LINKING TWO AMERICAS

Partially excavated preceramic deposits in Guitarrero Cave. The holes are more recent (c.2,500 yr B.P.) intrusive pits which have been emptied of their contents for excavating the earlier layers. These stacked stones in the background are walls of ceramic-age tombs along the side of the cave. (T. Lynch photos.)

Although North American archaeologists tend to speak of the "peopling of the Americas," they sometimes forget that "America" is plural. Tom Lynch, long-time specialist in South American archaeology, is acutely aware of the need to correlate archaeological information from both continents. In addition to some 20 field seasons spent in South America (Peru, Ecuador, and Chile), Lynch has worked in Spain, New York, California, Idaho, and the southwest U.S. He is the author of numerous publications, many dealing with the archaeology of South America.

His interest in the past developed at an early age. His father, he says, was a history buff, and his mother the family historian. As a boy growing up in the 1950s, he and his family frequently attended archaeological lectures at the University of Minnesota. Following his graduation from high school, Lynch entered Cornell University as a geology major. He quickly decided that the anthropologists were "much more open-ended" in their approach to the problems that interested him, and subsequently changed majors. Graduating with a double major in anthropology and sociology in 1969, Lynch went on to the University of Chicago, where he received a Ph.D. in 1967. He is currently on the faculty of Cornell University.

Although Lynch's archaeological experience is by no means restricted to South America, it is obvious when speaking with him that this area of interest is his first love. His enthusiasm for the culture and peoples of South America, as well as the archaeology, is evident. This, Lynch calls, the "Anthropological Effect," stating, "We are sometimes at odds with our own culture, and feel more at home somewhere else."

Lynch's involvement with South American archaeology began while he was still an undergraduate. Arriving in Peru to work with Alan Hemborg, a Cornell University professor engaged in an applied anthropology project, the young Lynch found that he preferred working with the past rather than the present cultures. After one season of ethnology, he was put in charge of seeking early human sites in the area.

Lynch later returned to Peru for several years. At this time, most of the archaeological work there was being done by North American scholars, a period which Lynch terms, "a great flurry of North American activity."

One of the most important sites excavated by Lynch during his stay in Peru was Guitarrero Cave, a site which produced wood, textiles, baskets, and even food remains, in addition to the usual lithics. Unlike many South American sites which lack or contain only poorly associated organic, the abundance of dateable material in Guitarrero Cave allowed for a series of reliable dates. These dates, which fall consistently into the 10,000-11,000 yr B.P. range, indicate that Guitarrero Cave may be one of the earliest known South American agricultural sites.

With the passing of the 1960s, it became increasingly difficult for foreign archaeologists to work in Peru. North American scholars branched out into other countries, and Lynch moved on to Ecuador for a brief period. He then found himself in northern Chile at the invitation of Lautaro Núñez and Agustín Llagostera, affiliates of the Universidad del Norte. While in Chile, Lynch ran a field school for students from that university and Cornell.

A growing nationalism over the last two decades, which Lynch describes as "academic as well as political," has made South Americans increasingly aware of the importance of training their own archaeologists, rather than simply accepting the answers provided by Europeans or North Americans.

As the numbers of native South American professionals have increased, the changing role of visiting North American and European scholars is evident. Although foreign archaeologists are still welcomed on the South American continent by native professionals, the

(Continued on page 5)

MANIS MASTODON SITE REVISITED

In August, 1977, on the Olympic Peninsula of the state of Washington, Carl Gustafson, Associate Professor of anthropology from Washington State University, leaned over, picked a fragment of mastodon rib out of the black mud of a bog, and "felt a bump that didn't belong there." The rib fragment was covered with black bog matrix, "miserable stuff," as Gustafson describes it, in which he had to stand nearly hip deep to excavate what has come to be called the Manis mastodon. "So," as he remembers, "I just stopped and washed that off. There was a piece of—in my notes I think I called it 'foreign bone'—embedded in this rib."

This was during his first visit to the Manis site, which began as a salvage investigation.

"At this point we just shut the whole thing down and took stock of what we were going to do. Because this thing that was stuck in the rib looked for all the world like it might have been a bone projectile point."

Now, an indication that humans had been hunting mastodons would be interesting anywhere in North America because it is evidence of human antiquity: mastodons died out somewhere around 10,000 years ago. It would be additionally remarkable because, although we have plenty of knowledge that humans hunted mammoths, there has been, for some reason, little evidence north of Mexico that humans hunted their smaller relative, the mastodon. But such a discovery would be most exciting of all in the Pacific Northwest, where it would represent "far and away the oldest material that we have, going back to about 12,000 years ago."

Archaeology is part of the study of humanity by itself, and it is not surprising if it opens out, at least momentarily, into other dimensions. One ponders how little, yet how much, it takes to alter the course of a life. How little, because Carl Gustafson has been excavating and lecturing about the Manis site for ten years now, though he has been without major funding since 1979, and all because of a piece of bone or antler embedded in a mastodon rib that he has been compelled to brood upon like Hamlet over Yorick's skull. And yet how much, for the chances against his having picked up exactly that piece of mastodon rib fragment are enormous.

