson, Kyle (Gila River Indian Community--CRM Program)

[44] *New Insights on the Snaketown Canal System and Hohokam Irrigated Fields*

A recent study of the Snaketown Canal System along the Middle Gila River has enhanced our understanding of Hohokam canal systems and irrigated fields. Over 75 years of archaeological research in the Snaketown area and the relatively undisturbed surface terrain have facilitated a detailed reconstruction of the system layout. The definition of field areas allows the estimation of command area, which is the portion of land that was subjected to irrigation. The data from Snaketown continue to provide new insights on Hohokam canal irrigation technology and how farmers adapted to environmental and social changes throughout a millenium of irrigation agriculture.

[44] see Wright, David K.

Wooley, Chris [27] see Proue, Molly

Wopschall, Kayla (University of Washington)

[194] *Explanations in Late Quaternary Extinctions: The Inappropriate use of Analogy to Create Global Models*

Late Quaternary mammal extinctions have been debated for decades. Popular explanations include human overkill, abrupt climate change, and more recently, extraterrestrial impact. The popularity of these arguments is based on two factors: 1) the dependence on and overutilization of analogy and 2) the catastrophic nature of the explanations, allowing the creation of a global model. Focusing on the human overkill argument, we explore explanations based on flawed comparisons. This, along with an overview of the history of analogy in archaeology and ecology, shows the inherent problems with global models of these extinctions, and why these remain the most popular explanations.

Worman, F. Scott (University of New Mexico) and James L. Boone (University of New Mexico)

[259] *People, a Plague on the Planet? A Landscape Geoarchaeology Study of Islamic Portugal*

Archaeological surveys in the Lower Alentejo region of Portugal have documented a dramatic increase in rural population densities during the Islamic period (711 – 1248 C.E.). Landscape-scale geoarchaeological investigations show widespread, severe soil erosion in densely populated areas during the 12th Century. A program of OSL and radiocarbon dating, along with a comparison of the history of landscape change in two surveyed areas, shows that environmental degradation during the Islamic period was anthropogenic. A detailed consideration of the processes of landscape change, augmented by archaeological and documentary data, provides insights into the complex human-environment interactions that ultimately led to catastrophic degradation.

Wright, David (Gila River Indian Community), Kyle Woodson (Gila River Indian Community) and Wesley Miles (Gila River Indian Community)

[44] *Hohokam Irrigated Agricultural Fields on the Middle Gila River*
Recent excavations near Upper Santan Village along the Middle Gila River uncovered a section of the prehistoric Santan Canal System that includes irrigated agricultural fields. The fields are located in the intermediary zones between a main canal, two distribution canals,

and at least four lateral canals. Contrasting sediment morphology, paleobotany, and chemical signatures have been documented between hypothesized fields and natural strata. The excellent preservation of the fields is attributed to their depth of burial and position at the distal end of an alluvial fan. These factors allow for one of the most comprehensive views of Hohokam irrigated fields unearthed to date.

Wright, Joshua (Stanford University)

[64] *Inequality on the Surface: Horses, Power, and Practice in the Eurasian Bronze Age*

Animals are an implicit part of all Inner Asia monuments from the human ecology of the pastoral nomads who built them to the distinctive, patterned, faunal deposits that are placed into the monuments. This paper focuses on the monuments, and monumental constellations, as concepts of order and locales into which horse remains were deposited. The thesis that monuments and the consumption of horses are central to landscapes of inequality will be critically examined through the study of several areas of dense monumental construction in Mongolia.

Wright, Patti (University of Missouri-St. Louis), George M. Crothers (William S. Webb Museum of Anthropology, University of Kentucky)

[51] *Women in Archeology: An Explicitly Humanistic Approach -- A Paper in Honor of Patty Jo Watson*

The career and intellectual contributions of Patty Jo Watson continue to inspire and influence the archaeological research of women (and men) worldwide. Pat has been at the forefront of theoretical discussions and a pioneer in the archaeology of caves, gender, and food production. Her field experiences include work in Iraq, Iran, Turkey, China, Arizona, New Mexico, Kentucky, and Tennessee. Here, we discuss her achievements and the ways in which they serve to challenge and inspire today's archaeologists.

