Alabama Archaeological Society

Associate Editors
Bart Henson
Dorothy Luke

STONES & BONES NEWSLETTER

Editor
Amos J. Wright
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Huntsville, Alabama 35803

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KIMMSWICK: A CLOVIS-MASTODON ASSOCIATION IN EASTERN MISSOURI

The association of man and the American mastodon *Mammut americanum* has been a frequent question in North American archaeology. In recent excavations at Kimmswick, Missouri, two Clovis projectile points and other stone tools were found in stratified deposits in direct association with the bones of *Mammut americanum* and other fauna. This is firm evidence for the association of the American mastodon and the Clovis culture.

The Kimmswick site, approximately 32 km. south of St. Louis, lies about 127 m. above mean sea level on a terrace abutting a 20-m. limestone bluff to the north. The terrace, occupying a small area at the confluence of Rock and Black creeks approximately 1.6 km. from their confluence with the Mississippi, was formed from overbank alluvium from the two creeks and colluvium from the bluff to the north. These types of late Quaternary deposits occur in similar micro-environments throughout the valleys of the central Mississippi and Missouri rivers and their tributaries.

Two virtually-complete Clovis lanceolate points, simple unifacial tools, a bifacial fragment, and hundreds of chert flakes were found in the upper pond deposit. The two projectile points were 1.25 m. apart horizontally and were vertically separated by less than 1.5 cm. One of these is large and steel-gray, with minor impact damage to the tip. This specimen was at least 14 cm. below the highest mastodon bone, a pisiform, and lay horizontally among disarticulated foot bones of an adult mastodon and adjacent to a lenticular concentration of botryoidal manganese. Heavy coatings of manganese covered this point and other artifacts from the stratum.

In the blue-gray silty clay pond deposit beneath these finds were additional Clovis artifacts: the basal ear of a lanceolate point, a basal fragment of a projectile point preform, and chert flakes. These artifacts were also in association with the bones of mastodons and other extinct fauna, although they were stratigraphically separated from the olive-green clay by the sterile upper colluvial gravel.

The Kimmswick points have straight to convex sides and concave bases with multiple flutes. The haft area, including the base and lateral edges, was extensively ground after fluting. All the specimens exhibit well-executed pressure flaking and, apart from differences in length due to reworking of the tip, are nearly identical.

The stratigraphic relations of these finds are compelling evidence for an association between the Clovis culture and the American mastodon. There are also lines of evidence that make other interpretations most improbable. Krotovina or other pedoturbational features that could displace artifacts were not encountered in excavations of the pond sediments. There is no evidence of edge damage to artifacts as a result of secondary deposition. Furthermore, the sedimentary environment of the clay matrix encasing the artifacts is not compatible with transport of these artifacts or bones.

The mammalian fauna from the pond deposits contains species adapted to deciduous woodland with open grassy areas. A similar reconstruction is also suggested by extrapolation of contemporary pollen data for southern Missouri, central Illinois, and western Tennessee. Such an environment is different from the spruce forest usually assumed to characterize the mastodon habitat and strengthens arguments favoring broader ecological adaptations for mastodons. Furthermore, this environment is markedly different from those encountered by Clovis hunters in the Great Plains and Southwest. Kimmswick therefore may illustrate another adaptive strategy of Clovis hunters: survival in the eastern woodlands.

(From an article by Russell W. Graham, Illinois State Museum, et al; in SCIENCE, Vol. 213, 4 September 1981)

The Editors

PRESERVING THE PAST

The Tennessee-Tombigbee Waterway, now under construction in Alabama and Mississippi, is the largest single public works project ever undertaken in the United States, and may well be the largest earth-moving project in the history of man.

The new waterway, from Demopolis, Alabama, to the Tennessee River, will extend some 232 miles and use a series of 10 locks that will provide a total lift of 341 feet. From a purely engineering standpoint, the project is one-third again as large as the effort expended in building the Panama Canal. It will create an entirely new route between the Gulf Coast and much of the interior of the United States.

The project is threefold: a River Section following the existing Tombigbee Channel, a Canal Section that will be constructed parallel to the upper river and Mackey's Creek, and a Divide Section along a 27-mile cut that will connect it with the Tennessee River.

Various archaeological projects were contracted out to such institutions as the University of Michigan, the University of Pittsburgh, Mississippi State University, the University of Alabama, the University of West Florida and private interests.

