Alabama Archaeological Society

NADB DOC # - 4,056,875

Associate Editors
Bart Henson
Dorothy Luke

STONES & BONES NEWSLETTER

Editor
Amos J. Wright
2602 Green Mountain Rd.
Huntsville, Alabama 35803

Volume 30 MEMBER OF THE EASTERN STATES ARCHEOLOGICAL FEDERATION Number 2

PREHISTORIC POLYNESIAN PUZZLE

In 1985, a team of archaeologists traveled to a small South Pacific island in search of the homeland of the prehistoric Lapita people, whose descendants first settled Hawaii and the rest of the Polynesian islands. Amid the muck and wet sand that now straddles a former shoreline of one of the Mussau Islands, the Lapita threw them for a loop.

What the investigators found was an extensively preserved record of the earliest known Lapita settlement, dating to about 1600 B.C. To their surprise, the remains were not those of a primitive "homeland" group, but of people whose culture was comparable to that of their counterparts more than a millenium later.

"It's an amazing site", says archaeologist and project director Patrick V. Kirch of the University of Washington in Seattle. Many archaeologists now hold that the Polynesians originated in the west toward Southeast Asia. This theory assumes that they sailed across expanses of uncharted ocean with no known navigation instruments against prevailing winds and currents. Nevertheless, it appears that the Lapita island-hopped throughout the South Pacific with surprising speed.

Kirch and his co-workers excavated three sites on two of the Mussau Islands. The most important site, where the stilt house remains and figurine turned up, is called Talepakemalai (under the malai tree"). Radiocarbon dates indicate that it was occupied from 1600 B.C. to 500 B.C.

The "cultural signature" that identifies Lapita settlements is a distinctive brand of decorated pottery. Ceramic cooking pots, bowls and dishes are laced with intricate horizontal bands and geometric designs. Decorations were applied either by direct incisions or with "dentate-stamps". A number of needle-like teeth apparently used in the stamps have been found, but an intact stamp has yet to be recovered.

The Mussau excavations have yielded more than 15,000 Lapita ceramic sherds so far. The artistic motifs on the pottery are much the same as Polynesian tattoo styles that occurred centuries later, says Kirch. Several ceramic fragments, he adds, contain dentate-stamped human faces.

(From an article by Bruce Bower in "Science News", Vol. 132; Oct. 10, 1987)

EXTINCTIONS ON ICE

The last Ice Age, or Pleistocene epoch, extended from 1.6 million to 10,000 years ago, yet not until its final two millennia did large numbers of North American animals make their swan song. In a blip of time in the 3.5-billion-year history of life on earth, the fossil evidence indicates that 35 classes of mammals became extinct in North America and most vanished altogether.

What caused the virtually simultaneous demise of mammoths, mastodons and saber-toothed cats, not to mention native horses, ground sloths, native camels, armadillo-like glyptodonts, giant peccaries, mountain deer, giant beavers, four-pronged antelopes, dire wolves, native lions and giant short-faced bears? Scientists have grappled with this question for nearly two centuries, and, as evidenced by a recent symposium at the Smithsonian Institution in Washington, D.C., the debate is not about to cool down.

There is broad agreement that the extinctions occurred 12,000 to 10,000 years ago, and probably more precisely about 11,000 years ago. But the cause of this disappearing act is attributed either to hunting by early inhabitants of the New World, climate change or some combination of the two.

Paul S. Martin of the University of Arizona formulated what is known as the "Pleistocene overkill" hypothesis in 1967. He observed that the abrupt North American extinctions of about 11,000 years ago primarily affected large plant-eating mammals whose adult weight exceeded 100 pounds. Unlike earlier episodes of mass extinction during the previous 65 million years, this one did not significantly affect small mammals, amphibians, reptiles and invertebrates.

In addition, archaeologists had found that from 11,500 to 11,000 years ago parts of North America were occupied by people whose fluted spear points had been found with the remains of mammoths, mastodons, horses, tapirs and camels. These people, called Clovis, after a site near Clovis, N.M., may have been the first to penetrate far into North America, although some investigators argue that there were earlier settlers.