There is plenty of corroborating evidence for human association with the Manis mastodon, beginning with the analysis of the piece of embedded bone or antler itself. X-rays taken at the Wallace Hams Group Laboratory near Seattle showed that the object

(Continued on page 3)
KEEPPING PACE WITH THE PAST

What are the sources of multidisciplinary information about the early peopling of the Americas? With so much being discovered and reported, there are now numerous publications in which to search. There are specialist journals of the various Quaternary disciplines (archaeology, geology, and paleontology, etc.), many society and academy journals, monographs, and books. Current Research in the Pleistocene (CRP) is continuing to fill an important role through its timely publishing of a wide range of information in a single source. By using an extended abstract format with illustrations and references, we are able to publish an ever-increasing number of papers from researchers. This issue of CRP, volume 4, has almost doubled in size from last year, and includes 74 papers from eight disciplines.

The quick turn-around time (five months) for each volume makes the information immediately useful to others doing related research. To do this, CRP must be focused, yet flexible. It is focused in its scope: articles relate to the Pleistocene peopling of the Western Hemisphere. It is also flexible: it has expanded opportunities for communications in specialized areas through the adoption of a Special Focus section. This year the focus is on South America.

The request for information about the Quaternary, in all its varying details, is enormous. And growing! Adequate dissemination of this information requires that almost everyone, not just the big libraries, be able to afford their own copy of CRP. We have streamlined CRP to get you the most for your money. The journal’s ultimate success, however, lies with you. It is the contributors to and readers of CRP that keep it going. CRP 4 (1987) is going to press this month and will be in the mail by July. We want to hear from you, to know how you like CRP, and how we can best serve you.

—Jim I. Mead

ARCHAEOLOGICAL SOCIETY UPDATE

The Center has contacted the following groups to establish a network of local archaeological societies to help keep us informed of Paleoindian research in their areas. If you belong to an archaeological or anthropological society that is not listed below, please get in touch with us. For starters, we would like the name and address of the society president so we can send him/her a survey. Any help you can give will be greatly appreciated. We would like to thank the following societies for taking the time to respond.

Alabama Archeological Society
Alaska Archeological Society
Arizona Archeological Society
Colorado Archeological Society
Delaware Archeological Society
Florida Anthropological Society
Idaho Archeological Society
Illinois Association for Advancement in Archaeology
Indiana Archeological Society
Kansas Archeological Society
Loveland Archeological Society
Maryland Archeological Society
Massachusetts Archeological Society
Michigan Archeological Society
Mid Columbia Archeological Society
Middle Cumberlnd Archeological Society
Mississippi Archeological Society
Missouri Archeological Society
Montana Archeological Society
Nebraska Archeological Society
New Mexico Archeological Society
North Carolina Archeological Society
North Dakota Archeological Society
Ohio Archeological Society
Oklahoma Archeological Society
Oregon Archeological Society
Pacific Coast Archeological Society
Pennsylvania Archeological Society
South Carolina Archeological Society
South Dakota Archeological Society
Texas Archeological Society
Utah Archeological Society
Vermont Archeological Society
Virginia Archeological Society
Wabash Valley Archeological Society
West Virginia Archeological Society
William S. Webb Archeological Society

SUGGESTED READINGS—

On Linking Two Americas


On the Manis Site


On the Sandusky Site


On Difference between Mammoths and Mastodons


ATTENTION MEMBERS

The Center for the Study of Early Man has reapplied for a major grant from the National Endowment for the Humanities Challenge Grant Program. The purpose of the grant is to launch the development of a humanities-based public education effort. This effort has several components, including establishment of a Textbook Publishers Resource Service (TPRS). The goal of the TPRS is to improve the coverage of prehistory in textbooks at the primary and secondary school level. A second component is the development of a newspaper for middle school-age students, modeled somewhat on the Mammoth Trumpet, but including a teacher’s supplement. This paper will be called the Ice Age Times.

How can you help? In two ways. If you are a teacher who is involved or interested in bringing archaeology into the middle school (grades 5-8), please let us know who you are and your needs.

Secondly, your gifts can help. If we receive the Challenge Grant ($100,000 spread over three years), we are required to raise a matching $300,000 dedicated to these humanities programs. The grant, if awarded, is retroactive in terms of when the matching money may be raised. Thus, money raised now may be applied as match.

Please help us meet the NEH challenge! As you know, our nation’s children, as well as the general public, know very little about our prehistoric heritage. The Center is in a position to make a difference with your support.

If you are able to help, please indicate that your gift is intended to meet the NEH challenge. Thank you.

NOTICE TO OUR CUSTOMERS

We anticipate that our prices will be going up in July. The current price structure will remain in effect for all orders postmarked before July 1, 1987.

MAMMOTH TRUMPET

The Mammoth Trumpet (ISSN 0182-2498) is published quarterly by the Center for the Study of Early Man, University of Maine, 495 College Ave., Orono, ME 04473. Applications to mail at second-class postage rate are pending at Orono, ME. POSTMASTER: Send address changes to the Mammoth Trumpet, 495 College Ave., Orono, ME 04473.

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A fragment of mastodon leg bone. The negative flake scar (top) indicates the point of impact on the external surface of the fresh bone, which resulted in the diagonal "spiral" fracture of the bone. (Photo courtesy of C. Gustafson.)

tapered to a point inside the rib, where it had penetrated about three quarters of an inch. Dr. Martin Walker diagnosed the wound as a typical penetration fracture, definitely made while the mastodon was still alive and not a freak product of the backhoe that had originally dug up the bone itself, because the ribs are nearly healed around bone or antler for at least 3-4 months and possibly for as long as a year. It was definitely not the cause of the animal's death, which may well have been simple old age. The Manis mastodon was an artritic old fellow with highly worn teeth which was about 45 years old by African elephant standards.