[151] *Discussant*

Wright, Patti [162] see Corella, Elijah J.; [211] *First Organizer*

Wright, Rita (New York University)

[51] *Pioneers of the Past and New Frontiers*

The first scholar that comes to mind when most people name an archaeologist working in my geographical area (South Asia and neighboring regions) is Mortimer Wheeler. But others, a few women pioneers, made important contributions, and though these have been acknowledged by European scholars, few U.S. scholars know their work. Fast forward to the 1980s, a new picture emerges when increasing numbers of women entered the field but with different levels of success. Today, a more promising picture emerges, and in this talk, I try to place these three "eras" in the historical and political contexts of the time.

[17] *Discussant*

Wright, Wendy Ann (Portland State University) [3] *Discussant*

Wriston, Teresa (University of Nevada, Reno) and Gary Haynes (University of Nevada, Reno)

[53] *An Early Farming Village Revealed, Hwange National Park, Zimbabwe*

In 1966 Robinson described a buried Early Farming Village near the confluence of the Lukoji and Kapula Rivers in Hwange National Park, Zimbabwe. He reported 26 decorated ceramics similar to the Gokomere Tradition associated with AD 570 +/- 110 and AD 810 +/- 90 radiocarbon dates, making this one of the earliest Farming sites in Hwange National Park. Recent investigations revealed many daga lined floors on top of nearly complete, intentionally-buried decorated pots eroding from the walls of the Kapula River. Salvage excavations of the exposed ceramics revealed great variability in decorative styles and form along with coiled copper.

Wrobel, Gabriel (University of Mississippi), David Glassman (University of Southern Indiana), and James Tyler

[91] Human Osteology of Blue Creek, Belize

This paper describes the result of analyses performed on the human skeletal collection from the Blue Creek site in northern Belize. The sample consists of over sixty individuals of all ages and both sexes, representing both Preclassic and Classic periods. Variations among the burials, including date, location, body treatment, grave furnishings, sex and age, are compared to biological data related to health and diet.

Wrobel, Gabriel [99] see Morton, Shawn G.; **112** see Andres, Christopher R.

Wu, Chia-chin (UC Berkeley)

[74] The Impacts of Food Processing on Parenchymous Tissue of Roots and Tubers: the Diagnostic Value of a Tissue Degradation Attributional Analysis in Identifying Specific Drying and Cooking Transformations

The nature of food processing activities and the inevitable impact they have on parenchymous tissues can be understood through physical and anatomical changes observable in systematically processed tubers. Roots and tubers were subjected to detailed food processing activities, which damaged the parenchymous tissue and modified its anatomy in specific ways. Tuber processing stages produce distinctive, identifiable damage in some tuber species. These various attributes are diagnostic and can be useful for identifying taphonomic, cultural transformations, and identities of roots and tubers. The focus of this study is to present the various tissue degrading attributes resulted from tuber processing events to illuminate their diagnostic value.

Wu, Chunming [155] see Jiao, Tianlong

Wu, Xiaohong (Peking University)

[155] Recent Uses of Radiocarbon Dating in International Projects in China

The radiocarbon laboratory at Peking University was founded in 1972. Starting in the 1990s, when international collaborations began, the Peking University lab was involved in research on early agriculture and pottery at Xianrendong in Jiangxi. Subsequently, as the lab was developed through interactions with other laboratories around the world, international collaborations in China have increasingly used the labs facilities for dating. Here we discuss the dating of materials from Xianrendong, Yuchanyan, Zhongba, Tianluoshan, and Donghuishan as representative cases of such collaboration and discuss the changes to procedures that these collaborations have brought about.

Wu, Xiaolong (Hanover College) [95] Discussant

Wu, Xinhua [155] see Jia, Peter Weiming

Wunderlich, Robert [147] see Hauser, Neil

Wurtz, Michelle (Geo-Marine, Inc.), Duane Peter (Geo-Marine, Inc.), James Harrison (Geo-Marine, Inc.)