Historic sites that would be affected by the waterway were also surveyed for mitigation. Research designers wanted to insure that historic preservation did not take a back seat to prehistoric work, as had so often been the case. Historically-significant properties were defined as including standing structures, house sites, bridges, ferry landings and sunken vessels. The archaeological potential for such sites to shed light on nineteenth and early twentieth-century rural domestic lifestyles was recognized. Old newspapers, French archival records and other sources served as reference material.

The first unexpected construction holdup came in 1978, when bulldozer blades uncovered the remains of a prehistoric archaeological site near the Columbus Lock and Dam area. Work halted to allow contract archaeologists to excavate the site, which proved to be a substantial village area dating to about 900 A.D.

Dr. Judith Bense, an archaeological research professor from the University of West Florida, is the principal archaeological investigator under contract to the Mobile District. Her area of interest eventually was to cover the waterway from Mackey's Creek in the north to Aliceville, Alabama, in the south.

In the late spring of 1980, Dr. Bense was notified of the existence of a small prehistoric mound in the pool above the Tenn-Tom's Lock D by a "local informant". The mound was symmetrical in plan and approximately 60 meters in diameter. Excavation revealed an undisturbed habitation about 18 centimeters deep and just under the plowzone. Artifactual material recovered included projectile point fragments (what the layman calls "arrowheads", according to Dr. Bense), blades, choppers, and a single specimen of ceramic pottery.

"The site represents an occupation during what we call the Archaic Period", she stated. "That would be about as early as anything we have definitely dated in the basin so far. We have one very probably Paleo site near Aliceville, but most of the digs are uncovering Archaic and Woodland habitations.

"We have located 682 archeological sites within the Multi-Resource District", Judy continued. "They span time from about 12,000 B.C. to 1900 A.D. We are disappointed in the scarcity of habitations prior to the Archaic Period, but we continue to look.

"The research designers wanted specific answers to the Paleo occupation questions in the Tenn-Tom Basin. When were they there, how many, what were they doing, how did they exploit their environment? We are just not able to provide any answers yet.

"When we get into the Archaic Period, from about 11,000 B.C. to 1,000 B.C., we can make reconstructions. We know what those people were doing, and their successors forward through time. For example, in the Middle Woodland Period, burial mounds begin to appear. When we get into the Mississippian Period, we start seeing temple mounds and ceremonial centers. The village sites become larger and farming characterizes the lifestyles, as opposed to the earlier hunting and gathering.

"I guess the most interesting artifact we have uncovered, at least from a layman's viewpoint, would be the canoe", she added. "We have an intact aboriginal dugout canoe that dates to about 1670 A.D. I don't think another intact dugout has ever been found in the Tenn-Tom Waterway."

The canoe is safely back in the lab now, reposing in a soup of warm water and a wax solution that will infiltrate the wood cells and preserve the canoe.

The lab is where the field work - the trowel work - is translated into scientific hypothesis. Blaine Ensor, a lab director for the project, described his work: "We normally assume two hours of lab work for every hour spent in the field. Lab types and field types are two different breeds of cat: our lab workers don't usually work in the field and field workers don't usually work in the lab. In the limited time available, such specialization is usually the case.

"We've got some techniques for dating artifactual remains that will amaze you", Blaine continued. "In addition to carbon-14 dating, we can send out for pollen analysis that will tell us about the floral environment the aborigines lived in. With archaeomagnetic dating, we can determine pretty closely when clay was fired. When it's fired, the molecules align themselves with magnetic north, and tables are being established that can tell us where, exactly, magnetic north was through time. Eventually, it will be possible to take an undisturbed piece of fired clay and determine when the early citizens of the Tenn-Tom Basin fired it."

Few of the Tenn-Tom artifacts would cause much excitement in a museum display case - the canoe perhaps an exception. There are no works of "art", no "King Tut's treasure", no masterpiece of statuary or pottery.

The early men in the Tenn-Tom Waterway were basically hunters, gatherers, and farmers. Their artifactual remains - all that is left - are dull and relatively unimpressive to the untrained eye - pottery fragments, broken tools, crude ornaments.

Yet the study and analysis of these artifacts is crucial to understanding the region's past. As Dr. Bense repeated continually, "We are trying to understand and preserve the folkways of a people's past...a people that are gone forever...and the water is coming".