Gustafson's field crew proceeded to excavate, excited by the probability this was an early archaeological site. They quickly discovered that they were at first excavating only half a mastodon—and not only that, but excusally speaking, the wrong half. The mastodon had died from the right side, but the right-hand side should have been lying topmost; yet those bones were not yet dug up. Gustafson decided to look for a more accessible area. The field crew imagined that if Pleistocene people had butchered only the right side of the mastodon and abandoned the left, they would probalbly have carried the meat and bones a bit northward. Sure enough, excavation about 2 m away produced the bones of the right side—not properly aligned like those of the left, but broken, scattered, and scored; as is the top portion of the carcass had indeed been butchered.

Subsequent pollen analysis by Peter J. Mehlinger, Jr. and Kenneth Petersen suggested that the general area of the Manis site was found included patches of marshy, pond-like vegetation, particularly cattails. Reasoning that such an area would have been too low and wet for a camp, Gustafson decided to look for a higher ground—that is, on the ancient landscape. To do this, sediment cores were gathered about every 2 meters in a fan-shaped sample. About 25 m from the fallen mastodon they discovered that the ancient land surface sloped rapidly upward to a suitable camp area. Here, a shallow trench was excavated by backhoe and the ancient material adjacent to the trench (including the slope) was carefully removed, beginning with the marker horizon of volcanic ash known to have been deposited 6,700 yr B.P.

Beneath the ash layer they discovered a broken bison skull slightly downslope from a deposit of three charcoal lenses, the largest of which was about 2 m x 1.5 m. Associated with the lowest charcoal lens were three bones, including a large radius and a small left ulna. The radius was charred, burnt ends and a piece of the distal epiphysis (lower limb bone). Both the skull and the metapodial were found on the Pleistocene gravel surface.

The next task was to connect the feature on the knoll with the main site area, mentioned at the beginning of this investigation. They discovered that the gravel surface was overlain by underlying sediments, both features were very slow to accumulate sediment, and that material found on that surface could have been deposited anywhere between about 12,000-10,000 years ago. Thus, although both site areas dated to the end of the Pleistocene, absolute contemporaneity could not be demonstrated.

From 1963 to 1965, lacking further funding, Gustafson and his son, Bradley, returned without a crew to excavate an area where evidence of a second mastodon had been found back in 1979, about 10 m
Interview with Richard Leakey

"THE ETERNAL LANDSCAPE OF THE PAST"

Richard Leakey was the keynote speaker at a conference organized by the Center for the Study of Early Man and held recently at the University of Maine. What follows is an interview with Mr. Leakey held at that time, in which he discusses his vision for and role in developing national awareness and support for understanding the earliest human inhabitants of Kenya.

R.L. When I joined the National Museum in Kenya in 1969, it was just the single facility in Nairobi. It was very small. It was in part a research collection in Kenya being modernized so that youngsters can learn more about their own country. Instead of using examples from the standard western textbooks, in Kenya we're using examples taken from our own resources, and this is having a big impact on how people see themselves.

M.T. Could you talk about the history of the Kenyan National Museum, particularly its public education function?

R.L. Well, I think it different, because in Kenya the indigenous people run the country. Here the foreigners run the country, and it's turned things around very much so.

M.T. But this wasn't always the case in Kenya.

R.L. Well, no but it's been the case since I've been involved, and I don't think much of the work that we're doing in the earliest stages of humanity could ever be construed as relating to the present-day, living people. Indeed, I think many of the contemporary Kenyan leaders treat evolution rather as a legend anyway. They're not at all sure that it applies, and there's a certain distancing from it, so . . . we don't have those sorts of problems. Amongst the younger people, the intellectuals, there's a great deal of national pride built around the fact that a man as a species probably arose in Africa. The second that, if you will, "Cape Kennedy" of paleoanthropology is in Kenya, and the center of exploration into man's origin is now focused in our country. We have a world resource, we have a top-flight museum, and the vast majority of people involved are, in fact, nationals of the country. There are very few foreigners doing this work in Africa.

R.L. Well, I think its different, because in Kenya the indigenous people run the country. Here the foreigners run the country, and it's turned things around very much so.

M.T. Do you focus on regional history or prehistory?

R.L. The focus is really on Kenya. We have ecology, we have history, we have history of the Kenyan people, we have prehistory, geology, ecology. And they're really exhibits that are designed around the country and the country's own resources. We don't have any exotics. We don't attempt to introduce other country's ideas at all, but we do provide a very strong support for teaching. It works extremely well.

The other part of the museum, of course, is the research, and we have a very strong research component, not just in human origins and in archaeology, but in entomology, mammalogy, geology, and botany. It really could be likened to a small university. We have a variety of formal programs, a horribly large research budget, in which a good number of Kenyan scientists are engaged. And part of the benefit of this has been developing new materials for the teachers to put back into the schools. In the past, in other words, much of Kenyan education had been based on the colonial experience. But as we move forward now, the curriculum is in no way abused or cheapened. And I think it works extremely well. Our antiquities ordinance, I think, is a model for many parts of the third world.

R.L. It's unusual to have such a popular support for what is perceived by many to be an academic area.