[231] Prehistoric Inhabitants of the West Fork of the Trinity River Valley – Merely Passing Through?

Prehistoric sites along the West Fork of the Trinity River frequently reveal very limited stone tool assemblages with equally limited expressions of formal features. Recognition of distinct activity areas is frequently difficult. Site 41TR198 offers a unique data set related to use of the West Fork flood plain between 2300 and 500 years B.P. Multiple data sets recovered from discrete living surfaces suggest that groups frequenting the site may have been distinct from those exploiting the woodlands/prairie ecotone elsewhere. The presence of distinctive thermal features and a diverse faunal assemblage contribute to an emerging synthesis of northcentral Texas archaeology.

Wyatt, Scott [84] see Speller, Camilla F.

Wymer, DeeAnne (Bloomsburg University)

[244] Education is not the Filling of a Pail, but the Lighting of a Fire: A Tribute to William S. Dancey

William S. Dancey, as archaeologist, professor, mentor, and friend, has made a lasting impact upon the discipline of archaeology and the lives of several 'generations' of scholars and professionals within our discipline. This paper describes, discusses, and honors the multi-faceted career of Dancey and explores the role that he has played in developing both theoretical and methodological rigor in the field – and how he has instilled those principles and values within his students. The "Columbus Cabal" (sensu James Griffin) would thus like to offer a tribute to the individual who gave us guidance and inspiration.

[244] First Chair

Wynne, J. Judson [62] see Nicolay, Scott

Xie, Liye (the University of Arizona)

[216] The Use-life of Groundstone Axes at Erlitou, an Early Bronze Age Site in Central China

Use-wear analysis (low-power) of groundstone axes from Erlitou revealed intensive reuse of axes. Four functional groups were distinguished according to use-wear patterns. Most axes appear to have been used for multiple purposes. According to experimental results, tree felling and wood cutting produce the least pronounced edge damage, and wear traces from these activities could be easily removed or obscured by damage from other functions. High-power microscopy, and perhaps residue analyses, would be useful for examining the portion of the axe bevels some distance from the working edge as a means of determining both initial and secondary functions of these artifacts.

Yaeger, Jason (U. of Wisconsin & U. Texas - San Antonio)

[18] Transforming Sacred Space at Tiwanaku: Inka Sacrificial Offerings at the Pumapunku Temple Complex

When the Inka Empire expanded into Bolivia's Titicaca Basin, they encountered the ancient platforms and pyramids at Tiwanaku. Among these, they focused their ritual activities on the Pumapunku platform and adjacent spaces. By placing sacrificial offerings, building a canal and basin complex, and erecting buildings on and around the platform, they reconfigured the Pumapunku to create a venue appropriate for Inka rituals, and they transformed this sacred space to better fit Inka worldview and cosmogony. This paper examines the function and meaning of the changes that the Inka made at the Pumapunku, with a focus on the sacrificial offerings.

Yancey, Miranda [187] see Galloy, Joseph M.

Yang, Dongya (Simon Fraser University), Anna Prentiss (University of Montana) and Camilla F. Speller (Simon Fraser University)

[203] Ancient DNA analysis of canine bones and coprolites from the Bridge River Site, British Columbia

Mitochondrial DNA analysis was applied to archaeological canine bone and coprolites from Bridge River, a complex hunter-gatherer village on the Fraser River, British Columbia, to assess their relationship to other ancient and modern dog populations. Several different *Canis lupus familiaris* mitochondrial DNA sequences were recovered from the ancient remains, some of which matched sequences recovered from ancient dogs at other British Columbia Interior Plateau and Northwest Coast sites. Ancient DNA analysis was also applied to salmon vertebrae preserved within the canine coprolites, indicating that domestic dogs at Bridge River had access to sockeye salmon.

Yang, Dongya [84] see Speller, Camilla F.

Yang, Shugang [122] see Eng, Jacqueline T.