(From an article by Bob Norton in WATER SPECTRUM, Summer 1981)

The Editors

FLUTED POINT STUDY

The Alabama Archaeological Society has agreed to participate in a study attempting to compile data on the distribution of fluted points across the entire eastern United States. The project is being led by Lewis Brennan of the Eastern States Archeological Federation, and the results will be published in Volume 10 of Archeology of Eastern North America.

It has often been rumored that more fluted points have been found in Alabama than in any other state. This is our chance to turn rumor into fact, but we can't do it without your help. If you possess any fluted points found in Alabama, or know someone who does, please share this information with us. The only information we need is the county the point was found in, and where the artifact is now - to help eliminate duplication. A definite fluted point fragment is just as important as a whole point. Exact site locations ARE NOT being sought; all we need to know is the county the points were found in. Any other information you can provide that may be helpful in compiling the total and checking for duplicate reports - such as who found the point, about when, the point type, any published references, etc. - will be appreciated but is not required.

Unfortunately, the time available for this project is very short. We need the information no later than March 20 so the data can be compiled and submitted by March 31. Please help. This is the kind of research that cannot succeed without the amateur archaeologists' participation. The very few fluted points found as a result of professional research in Alabama are a small, meaningless fraction of the true number. This project will succeed or fail depending on the amount of information supplied by amateurs. And remember, we do not need your site locations.

If you have information to share, send it as soon as possible to:

Eugene Futato
Office of Archaeological Research
1 Mound State Monument
Moundville, Alabama 35474

Eugene has agreed to act as coordinator for the Alabama Archaeological Society in this project and to compile and send the information. We will also publish the Alabama results in a later issue of STONES & BONES for the interest of A. A. S. members. Your help will be greatly appreciated.

Eugene Futato
Moundville

HIGHLIGHTS OF THE A.A.S. BOARD OF DIRECTORS MEETING

Directors of the A. A. S. from all across the state met in Birmingham on January 20, 1982 to plan the Society's activities for the forthcoming year. Society President Margaret Chase presided. Business items acted upon included the following:

1. The proposed budget for 1982 was approved.

2. The summer Society meeting will be a "member participation" type meeting, perhaps an excavation. The details are to be worked out by the Archaeological Resources Committee, chaired by Charles Moore of Florence. Committee members are Carey Oakley, Moundville; Thomas Hutto, Birmingham; Elizabeth Sheldon, Wetumpka; and James Lee, Huntsville. The

Committee will make its recommendations to the Board in April 1982.

3. Mr. James Lee, on behalf of the Huntsville Chapter, extended an invitation to the Society to hold its winter meeting in Huntsville. The Board unanimously accepted the invitation. Opinions expressed indicated a preference for meeting in the earlier part of the season, schedules permitting.

4. The Board approved a grant of up to $200 to the Office of Archaeological Research for the dating and preservation of a most unique artifact. The artifact is a hafted stone ax recently acquired by the University Museum, and is considered to be in excellent condition. However, as it was recovered from a river bottom where it lay in silt and mud, it cannot be exposed to air until after having undergone special preservation techniques. The wooden-handled stone ax presently resides in a water-filled container while the O.A.R. evaluates the various options available for its C-14 dating and preservation. This newsletter will have more information of this "first-of-its-kind" artifact from Alabama when available from the University.

The Editors

CHAPTER NEWS

Birmingham Chapter

Dr. Charles Ochs, President of the Birmingham Chapter, has made available a revised schedule of the Chapter programs for coming months.

February 11: Dr. Richard A. Krause will be the featured speaker at the Birmingham Chapter meeting at 7:30 p.m. on February 11, 1982, at the Red Mountain Museum. Dr. Krause will discuss the environmental background of the Great Plains, including the cultural adaptation of the prehistoric Indians. His talk will include alterations in settlement patterns, house design and community size for the period 1,000-1,450 A.D. Dr. Krause is Professor and Chairman, Department of Anthropology, University of Alabama. He received his Ph.D. at Yale University in 1967. He has done extensive archaeological research in Nebraska, South Dakota, Missouri, Kansas, Mississippi and Alabama. His special interests have been prehistorical social structure.

March 18: "The Art of Black Africa". Speaker: Paul A. Clifford, Curator of Duke University Museum. Note: This meeting will be held one week later than the usual meeting date, at 7:30 in the Birmingham Museum of Art Auditorium.

April 8: "Biblical Archaeology". Speakers: Mr. Steve Wimberly, Dr. Paula Hesse and Dr. Charles Ochs.

