SUMMIT '89

Who were the First Americans? Where did they come from? When and by what route did they arrive?

Researchers from around the globe convened May 24-28, 1989, at the University of Maine, Orono, to address these and other intriguing questions concerning the earliest peopling of the New World at the First World Summit Conference on the Peopling of the Americas. Hosted by the Center for the Study of the First Americans, Summit '89 was the first forum to approach the question of the peopling of the Americas from a global perspective. Approximately 300 people attended the conference, which was produced with major financial support from the National Geographic Society, National Park Service, and Wenner-Gren Foundation, as well as private contributions. Plans to publish the proceedings are presently underway.

University of Maine President Dale Lick and Center Director Robson Bonnichsen welcomed participants to the official opening of Summit '89 Wednesday evening at the recently completed Maine Center for the Performing Arts.

Jean Auel, author of the popular Earth's Children saga, opened the event, speaking on the "Public and Prehistory." Auel addressed the archaeologists in the audience, urging them to make prehistory more readily accessible to the general public. Citing inadequate public education, the ever-increasing loss of archaeological sites through construction and looting, and archaeological texts and reports made incomprehensible by jargon, Auel stressed the need to involve and interest the average individual in a way that would preserve our archaeological heritage.

The evening ended with a salute to Auel by Marilyn and Harrison Roper on a "mammoth trumpet."

Four days of formal conference proceedings began early Thursday morning with discussions on archaeo logical, cultural and theoretical avenues. Thursday afternoon's session focused on the peopling of the Americas from an Asian perspective, as researchers from China, the Soviet Union, Korea, and Japan examined the relationships between Old and New World technologies. Friday's presentations covered early human evidence from North America, while Saturday's focused on projects in Latin America. The conference concluded with Sunday's public free symposium.

Presentations given during the conference exhibited considerable diversity, ranging from the early peopling of Japan and the Peopling of the Americas) to a description of a new technique enabling researchers to identify blood residues adhering to artificial materials (David Hyland: "An Application of Nitrocellulose Membrane for the Identification of Blood Residues on Artificial Material," see Mammoth Trumpet 4(3)).

Old issues were reexamined; Dr. James Adovasio ("Meander to Rockshelter Radiocarbon Chronology: 1975-1988"), in a dynamic presentation, (hopefuly) laid to rest the dearth assertions that the 14,000-14,500 year old dates from Meander to Rockshelter are the result of coal contamination. And Dr. Tom Dillehay ("Pleistocene Peoples of Monte Verde, Chile") convinced even the most skeptical among the audience that Monte Verde is indeed a 13,000 yrs B.P. peat-preserved settlement, complete with hand-hewn wooden planks, sharpened stakes, wood, bone, and stone implements, and preserved mastodon mosa (see Mammoth Trumpet 11(1); 2(2)).

Occasional notes of humor were sparked throughout the conference proceedings. Following his talk on the early biface technology of Siberia, Soviet scientist Dr. Nikolay Dvoryan ("The Projectile Point Tradition of the Late Paleolithic of Northern Asia and Its Coming to Northern America: 1989") presented Dr. Robson Bonnichsen with a new Center logo. Expressing the concern he and his colleagues had felt on observing the downward passage of the new American immigrants as they

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RED OCHRE USE ON THE PLAINS DURING THE PALEOINDIAN PERIOD

by Donna C. Roper, Commonwealth Cultural Resources Group, Jackson, Michigan

Editor's Note: Mammoth Trumpet 5(2) featured three unusual Paleolithic sites: the Anzick and Richer-Roberts Clovis caches and the Ontario Crowfield site. Sites such as these contain clues, not only to the material cultures of the early New World inhabitants, but to the beliefs and lifeways of these people as well. The presence of red ochre, or hematite, at archaeological sites also provides scientists with glimpses into the non-material past. Although a common element at many Paleolithic sites, few comprehensive studies exist on this subject. In the following article, Dr. Donna Roper examines the temporal and spatial distribution of ochre at Plains Paleolithic sites.