Yatsko, Andrew (U.S. Navy), Douglas Comer (Cultural Site Research and Management) and Kevin May (Cultural Site Research and Management)

[160] Cultural Implications of Viewshed Analyses at San Clemente

Island

San Clemente Island has evidence of occupation for more than 9,000 years, during which the prehistoric economies were strongly marine oriented. The distribution of island sites is generally consistent with this, with these optimally located to provide viewsheds across the surrounding ocean where resources moved important to humans, such as sea mammals and inter-island boat traffic. Within this prehistoric landscape there are also anomalies associated with apparent ceremonial sites. We examine the cultural dynamics implied in these sites' viewsheds, as well as those suggested by potential for reciprocal viewsheds among San Clemente Island, nearby Santa Catalina Island, and the California mainland.

Yatsko, Andrew [160] *see Blom, Ronald G.*

Yellen, John (National Science Foundation) [126] *Discussant*

Yellowhorn, Eldon (Simon Fraser University) [63] *Discussant*

Yepez, Willey, Justin Jennings (Royal Ontario Museum)

[188] *Style and Power at La Real: Dynamic Discourse, Permeable Barriers and Cultural Convergence in Middle Horizon Arequipa*

We present the preliminary results of our study of the archaeology remains from La Real, a mortuary site in the Majes Valley that was discovered and rescued during a civil engineering project in 1994. Two Middle Horizon contexts were studied: the first was a cave filled with mummies that dates stylistically to the Middle Horizon 1, and the second a semi-subterranean structure packed with post-mortem offerings dating to Middle Horizon 2. By tracing changes in the artifact assemblage over time, we can begin to understand the dynamic events occurring in the Majes valley and their relationship to the Wari state.

Yerka, Stephen (U. of Tennessee, Archaeological Research Lab), Mathew D. Gage (University of Tennessee) and Nicholas P. Herrmann (Mississippi State University)

[24] *Curing the Data: Managing Information Systems and Digital Data at Tennessee's ARL*

The Archaeological Research Laboratory (ARL) at the University of Tennessee actively incorporates archaeological technologies into various educational, public, and private projects. In addition, ARL pursues research opportunities, which will benefit from the integration of digital technology. Potential conflicts relate to a varied stakeholder interface that requires malleable but secure access to cultural resources data including artifact databases, geophysical and GIS layers, and various state and federal historic properties' site file information. This paper examines the benefits and challenges facing an academically based archaeological research laboratory, and ARL's efforts to address these issues are highlighted through several recent projects.

Yerka, Stephen [24] *see Johanson, Erik N.*

Yerkes, Richard (Ohio State University) and Brad Koldehoff (ITARP University of Illinois)

[146] *New Perspectives on Dalton Adzes and Toolkits in the Middle Mississippi Valley*

Dalton adzes and toolkits from the American Bottom region are compared with those from northeastern Arkansas. Technological and use-wear analyses reveal that adzes were made and used in similar ways - primarily for heavy woodworking, possibly for manufacturing canoes. Dalton toolkits are highly formalized, consisting of adzes, scrapers, and points used both as projectiles and knives. Dalton assemblages are often considered late Paleoindian. We argue that Dalton toolkits are hallmarks of an Archaic tradition that focused on woodland and riverine resources. Dalton foragers were the first groups to settle, fully utilize, and occupy the Mississippi Valley and adjacent Ozarks.

Yerkes, Richard [61] *see Parkinson, William A.*

Yeshurun, Reuven [16] *see Bar-Oz, Guy*

Yim, Ronald (Vanderbilt University) and Steven A. Wernke (Vanderbilt University)

[138] *From Pottery to Practice: A Contextual Ceramic Assemblage Analysis from an Inka Outpost and Early Colonial Mission in Highland Peru*

This poster investigates the organization and nature of ceremonial and domestic practices at the site of Malata in highland Peru during the transition from Inka to Spanish rule. First, we analyze variations within the ceramic assemblage to gain further understanding of the rituals that created political bonds between the Inka state and this community. Second, we examine ceramics from chronologically-controlled domestic structures to infer how colonial influences affected ritual and daily routines during the first post-conquest generation. The results indicate significant differences between ritual and domestic assemblages, and between the assemblages of households of different status.