Martin suggested that Clovis big-game hunters crossed the Bering land bridge from Asia to Alaska and moved through an ice-free corridor just east of the Canadian Rockies about 11,500 years ago. They then entered a hunter's "garden of Eden", populated by 50 million to 100 million large mammals similar to prey that had been hunted in Europe and Asia, but unadapted to human predation. Given easy hunting and exposure to few, if any, new illnesses, population growth soared. Humans spread southward and within several hundred years, according to Martin, could have left many big-game extinctions in their wake.

Archaeologist C. Vance Haynes, also of the University of Arizona, agrees that Clovis people emerged from the glacial corridor into what he calls "the happiest hunting ground ever known" and rapidly spread throughout the continent. But unlike Martin, he sees a role for climate. The transition out

of the Ice Age resulted in a rise in sea level and lowered water levels over much of North America. Large mammals probably congregated at the few remaining springs and were far more vulnerable to hunting. Haynes also argues that the human population grew slowly, with neighboring groups probably engaging in cooperative hunts.

Other scientists, such as geologist Ernest L. Lundelius of the University of Texas in Austin, hold that climate change alone was the ultimate cause of the extinctions. Lundelius points to evidence that the habitats, or natural living areas of many animals, underwent extensive destruction at the end of the Pleistocene. Many late Ice Age sites contain plant and animal species whose ranges do not currently overlap. The yellow-cheeked vole, for example, shared its southeastern United States habitat with the eastern pack rat in late Pleistocene times. Today these two species live 1,200 miles apart.

Another perspective is provided by zoologist Norman Owen-Smith of the University of Witwatersrand in Johannesburg, South Africa. The late Pleistocene elimination of "megaherbivores", weighing more than 2,200 pounds, by whatever means, would have drastically changed vegetation patterns and resulted in extinctions or geographic migration among many smaller herbivores, says Owen-Smith in the summer PALEOBIOLOGY.

In modern Africa, he points out, the massive appetites of grazing and browsing megaherbivores such as elephants and rhinoceroces help to transform wooded savanna to open, short-grass savanna dominated by rapidly regenerating plants and herbs. This, in turn, provides more nutritious food sources for other herbivores.

A lack of data clouds other aspects of the debate. "The timing of Ice Age extinctions is really very poorly understood", says archaeologist Donald K. Grayson of the University of Washington in Seattle. "Radiocarbon chronologies are bad in North America and worse in Europe".

There are some species extinctions that will probably never be reliably dated, acknowledges Martin. Other remains, he says, such as those of the Barrington mountain goat and Shasta ground sloth in the Grand Canyon, show a clear timing of extinction at 11,000 years ago.

Grayson also contends that the sample of Clovis sites uncovered so far provides a biased view of the early settlers' lives. "Big-game hunting may not have been a common activity", he says. "If they spent most of the time hunting mice and eating berries we probably wouldn't know it".

Some additional light is being shed on the late Pleistocene by ongoing excavations at the Cutler Fossil Site in southern Florida. At least 65 animal species, many now extinct, have been identified in a cave exposed by a sinkhole, says Dade County archaeologist and project director Robert Carr. Several radiocarbon dates put the remains at about 10,000 years old.

"We've established that the center of the cave was a human habitation site that included a dispersed area of burned rock and charred animal bones, although there is no discrete pit or hearth", says Carr.

Human skeletal remains of five individuals as well as several projectile points have also been found, indicating that some animals at the site, such as early horses and camel-like creatures, were hunted. On the other hand, the recent discovery of fossilized seeds at the Cutler site includes a now-extinct hazelnut, which suggests to Carr that a climate change may have led to its departure.

(From an article by Bruce Bower in "Science News", Vol. 132, October 31, 1987)

The Editors

CALL FOR PAPERS

Call for Papers: Fifth Annual Heritage Council Conference on Kentucky Archaeology.