M.T. What is the impact?

R.L. I think the impact, really, is a growing awareness in Kenya amongst young people about their own country and about the role of their own country in development. These are big, big issues.

M.T. In this country we have what might be viewed as a problem where the aboriginal people are not necessarily the people doing the research, and people who are doing the research and the bulk of the general public, don't necessarily recognize aboriginal America as their heritage. Do you have some experience that is comparable?

R.L. Well, I think its different, because in Kenya the indigenous people run the country. Here the foreigners run the country, and it's turned things around very much so.

M.T. But this wasn't always the case in Kenya.

R.L. Well, no but it's been the case since I've been involved, and I don't think much of the work that we're doing in the earliest stages of humanity could ever be construed as relating to the present-day, living people. Indeed, I think many of the contemporary Kenyan leaders treat evolution rather as a legend anyway. They're not at all sure that it applies, and there's a certain distancing from it, so . . . we don't have those sorts of problems. Amongst the younger people, the intellectuals, there's a great deal of national pride built around the fact that a man as a species probably arose in Africa. The second that, if you will, "Cape Kennedy" of paleoanthropology is in Kenya, and the center of exploration into man's origin is now focused in our country. We have a world resource, we have a top-flight museum, and the vast majority of people involved are, in fact, nationals of the country. There are very few foreigners doing this work in Africa.

"I think one should focus on the international heritage, on the fact that there were many cultures and many peoples that are now lost, for all intents and purposes, to the world."

There's a great deal of interest in what will be found. We are dealing with a population in Africa that's been very transient. People in Kenya today probably came into the area from other parts of Africa over the last 500 to 600 years. There's a great deal of interest in Africa about the origin of the language groups and tribal relations and that sort of thing. This work is perceived as very constructive, understanding the heritage of the country.

None of our fossil material, none of our artificial material, leaves Kenya. We've got very strong orders. Everything is kept in the country. Nobody can undertake any excavation or any search procedures without a license from the government. The licenses are strictly designed to insure that the fossil heritage

R.L. I think one of the things that would be very nice to see in this country, somewhere, would be a very large exhibition, as they have in Mexico, depicting the richness and the state of this continent at the time of European contact, and to use that exhibit to demonstrate the ghastly destruction, the pillage, of this whilst dealing with history. I think that one could in that way engender a public pride in what has been and a public shame in what happened. I think a lot of the constructive elements in society in the United States wouldn't necessarily encourage such a depiction, but I think it would be a legitimate way to try and broach some of the issues that have to be faced in the country, and ever present the archaeology of this continent in the light that I think it should be.
Excavations at the Quisqui Punco site 25 km southeast of Guatirimurro Cave. These are but two of many preceramic sites located so far in the Callejon de Huaylas, a high river valley between two mountain ranges in west-central Peru.

(Continued from page 1)

relationship has become a much more equal partnership. Outside scholars are no longer the sole sponsors or initiators of projects, but are instead participants in locally organized excavations. Lynch suggests that northern archaeologists may be particularly helpful in correlating and synthesizing information between the various South American countries, although the role too is beginning to pass to South Americans.

Accompanying the numerical increase in South American archaeologists is an ever-increasing amount of excavated material. Lynch emphasizes there is a current necessity for U.S. journals to open up their publications to South American submissions. At present, potential articles are often rejected by publishers because of format or language barriers. Lynch stresses, however, that the wealth of new information pouring out of South America today makes it imperative that these problems be overcome. Unlike 20 years ago, when the number of excavations in South America was small enough for U.S. scholars to easily keep track of what was going on, it is now impossible for professionals to remain abreast of the new South American discoveries unless these discoveries somehow find their way into the Northern literature. "Communication," Lynch emphasizes, "is the key."

"There are both pros and cons of working in South America. While in terms of absolute dollars, South American archaeologists have far fewer resources, state-run universities are often more supportive of research faculty than their northern counterparts. Vehicles, equipment, time, and even labor are often placed at the disposal of researchers. In addition, the growing academic nationalism of the South American countries ensures greater interest and cooperation by the local populace. On the other hand, there is frequently a shortage of university funding for scholarships, analysis, or even libraries. Unlike the U.S., private sources of funding are few. However, Lynch retains an optimistic view of events, suggesting South American archaeology is "in a period of expansion."

Lynch is currently involved in two ongoing projects in Chile, run in conjunction with the museum of the Universidad del Norte in San Pedro de Atacama. The first is a survey of the Punta Negra drainage basin in the Atacama Desert in the Despoblado of northern Chile. The project has potential for extensive pre-Clovis materials, and work of this kind may have to be discovered in this locale, the recovery of "early to Archaic" artifacts leaves Lynch hopeful about the possibility of finding evidence of pre-Clovis peoples, were they in the area. Like many of his North American colleagues, Lynch's major focus is on New World entry dates, early adaptations, and paleoenvironmental studies.

For variety, Lynch is also involved in the excavation of Catara Tambo, an Incan administrative center. Since 1983, he and the Museo Arqueologico Le Paige have run an international field school at this site.

brought the possibilities of what could turn into firewood into caves... yet will date to the time at which the trees died. There are so many of these complications."