Yingst, James R. [219] *see Sasso, Robert F.*

Yoder, David (William Self Associates), Bradley Newbold (Washington State University), Joel Janetski (Brigham Young University), Mark Bodily (Bureau of Land Management) and Sara Hill (University of Nevada Las Vegas)

[118] *Subsistence Change and Continuity During the Paleoarchaic/Archaic Transition on the Northern Colorado Plateau*
In the desert west, intensive use of small seeds as a dietary staple marks the transition between the Paleoarchaic and Archaic periods. Geib and Jolie (2008) have postulated that small seed use may have begun in the south and spread to the Great Basin through the Colorado Plateau. Work at North Creek Shelter suggests small seed use may have been in place by 9000 BP. But unlike in many other areas, Early Archaic occupants at NCS continued a focus on large game hunting. In addition, the replacement of stemmed points with side-notched styles suggests broad cultural changes at 9000 BP.

Yoffee, Norman (University of Michigan) [15] *Discussant*

Yohe II, Robert M. [232] *see Binning, Jeanne Day*

Yost, Chad (Paleo Research Institute)

[87] *Tropical Arrowroot Family (Marantaceae) Phytoliths and Starch Observed in Jornada Brown Bowl Fill Samples from Site LA 149260, Southeast New Mexico*

Fill collected from a Jornada Brown bowl recovered east of Carlsbad, NM (and other sites in the region) yielded phytoliths and starch diagnostic of the arrowroot family (Marantaceae) and resembling those produced by Calathea roots. Thalia is the only Marantaceae native to North America; however, these phytoliths bear no resemblance to those from Thalia roots. Calathea is native to Southern Mexico and has been cultivated as a root crop for over a millennium. This paper will present the results of ongoing Marantaceae phytolith reference work and information on Marantaceae root crop cultivation, storage, and possible trade networks with Mexico.

[10] *Discussant*

Yost, Chad [87] *see Boggess, Douglas H M; [172]* *see Cummings, Linda Scott; [172]* *see Varney, R. A.*

Young, Allison (College of Wooster)

[163] *An Assessment of the State of Civil War Battlefield Archaeology*
Battlefield archaeology is a significant subfield of historical archaeology. Battlefields of the American Civil War serve as ideal locations for its practice and development. This study will assess the state of civil war battlefield archaeology through discussion of representative cases including work done at Gettysburg, Antietam, Shiloh, and Fort Davidson in Missouri. It will also examine the methods and theories of battlefield archaeology and evaluate their effectiveness. The discussion of each battle will assess the

correlation of the material and historical records, report the state of preservation of each site, and examine how the public relates to each site.

Young, Bailey K. [123] *see Woods, William*

Young, Eric (Pennsylvania State University) [69] *Discussant*

Young, Janet [79] *see Ryan, Karen*

Young, Michael (Richard Grubb & Associates)

[97] *Technological Style and the Atlantic World System: A Case Study in African-Caribbean Pottery from Montserrat*

African-Caribbean pottery, or Colono ware, offers an opportunity to study the slaves' independent economic activity in the Caribbean. A paste typology was developed for an assemblage from Galways Plantation, Montserrat. X-ray radiography was performed to identify method of manufacture. A trend emerges in the Galways collection of an increase in plain types over time. This study combines theories formulated by prehistorians, historical archaeologists, and historians. The theories of technological style and style and theories regarding the economic changes within the Atlantic world system are employed to illuminate the systems of production, distribution, and consumption of this pottery and its transformations.

Young, Tatiana (Temple University)

[109] *Independence rather than Domination of Smaller Sites in Quintana Roo, Mexico*

It becomes increasingly difficult to maintain a hierarchical model as continuing data suggests independence of smaller sites through economic specialization. To adapt to the rain forest environment ancient Maya employed multifaceted agricultural strategies dependant upon the soil type, vegetation and landscape features. This approach differs greatly from Western monoculture which relies on a single agricultural technique employed in extensive vicinity. Settlement pattern was comprised of a mixture of farms and residences, which promoted economic self-sufficiency to the ancient Maya (agricultural facets were present in the core of some cities). Dispersion amongst the continual occupation did not reflect any tangible boundary between "urban" and "rural" settlements. Rather, smaller sites maintained independence from the domination of larger sites by means of economic self-sufficiency.