Recognizing the need for a forum for archaeologists to disseminate information pertaining to Kentucky's prehistory, the Kentucky Heritage Council has undertaken to sponsor an annual conference on Kentucky archaeology and to publish selected papers presented at the conference. This year the conference will be co-sponsored by the University of Kentucky in Lexington. This dual sponsorship reflects the particular theme of the 1988 Conference, which focuses upon the significant contributions of Kentucky New Deal era archaeology towards our understanding of the prehistoric peoples of the Commonwealth and towards the development of this scientific discipline. Under the energetic direction of Dr. William S. Webb, founder of the Museum, that institution became a nationally recognized major repository of archaeological collections representing more than 8000 years of Kentucky's cultural heritage. These collections have attracted researchers in increasing numbers over the past 50 years, and the recent reorganization of pertinent documentation under KHC sponsorship has greatly enhanced their value to future scholars. The 1988 Conference will bring together a number of individuals who participated in the original New Deal era excavations at numerous sites, in order that they may share their personal reflections with colleagues of the succeeding generations who have assembled to present the results of recent research on the old collections or new data from the same sites. Though the primary focus of the conference is on the New Deal era, participants are also encouraged to present papers on other aspects of Kentucky archaeology.

The conference will be held on March 4-6, 1988. Those interested in presenting a paper should send an abstract to Mary Lucas Powell; Museum of Anthropology; 211 Lafferty Hall; University of Kentucky; Lexington, KY 40506-0024.

The Editors

TUSCALOOSA'S NEW T-SHIRT

The new Tuscaloosa club T-shirt was designed by chapter member Bill Adkison and shows the four different phases of archaeology associated with West-Central Alabama.

John Wm. (Bill) Adkison
Tuscaloosa

ALABAMA STATE MUSEUM OF NATURAL HISTORY
"SPECIAL SATURDAYS"

February 6 - Chemistry Magic

February 13 - Snakes: Facts and Fables

February 20 - Birds of Prey

February 27 - Hightower Village Dig

Admission - $1.00 for adults, $.50 for children 12 and under. For more information call the Museum at 348-7550.

The Editors

UPPER PALEOLITHIC BOOMERANG MADE OF A MAMMOTH TUSK IN SOUTH POLAND

Excavations in a cave in the Oblazowa Rock in south Poland revealed an Upper Paleolithic cultural level with an abundance of lithic and organic artifacts as well as paleozoological material. This level yielded a fragment of mammoth tusk showing the characteristic traits of a complete boomerang. This is the earliest certain find of this type of weapon in the world. The same layer also contained an adult distal thumb phalanx which represents the earliest find of human skeletal material in Poland to date. Human food debris in the cultural layer suggests that the Upper Paleolithic people inhabiting the cave hunted reindeer for the most part. The faunal complex of this cultural level is typical of the Upper Pleistocene steppe-tundra, while the artifacts belong within the complex of Central European cultures with backed points and have attributes which allow them to be grouped within the Pavlov culture dating from c. 23,000 B.P. The site might have been of importance in the course of migration of human groups with backed points from today's Moravia and southwestern Slovakia regions northeastwards to the Don river basin.

(From an article by Pawel Valde-Nowak et al in "Nature", Vol. 329, October 1, 1987)

The Editors

CHATTAHOOCHEE TRAILS

CHATTAHOOCHEE TRAILS, by Hoyt M. Warren - 166 pages, 3 illustrations. Indexed. Published 1981. Paper - $10.00 postpaid.

A documentary collection of over 100 historical features on people, places and things within many of the Alabama-Georgia counties bordering on the Chattahoochee River. These interesting articles were originally featured in The Eufala Tribune and The Cuthbert Times - News Record between 1977-1979. Subjects covered include the Indians, early explorers, political leaders, city/county histories and Chattahoochee Valley mail service.

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The Editors

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Mr. Amos J. Wright
2602 Green Mountain Road SE
Huntsville, Alabama 35803

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