What will pre-Clovis evidence in the New World look like if and when it is found? Lynch postulates that such an assemblage will be similar in form to Siberian Palaeolithic materials. Particularly probable is a well-developed stone tool technology. Blades produced from prepared cores, end and side scrapers, some bifacial workmanship, and chopper and pebble tools will likely be in evidence. Bone tools, such as needles, awls, and shaft straighteners are also to be expected. Other possible material items include netting, baskets, and various wooden tools.

Overall, Lynch is somewhat skeptical that an early entry date will eventually be proven for the appearance of humans in the New World. He points out that, despite the wealth of sites which have been excavated to date in both North and South America, none has yielded incontrovertible evidence of early entry. While conceding that some sites remain possibilities, he maintains that as a growing number of such sites is rejected, the statistical probability that there was a pre-Clovis occupation decreases. "As the certain occupation around 12,000 years ago becomes better known, the whole process looks very sudden. We have had... (before this time) are a lot of possibilities that don't fit together in a coherent way."

How was this process when? Lynch also notes that when early New World sites are plotted as a whole on a time line, there is a changeover within a few hundred years from almost no dates to increasingly dense clusters. Interestingly, the cluster of early South American dates lags approximately 500 years behind the bulk of the North American Clovis dates.

While the similarity of the North and South American Clovis dates seems to suggest an almost unbelievably rapid spread of humans throughout the New World, Lynch contends that such a sweep is feasible. Resources, he claims, would have been sufficient to support a relatively high population growth, while groups would have been small enough to allow for effective migration. As Lynch proposes, "They came fast because they were not settling. They were looking for unspoiled game in the next valley over, on a generational or annual basis."

Given herds of unwary, gregarious game animals and a human population ignoring all but the choicest of environments, Lynch sees no reason why a movement from North America to the end of South America need have taken over 1,000 years. A somewhat analogous situation, Lynch suggests, may be one which occurred in historic times, when European fur trappers moved across the North American continent and decimated the beaver population in a few centuries. An enthusiast of a somewhat modified version of Paul Martin's extinction hypothesis, Lynch views the North and South American Clovis as a period of "fluorescence based on easily hunted animals." Although he says this big-game "honeycomb" proved ultimately unsuccessful because of the extinction, "it did work to move some people tremendous distances over not so many generations."

As in North America, the story of the early peopling of South America is still unfolding. As work on the southern continent continues to progress and the archaeological puzzle pieces fall into place, it is a certainty that Tom Lynch will remain an integral figure in bridging the information gap between North and South.

— Karen Turner
NEW REFERENCES AND RESOURCES

ARTICLES


Cahill, Tim 1987 Going Native: Cutting up with the Rock Doc. Outside February 21-23.


SUMMER STUDY AND FIELD WORK OPPORTUNITIES

The Institute of Archaeology at the University of London has announced their 1987 Summer School programs. These are short courses, normally five days, held in June and July at the Institute in London, England.


Courses in conservation include: Restoration of Glass Vessels, Glazed Pottery/Porcelain Restoration, and Information About Foils.

Bibliographies specific to certain disciplines are very hard to come by, especially on a regular, up-to-date basis. Occasionally, regional and specific bibliographic surveys are printed "once in a lifetime." These are invariably excellent data sources, but in a few years become outdated.

Probably one of the most comprehensive systems of bibliographic entries for a specialist field is in the Society of Vertebrate Paleontology's annual Bibliography of Vertebrate Fossils (BFV). This provides a one-source publication of articles in vertebrate paleontology for the year. It is updated and published once a year. At a certain point in geologic time, the study of humans drops from anthropology (sensu stricto) and fades into the realm of vertebrate paleontology, or better yet, the two merge to a common ground. Thus, the BFV is also an excellent resource for the human osteological literature.

How does one obtain a yearly copy of the BFV?

One way is to become a sustaining member of the Society of Vertebrate Paleontology (SVP) and the second is to convince your departmental or institutional library to obtain a standing order for the BFV. As SVP members will tell you, this updated resource is expensive, but very rewarding and extremely important for this day and age of multiple publications. For information about the Society of Vertebrate Paleontology's bibliography contact Jim I. Mead, (Department of Geology, 6300, Northern Arizona University, Flagstaff, AZ 86011).


REPORTS, JOURNALS, DATA BASES


EXHIBITS

April 5 - June 30, 1987

The New England Science Center in Worcester, Massachusetts has a special exhibit entitled Mammoth Man - 200 Million Years of Our Prehistoric Past. Craft activities for children and continuously playing video tapes along with dinosaur puppet shows are some of the events for further information please call their Dino-hotline: 617/791-9215.

*New materials received by the Center library.
CONFERENCES

The Human Story: Bringing Prehistory to Life

The Center for the Study of Early Man (CSEM) under the direction of Richard Leakey's recent visit to the University of Maine as a Distin-
guished Lecturer with a full weekend of archaeo-
logical events. One mandate of the Center, as Mam-
moth Trumpet has always been, is to commu-
nicate information about the peopling of the Americas and our human ancestors to the public. This event which interfaces between science and the humanities, represented the Center's first major at-
tempt to do this in a conference format.

Over 200 people representing the general pub-
lc, teachers, archaeology buffs, and scholars gath-
ered Friday afternoon, February 20, 1987 to attend the conference, "The Human Story: Bringing Pre-
history to Life." They were treated to nine slide lect-
tures, four travelling exhibits, three workshops designed for teachers, Native American presenta-
tions, and a video festival. Richard Leakey lectured Sunday afternoon, February 22nd, to a standing-
room only crowd of over 1,700.