Youssef, Sam [58] *see Moncel, Marie-Hélène*

Yu, Pei-Lin (Ca. State U. Sacramento) [119] *First Organizer; [119] Second Chair*

Yuan, Jing [155] *see Campbell, Roderick B.*

Zachmann, Carl (Illinois State University, Normal)

[125] *A Study of Consumer Choice and Customer Loyalty from the Remedies Present at Two Midwest Historic Sites*

Embossed bottles are one of the few forms of text archaeologists can physically recover from mid-nineteenth to early twentieth-century soils. A comparison of the medicines purchased by the residents of a lower-working-class St. Louis, Missouri, neighborhood (23SL2229) and the upper-middle-class David Davis Mansion (11ML2725) in Bloomington, Illinois, goes beyond a review of nationally branded nostrums and a class based interpretation. The remedies presented at these two Midwest sites are able to inform historical archaeologists on local medicines, consumer choices, and customer loyalty.

Zafe, Zarley (Archaeological Research Center of St. Louis, Inc.), Joseph Harl (Archaeological Research Center of St. Louis, Inc.)

[2] *Unusual Pottery Vessels at the Alexander Jacob Site*

The more unusual pottery vessels recovered from the Alexander Jacob site will be discussed. These vessels include a hexagonal shaped bowl, exotic decorated jars, animals effigy lugs, a disc with spider web incisions, and a human effigy water bottle. These objects

will be compared to similar vessels found in the American Bottom. Some preliminary insights how the symbols on these vessels reflect changing ideas at the beginning of the Mississippian Period will also be discussed.

Zaragoza, Diana (INAH)

[195] *¿Tepantitla, lugar de peregrinaciones?*

Las recientes exploraciones realizadas en el sitio arqueológico de Tepantitla, en el estado de Hidalgo, nos hacen suponer que este lugar pudo haber sido utilizado por los otomies para ceremonias. En las pinturas rupestres de El Cajón también en Hidalgo, encontramos representaciones de personas alineadas portando vestimentas y adornos que me hacen suponer que son sacerdotes en peregrinación. En la Huasteca es común que se invite a sacerdotes y curanderos otomies a las ceremonias, por lo que no sería difícil pensar que estos sacerdotes en peregrinación fueran a realizar alguna ceremonia al sitio de Tepantitla.

[195] *First Organizer ; [195] First Chair*

Zariñán, Nora N. Rodriguez (Escuela Nacional de Antropología e Historia)

[57] *El Águila Joven en Alta Vista, Zacatecas*

A partir de la recurrente aparición de vasijas con un mismo conjunto iconográfico, el águila, el rombo o círculo y la serpiente, en el área de Chalchihuites, Zacatecas, surge la pregunta respecto a su significado en tiempo y espacio para esta área. En un acercamiento a través de la analogía wixaritari se ha conseguido una interpretación, más allá de ello sin embargo, después de un largo trabajo, se han identificado convergencias en los contextos de uso y desecho del soporte material de dicho conjunto tanto etnográfica como arqueológicamente, así como la continuidad e identificación de lo que parece ser una deidad del Noroccidente de México.

Zaro, Gregory [112] *see Houk, Brett A.*

Zavala, Bridget (Universidad Juarez del Estado de Durango) and Eva Angelica Bravo Torres (Universidad Autonoma de San Luis Potosí)

[57] *Dwelling and Architecture in the Sextín Valley of Durango, Mexico*

This paper applies a landscape perspective to the archaeology of the Sextín Valley in northern Durango, Mexico based on results from the Proyecto Arqueológico Sextín. We use architecture as an entry point to demonstrate how places are created in several different temporal settings in the region. Specifically, we take into account aspects related to visibility, private vs public spaces, among factors, in order to understand how each of the locales was experienced by the agents who infused these places with meaning.