May 13: "Private Collections". Selected artifacts from members will be presented. Coordinator: Mr. Kenneth DeRamus.

June and July: Field Trips. Details to be announced. Dr. Roger Nance, Associate Professor of Anthropology, UAB.

NOTE All Birmingham Chapter meetings are free to the public except for field trips. Commencing January 1, annual dues are $5 per person or family. For further information call Dr. Charles Ochs, President, at 967-8848; or Tom Hutto, Vice President, at 956-1895.

Huntsville Chapter

The Huntsville Chapter met on January 19 to hear "The Crystal River Site", a presentation by Chapter member Mr. Houston Wright. The next Chapter meeting will be Tuesday, February 16; the speaker will be Dr. Richard Hoover, also of the Huntsville Chapter. Dr. Hoover will discuss ancient astronomy, with emphasis on the Maya.

The Huntsville Chapter meets the third Tuesday of each month in the Arts Council Conference Room, Von Braun Civic Center, at 7 p.m. Visitors are always welcome.

Muscle Shoals Chapter

The Muscle Shoals Chapter held its January meeting on the 11th at the Indian Mound Museum in Florence. Charles Moore led the study and discussion of the "Point of the Month", which was the Mulberry Creek. Gregory Waselkov of Auburn University presented an interesting slide narration on Fort Toulouse. He and Bob Morgan then reported on their TVA-sponsored project to survey the Seven Mile Island area. The next meeting is planned for February 8 at 7:15 at the Indian Mound Museum.

DIGGING UP A DATE FOR AN EARLY AMERICAN

Two human skeletons found near Del Mar and Sunnyvale (Cal.) may be tens of thousands of years younger than previously thought, says a geochemist at the U. S. Geological Survey here. If he's right, one side of the debate over when humans first arrived in North America may have lost its most direct evidence.

In 1974 Jeffrey Bada, a geochemist at Scripps Institution of Oceanography, used a technique that measures the rate at which amino acids change to determine the ages of the fossils. He concluded that the Del Mar bones were 48,000 years old and that the Sunnyvale remains were 70,000 years old. Because only circumstantial evidence exists for human presence in North America prior to 12,000 years ago, these fossils were touted as direct proof of an earlier date. Other anthropologists, however, say the skeletons may too closely resemble modern man to be that old. Now the U.S.G.S.'s James Bischoff claims the fossils are 11,000 and 8,300 years old, respectively. He used a method based on how quickly uranium, taken up by the bones after burial, breaks down.

Both Bischoff and Bada are quick to point out that the other's method sometimes yields inaccurate ages. And for many anthropologists, the matter will not be resolved until a more definitive test is used. There is not enough material to perform traditional carbon-14 dating, but Bada hopes soon to try a new technique that needs only minute amounts of bone and uses a particle accelerator to count the C-14 atoms. Meanwhile, the San Diego Museum of Man, home of the Del Mar skull, is preparing a label bearing both its 48,000- and 11,000-year ages. (SCIENCE, Nov. 1981)

PUBLICATIONS AVAILABLE

Available issues of *Journal of Alabama Archaeology* Vol. 13-18	$1.00 pp
Vol. 20-24 ($2.50 to Members)	$4.00 pp
Stanfield-Worley Bluff Shelter Excavations (Journal of Alabama Archaeology) Vol. VIII Nos. 1 & 2-Reprint	$5.00 pp
Special Publication 1 – Fort Mitchell	$2.00 pp
Special Publication 2 – *The Archaeological Sequence at Durant Bend, Dallas County, Alabama*	$4.50 pp
Special Publication 3 – *Archaeological Investigations at Horseshoe Bend*	$6.50 pp
Handbook of Alabama Archaeology Part 1, Point Types	$7.35 pp
Lively, Long, Josselyn - *Pebble Tool Paper*	$3.00 pp
Investigations in Russell Cave, published by the National Park Service	$5.00 pp
Exploring Prehistoric Alabama through Archaeology (Juvenile)	$7.00 pp

CHECKS SHOULD BE MADE PAYABLE TO: **ALABAMA ARCHAEOLOGICAL SOCIETY**
SEND CHECKS TO: **MR. EUGENE FUTATO, Office of Archaeological Research**
1 Mound State Monument, Moundville, Alabama 35474

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Mr. Amos J. Wright
2602 Green Mountain Road SE
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DR. VERNON J. KNIGHT, JR. - I
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