Following the performance of "The Maine-
Maritimes Melt" played by french hornist Harrison Roper, on the newly-created "mammoth trumpet," members of the Institute for Quaternary Studies set the stage for the human story. Glacial geologist and Institute Director Harold Borland led the audience through the retreat of the glaciers in the Northeast. Paleoclimatologist Ronald Davis then illustrated the dramatic changes in the vegetational communities, laying the groundwork for CSEM director Robin Bonnichsen's presentation on archaeology, "Ice Age Colonization of Northeastern North America." This suite of presentations demonstrates the importance of a multidisciplinary approach in the holistic re-
construction of the past; such an approach is the hallmark of the Institute of which the Center is part.

The Ceremonial period of the Maine Maritimes area were the focus of slide lectures by David Sanger (University of Maine), Christopher Turbitt (New Brunswick Archaeology Branch), James Petersen (University of Maine, Farmington) and Bruce Bourque (Maine State Museum).

Dennis Stanford, Director of Paleoindian Pro-
grams at the Smithsonian Institution, challenged the audience by asking how the fluted point toolkit, which is essentially the same from Alaska to South America, from California to Maine and which differ from any toolkit found to date in Siberia could have spread to these far-flung areas of the Americas within just a few hundred years, for that is what appears to have happened.

Then Stanford jumped into the controversial question of possible pre-Clovis (pre-fluted point) cultures in the Americas, stating that there were 94 such "sites." He quickly added that each one is challenged by some expert or other on either dating, artifacts, or context—or all three. Via slides he took us to the shores of the Great Lakes, sites where bone tools were excavated, and told his questioners he believes there were humans living in North America before the Clovis—he just can't prove it yet beyond a shadow of a doubt. Flaked bone evi-
dence is one of the major factors leading Stanford to this position.

Thomas Lynch from Cornell University then took the podium and firmly restated that no sites exist in the Americas dating to earlier than about 15,000 years ago. He claimed that the cave shelters discovered in Brazil, some with cave art and recently dated to more than 30,000 years ago, may have been improperly dated. Likewise, Lynch believes, the ar-
tifacts, "All the fauna is modern. There is no ex-
tinct fauna. The site is probably late Paleoindian," he said. Because of coal deposits in the area which could have contaminated the ground water and therefore the C14 dated samples, Lynch calls for scientific testing of the ground water.

Three well-attended workshop sessions for teachers were held Saturday morning. English pro-

ductor Kirk Vaughan and high school teacher David Cook linked storytelling and literature to the pro-
cess of prehistoric reconstruction in their session "Starcking the Evidence: A Nova Scotian ethno-
historian Ruth Whitehead shared films and ethnog-

draphic details of Micmac life in her workshop "Singing Songs to Stones: Examining Native World Views." It is a third workshop teachers learned how to present archaeology of the region to students from State Historic Preservation Officer Arthur Spiess and museum specialist Diane Kopeck.

Penobscot and Passamaquoddy educators Theodore Mitchell and Wayne Newell noted that when the Europeans came to this area there were clear streams and a pristine environment, even though people had lived here for thousands of years. After 400 years is that still true? Native Americans have an important message about atti-
tudes toward the land and its gifts to impart to non-
Natives. Newell spoke of the role of the "survivors" of the Native American heritage and of the need for intercultural understanding as we face the future together. Linguist Robert Leavitt illustrated how world view is both created and reflected in language.

The excitement and crowds escalated as the time of Richard Leakey's lecture approached while waiting for the auditorium doors to open, the at-
tenders could view some of the outstanding artifacts and displays of the CSEM collections, directed by Richard Emerick and housed in the new Maine Center for the Arts on the Orono campus. Traveling exhibits about local prehistoric peoples included "Early Peoples in Northern Maine" produced by the CSEM, "The St. Croix - An International Heritage River" produced by the New Brunswick Archaeol-
ogy Board, and "Active Archaeology in Maine: Five Mini-Exhibits" with contributions of slides and texts by area archaeologists. In addition, an exten-
dive display of fossil hominid remains and glimpses of all the famous sites from Africa — was there cour-
tesy of Carolina Biological Supply Co.

The Center wishes to thank all the archaeolo-
gists and other researchers who contributed to mak-
ing this conference a success. The conference was funded by a major grant from the Maine Humanities Council. Other contributors were the Maine Historical Society and the Canadian-American Center of the University of Maine.

--Marjory Roper

UPCOMING CONFERENCES

June 3-6, 1987 LATIN AMERICAN INDIAN LITERA-
TURES V INTERNATIONAL SYMPOSIUM, Cornell Univer-
sity, Ithaca, NY.

Contact: Dr. Richard N. Lustig, LAILA/AIILA Symposia Chairman, P.O. Box 106335, Ithaca, NY 14850

July 31-August 5, 1987 XII CONGRESS OF THE INTER-
ATIONAL QUATERNARY UNION (INQU), Ottawa, Ontario.

Contact: Dr. Allen V. Morgan, Department of Earth Sciences, University of Waterloo, Waterloo, Ontario, Canada N2L 3G1, 519/885-1211, or K. Barchetta, National Research Council of Canada, Ottawa, Ontario, Canada K1A 0R6, 613-951-9999.

August 1-3, 1987 FLINTKNAPPING WORKSHOPS, Lynch-
burg, VA.