[57] *First Organizer; [57] Second Chair*

Zavala, Gina (Indiana University)

[196] *Community Involvement in Knowledge Creation at the Ground Level in Barahona, Dominican Republic*

In this paper I chronicle a community-based archaeological research trajectory in Barahona, Dominican Republic. After small-scale construction revealed a Taíno village beneath the modern barrio of Imbert, a group of community leaders approached the director of the national museum, Dr. Juan Rodríguez, with a request for archaeological work and assistance in creating a community museum. The Taíno site appears to have a long chronological sequence and associated cave features. This ground level approach supports the efforts of the people of Imbert to empower themselves by facilitating learning and including community voices in the creation of knowledge about the past.

[196] *First Chair*

Zawadzka, Dagmara (Université du Québec à Montréal (UQAM))

[22] *Pictures on the Shores of Deep Water: Temagami Area (Ontario) Rock Art within its Landscape Context*

Canadian Shield rock art, created by the Algonquian-speaking peoples, is most often associated with sacred places. This paper

discusses the rock art of the Temagami area of north-eastern Ontario within its landscape context. An understanding of rock art sites' place within the cultural landscape can be achieved by an examination of rock art's relation to natural resources, cultural resources (tangible and intangible), as well as to the paths travelled. Such a study sheds light not only on the place of rock art within the cultural landscape of Algonquian-speaking peoples, but also on the perception of the landscape itself.

Zborover, Danny A. [228] *see King, Stacie M.*

Zeanah, David, Brian Coddig (Stanford University), Douglas Bird (Stanford University) and Rebecca Bliege Bird (Stanford University)

[118] *Intensive Seed Exploitation, Central Place Foraging, and the Organization of Ground Stone Technology in the Australian Arid Zone*
We suspect that Australian foragers had to use fire to enhance grass seed productivity, because seed patches are too dispersed to make reliance on seeds worthwhile in climax vegetation. If so, the proliferation of ground stone in the arid zone during the Holocene signals the simultaneous emergence of fire-managed landscapes. We use foraging theory to model managed habitat mosaics relative to contemporary occupation sites in the Martu territory of Western Australia to generate testable predictions about the distribution and organization of ground stone technology. Implications for the development of ground stone technology in western North America are discussed.

Zedeno, Maria (University of Arizona), Dale Fenner, Sr. (Blackfeet Tribe) and Jesse Ballenger (University of Arizona)

[234] *If We Build It, Will They Come? Planning Bison Kills on the Two Medicine River, Montana*

The Two Medicine River of north-central Montana preserves abundant surface evidence for Late Prehistoric bison drive lanes, kill sites, encampments, and stone alignments which, together, demonstrate long-term success of communal bison hunting. Extensive drive lines insinuate themselves as a reasonable means to predict kill site locations; yet, drive lanes lead directly to stratified bone beds only in some cases. The absence of bone at the terminus of drive lanes must be explained as a result of taphonomy or the absence of a kill event. We review drive line placement and discuss the preparation and risk involved in the communal hunt.

[228] *Second Chair* [228] *Second Organizer*

Zedeno, Maria Nieves [228] *see Murray, Wendi F.; [198]* *see Hollenback, Kacy L.*

Zeidler, James (Colorado State University)

[89] *Archaeoastronomy, Community Plan, and Domestic Structure Orientation at Real Alto, Coastal Ecuador: Why Don't the Houses Face the Plaza?*

In previous studies of archaeoastronomical phenomena at the Valdivia site of Real Alto, coastal Ecuador (Zeidler 1984, 1998), overall community plan and individual structure orientations between Phases 3 and 7 were discussed in terms of a pronounced intercardinality, after which several different celestial phenomena were suggested as possible alignments. One question left unanswered, however, is why the domestic structures don't face inward toward the central plaza, as is common in Amerindian circular villages throughout South America. This paper addresses that issue by exploring the spatial patterning of similarly oriented dwellings at disparate locations within the village configuration.

Zeidler, James [164] *see Rush, Laurie W.*

Zelin, Alexey (ITARP, University of Illinois)

[83] *Orendorf Settlement D: A Middle Mississippian Town Ceramic Assemblage*

This paper reports preliminary results of the ceramic artifact analysis from the Settlement D occupation of the Orendorf site. The unfortunate circumstances in which the site was destroyed present a

most informative glimpse of the ceramic assemblage of a Spoon River Middle Mississippian town on the Illinois River bluff during the 13th century. The badly burned floor material provides an inventory of the vessel forms and locations in the buildings at a particular moment, while the unburned sherds from the pit features allow detailed descriptions of the vessels present.

Zetina-Gutiérrez, Guadalupe (Posgrado en Antropología FFyL /IIA UNAM)

[241] *Searching for Demographic Phenomena in Maya Archaeological Context*

Throughout the historic development of the Maya, population phenomena documented through ethnohistorical and ethnographical studies such as migration, demographic waxing and waning, contraction and expansion of human communities, cyclical mobility of households, settlements and corn-fields, as well as dual-residence, have constituted common strategies to address physical, biological, cultural, political, religious or psychological requirements. In this paper, I sum up how these issues have been studied in archaeological contexts by specialists in the Maya area through the application of demographic archaeology and Paleodemography.

[241] *First Organizer; [241] First Chair*

Zhang, Dongju [177] *see Elston, Robert G.; [155]* *see Morgan, Chris*

Zhang, Quanchao [122] *see Eng, Jacqueline T.*

Zhanwei, Yue [155] *see Stoltman, James B.*

Zhao, Hui [155] *see Qin, Ling*

Zheng, Tongxiu [155] *see Li, Min*

Zimmerman, Larry (IUPUI/Eiteljorg Museum) [7] *Discussant* [181] *Discussant*

Zovar, Jennifer (Vanderbilt University)

[121] *LA-ICP-MS Analysis of Ceramics from Late Prehispanic Bolivia*
Laser ablation - inductively coupled plasma - mass spectrometry was conducted on a sample of 100 ceramic sherds from the Late Intermediate Period site of Pukara de Khonkho, Bolivia and from Late Intermediate and Inca/Colonial contexts at the nearby sites of Khonkho Wankane and Chaucha de Khula Marka. The concentrations of 53 major, minor, and trace elements were considered in order to identify meaningful chemical characterization groups. This analysis, in conjunction with a more intensive analysis of ceramic form, decoration, and surface treatment, was used to address issues of craft production, population movement, and intercommunity interaction in Late Prehispanic Bolivia.

Zovar, Joel (University of Illinois-Urbana-Champaign)

[212] *Mallkus, Monoliths, and Museums: Developing a Cultural Resource Center in the Bolivian Altiplano*

Research conducted in the summer of 2008 demonstrated that museums in the department of La Paz, Bolivia have largely relegated Indigenous political agency to the prehistoric past, effacing 500+ years of Native struggle, compromise, and collaboration with colonial powers. This paper will briefly examine that research and explain how findings from this fieldwork informed plans for the construction of a cultural resource center in the heart of the Bolivian altiplano.

Zubrow, Ezra, Dustin Keeler (SUNY-Buffalo), Eva Hulse (SUNY-Buffalo) and Greg Korosec (SUNY-Buffalo)

[117] *Supra-regional Issues in Archaeology*

Globalization, environmental and climate change are global problems and it has become increasingly clear that small scale, regional scale, and even national scale studies do not allow one to understand the underlying causes or responses. Archaeology unlike climatology and geology has been slow to examine supra-regional scales. This paper examines the issues involved in doing research at a supra-regional scale and makes use of the climatic reconstructions from the world

climate model and prehistoric data from around the circumpolar area collected since 2006 by Social Change in the Environment in Nordic Prehistory and the International Collaborative Circumpolar archaeological project.

Zúñiga-Arellano, Belem [64] *see* López Luján, Leonardo