Short workshops in flintknapping. August 1-2 basic flintknapping designed for beginner. August 3-7 open to knappers of any skill. August 8-9 Master Class for advanced knappers. A fee of $25 covers the cost of materials. Contact: Dr. Erren Callahan, Cliffridge, 2 Fredonia Avenue, Lynchburg, VA 24501, 703/352-5343.

August 9-22, 1987 THE PHYSICAL BASIS OF ICE SHEET

MODELING, Vancouver, B.C., Canada.

Contact: E.D. Waddington, Geophysics Program AK-50, Uni-
versity of Washington, Seattle, WA 98195.

September 9-12, 1987 INDOS-PACIFIC PREHISTORIC ASSOC-
IATION ELEVENTH AGLOMENON ARCHAEOLOGY

CONFERENCE. Abstracts and papers due June 1, 1987. Contact: R.L. Hunter-
Anderson, WEBS, University of Guam, Mangilao, GU 96922.

October 22-25, 1987 NINETEENTH ALGONQUIN CON-
FERENCE, Museum of Natural History, Smithsonian Insti-
tution, Washington, DC 20560.

Contact: Ivan Goddard, NOH Rm 85, Smithsonian Institution, Washington, DC 20560.


Contact: Conference Committee, Department of Archaeol-
ogy, University of Calgary, Calgary, Alberta Canada T2N 1N4.

November 16-18, 1987 AMERICAN ANTHROPOLOGICAL

ASSOCIATION, 86th Annual Meeting, Chicago Marriott, Chicago, IL.

Contact: Victor Golla, George Washington University.

SPECIAL OFFER FROM THE SMITHSONIAN

The Arctic Ocean and Its Coast in the Cenozoic Era

A.I. Tolmaskyev, editor

This volume is concerned with problems of the origins, evolution, and paleogeography of the Arctic Ocean and its coast during the Tertiary and Quaternary periods. Much emphasis is placed on the evolution of modern Arctic flora and fauna, both terrestrial and marine. These problems are discussed on the basis of hydrogeological, paleon-
tological, biogeographical, climatological, and ar-
citectural data presented at the Alutiiq Symposium on the Cenozoic History of the Polar Basin and Its In-
fuence on the Development of the Landscapes of the Northern Territories, held in Leningrad in 1986. This is a unique encyclopedia on the Arctic, both in scope and subject. It presents information seldom available in the West that has a direct bear-
ing on research regarding the early peopling of the Americas. It will be of interest to many researchers — geologists, geographers, biologists, archaeologists, and all who deal with the problems of the geology, biology, and paleogeography of the Northern Hemisphere. Originally printed in Russian in 1970, this book has recently been translated into English and publish-
ed by the Smithsonian Institution Libraries in cooperation with the Nelson Science Foundation with funds made available by the Foreign Curren-
cy Program. Through special arrangement with the Smithsonian Institution, the Center for the Study of Early Man has obtained a limited number of copies of this book, which we will distribute on a first-come, first-served basis while supplies last. The book itself is free. You pay only the shipping and handling charges listed below. Inside U.S.

- 2,000, U.S.A.: $5.00, Mexico: $7.00, outside North America: $15.00 — per book.

To order, multiply the number of books ordered by the shipping rate to their destination and make checks for that amount to the Center for the Study of Early Man, 405 College Avenue, Orono, ME 04473. Include your name and shipping address. Please allow 6-8 weeks for delivery.
(MAMMOTH BRIEFS)

Yan Jiagui (Xian Mine College) and Huang Weiwen (Institute of Vertebrate Paleontology and Paleoanthropology, Academia Sinica), China, report the discovery of a Paleolithic industry which includes stone bifaces. The Liangshan site consists of five terraces along the southern end of the Hanzhong Basin in the Dabashan mountain range. The Han River, largest tributary of the Yangtze, flows from west to east nearby. To date approximately 1,000 artifacts have been found both in the sandy gravel of the terraces and on the surface of nearby hills. Many associated mammalian fossils have also been found nearby, including Stegodon orientalis (stegodon), Algouramia melanoleuca (panda), Rhinoceros sinensis (rhinoceros), Macrurusb munice, Cervus sp. (red deer), and Babalus sp. (water buffalo).

The artifacts are of a typology and technology similar to assemblages found in South China and the Korean peninsula, but also to the Oldowan in East Africa. The primary difference between Liangshan and the latter is the lack of burins and awls at Liangshan.

The artifacts themselves consist of quartz cobbles, volcanic rocks, and local quartzite and include axes, knives, “tools,” and debitage. Choppers, hemmers, and picks are made primarily by using a bipolar split-cobble technique, while scrapers, points, chisels, and some choppers are made primarily “flake” tools.

Yan and Huang feel the importance of this site lies in the similarity of the assemblage to “western” assemblages. "When we view evidence from the Old World objectively, it is hard to divide the Lower Paleolithic into two mutually exclusive cultural spheres, a Western hand-axe tradition and an Eastern chopper-chopping tool tradition, as had been previously theorized [by Movius]. To the contrary, the cultural gap between East and West is disappearing more with each new discovery, and the Liangshan industry is one of these discoveries.

(Continued from page 2)

MAMMOTH TRUMPET

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(Continued from page 2)

MASTODON SITE

(Continued from page 3)

to go around this, Daughter managed early on to get it on the National Register of Historic Places, after which the State Office of Archeological and Historic Preservation came up with funds matched by the federal government. In the meantime, there was a small grant from the National Science Foundation provided for equipment. In recent years, however, except for a small private donation, the Manis site excavations have depended on the determination and help from volunteers and students.

Yet the most poignant lesson in this decade-long odyssey is the nature of science. It is infuriatingly appreciated that such lengths of time are required for the sort of interdisciplinary, meticulous, and thorough investigations that will, in the end, give us some answers.

The Manises have closed the site to the public and are trying to go on with their own lives. The original digging area has been reburied, filled with sediment again. And Gustafson has left part of the site intact for the future. The left portion of the skull and most of the bones of the animal's right side remain in situ, available should someone need to uncover it again. "With my kind of luck," he grumbles, "there's probably a projectile point or something lying underneath it."

It is the maddening inconclusiveness of the evidence that has kept Gustafson revolving around the site for a decade: the case is probable, but just not certain. "If Mother Nature is fooling us, and making this look like an archaeological site when it actually isn't, I think it behooves us to study that as well. Because, if this is the case, we've been fooled now since 1977. On the other hand, if it's really archaeological material, it's important. It's right at a borderline in time, between 11,500 and 12,000 years ago, that these events occurred. Consequently, it's an important transitional site, at a transitional time period. There are not stone artifacts associated with it; so we're dealing entirely with pieces of bone and tusk modified in a way that I can't explain without invoking humans."

—Michael Dolan

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Readers of Mammoth Trumpet are asked to discuss questions about the delivery of forms of life in the New World. It may surprise them that similar questions arise also in the Old World: they concern the time of arrival of humans on islands, and in particular on Sardinia.

During the Pleistocene, the Mediterranean islands had only a few species of mammals; their small number was, however, compensated for by their strange- ness, e.g.: dwarf elephants, small cervids with very short limbs, bizarre boids with ever-growing incisors, and hippos adapted to mountain niches. The model proposed by Dr. P.Y. Sondaar of Utrecht University suggests the forerunners of these strange animals reached the islands by swimming. Once there, they were at liberty to adapt to their new environments without being bothered too much by predators because carnivores and humans usually did not colonize the islands before the Neolithic period. In consequence, herbivores reduced their size, probably for food-economy, and acquired a sure-footedness for the uneven ground of mountainous islands, instead of keeping large dimensions or running fast limbs to discourage or escape predators. When humans and their domesticated animals eventually reached the islands, about 1,000 years ago, the large animals were no longer able to compete or defend themselves and they all vanished.

Among the many islands excavated by P.Y. Sondaar and his team for more than 10 years, Sardinia appears to be an exception: The Pleistocene endemic deer of Sardinia is not small, nor has it lost the running proportions of its limbs. Could it be because of the presence of some large predator exerting pressure on the deer population, maintaining it in the "usual" anatomical and functional pattern? The Pleistocene fauna of Sardinia did contain a carnivore alongside the deer, namely Cynothereus, a small kind of canid. But now, new evidence points to the influence of a much larger predator: humans ... not Neolithic humans as on the other islands, but Paleolithic humans.

In northeastern Sardinia there is a cave composed of a suite of four large halls. The cave was used as a shelter by turn-of-the-century bandit Corbèddu, and is named after him. It had also been used in the Bronze age, and during the Neolithic, as shown by the studies of Dr. Mario Sanges, from the Museo Civico Speleo-archeologico di Nuoro. But it seems more and more certain that humans were also present there even earlier. As we have already seen, the first evidence is ambiguous. The Pleistocene deer of Sardinia could have kept its usual "continental" build because of predation by the small canids, possibly hunting in packs. The canids, however, could not have left the cut-marks found on several deer bones. Nor could they account for various strange-taphonomical patterns currently being studied in detail by F. Brabet and G. Klein Hofmeyr (Utrecht) on more than 10,000 deer remains already excavated. This year also, several pieces of limestone were recognized as human artifacts. Last but not least, a few human skeletal remains (temporal, maxilla, ulna), still under study by Dr. B. Wood (Liverpool), Dr. P. Y. Sondaar and Dr. S. Spoon (Utrecht), and by B. Senut (Paris), seem definitely to be different from those of modern humans. The temporal and maxilla were found in a layer dated by 14C on charcoal to 9,120 ± 380 yr B.P., 25 cm below the base of the Neolithic levels.

While everyone hopes for the discovery of more human bones and artifacts as well as for more refined dating, it seems possible to accept, at least as a working hypothesis, that there was a very early arrival of humans in Sardinia, possibly as long ago as the lower Middle Pleistocene. At that time, P.Y. Sondaar points out that there occurs a sharp change in the Sardinian fauna, which could be partly related to the arrival of humans when sea level was temporally lowered. In contrast with other islands, Sardinia could support a human population for a long time because of the presence, alongside deer, of a large ochoctonid, Pro- lagus (studied several years ago in the same Corbèddu cave by Dr. Mary Dawson). This animal would easily furnish a relatively large amount of meat without danger of overkill and subsequent starvation, because of its high rate of reproduction. The Paleolithic peoples of Sardinia would thus have evolved in isolation, independently developing their own original culture, until the arrival of the very different Neolithic peoples.

—Vera Eisenmann
Institut de Paléontologie, Paris

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