Hematite, particularly in its earthy form known as ochre, is the second most common mineral found in North American pre-ceramic archaeological sites, exceeded only by the siliceous minerals used for fashioning chipped tools.

Ochre is most common in mortuary contexts, at times achieving such prominence that it lends its name to an archaeological complex (the Red Paint complex of Maine and the Red Ochre complex of Illinois are two examples). There probably is no part of North America (indeed, of the world) in which ochre was not used at some time during prehistory. Examination of its use through time at archaeological sites in a given area, however, may reveal discontinuities in the contexts in which it was used and perhaps even in its use at all. These discontinuities may reflect social and cultural changes, and perhaps were produced by changing circumstances of life. This, I suggest, was the case on the Plains in the late Pleistocene and early Holocene.

Although the Plains are outside the core area of hematite use in North America, as defined by Moorehead, ochre was used throughout the prehistoric period and into the historic period. Some provocative associations are re

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STONES SPEAK IN MANY TONGUES

As we at the Center for the Study of the First Americans wind down from the excitement of Summit ’89, I am pleased to announce that the conference exceeded our wildest expectations. Cards and congratulatory notes continue to pour in. In many ways, Summit ’89 was a first: the first conference to offer an international artifact exhibit; the first to address the challenges of archaeological conservation and the direction of future research; and the first to approach the question of the peoples of the Americas from a global perspective.

Far more important than an international perspective on archaeology, however, Summit ’89 also afforded participants a unique opportunity to meet one-on-one. Although given the option of staying in nearby hotels, the majority of conference-goers chose instead to experience dormitory living. Situated in the quiet Maine countryside, the small town of Orono offered few of the diversions which typically accompany large conferences. In contrast to the usual round of bars, shops, and other forms of readily accessible entertainment, the dormitory residents were left to devise entertainment of their own making.

Oddly enough, far from being a disadvantage, the somewhat unusual housing acted as a catalyst for breaking down the barriers behind which people so often en-

Jonnae Turner (left) and Niece Guidon share a relaxed moment after the opening day’s presentations.

other themselves. Drawn together by communal living, Summit ’89 participants quickly transformed the halls and lobbies of Knox Hall into an international melting pot.

Oftentimes, dormitory residents could still be found deep in conservation at 2:00 or even 3:00 o’clock in the morning. Several impromptu slide shows, not of artifacts but of homelands and families, were presented on the walls of Knox Hall following the formal presentations of the day. Undoubtedly, one of the highlights of the conference was an informal flint knapping session lasting well into the wee hours of the morning. There, Dr. Dennis Stanford of the Smithsonian Institution and Dr. Nikolay Drootzov, Institute of History, Philology and Philosophy of the USSR Academy of Sciences, replicated ancient stone tools from their respective countries. As a crowd of spectators watched in fascination, Stanford and Drootzov then began exchanging techniques, each teaching the other—a tradition made all the more remarkable by the fact that Drootzov speaks no English, and Stanford no Russian!

Other barriers were bridged as well as the language gap. Scholars who had never met previously face-to-face had an opportunity to discuss their ideas and papers in person, rather than in print. New friendships were formed, future plans were shared, and in some cases, new research projects were initiated. In a field all too frequently characterized by competition, Summit ’89 provided a refreshing change whereby ideas were exchanged rather than hoarded, and cooperation replaced conflict.

The aura of goodwill initiated in the dormitory spilled over into the formal proceedings. While it is surprising that in a hall which seats 1600, true speaker-audience rapport could exist, the atmosphere of empathy which surrounded the presenters was unmistakable. Participants rushed into the halls during conference breaks to congratulate presenters or eagerly discuss ideas which had been raised during the proceedings.

The success of Summit ’89 was a tribute to the many hours of hard work put in by those individuals working behind-the-scenes, both before and during the conference. From the chef who had to learn how to cook buffalo meat to the projectionist who fashioned complex electrical circuitry overnight to the countless hours donated by Maine Archaeological Society volunteers—all contributed incredible energy and creativity. Although those who had a band in this process are too numerous to mention here, our group of translators deserves a special thanks.

Russian translator Dr. Rex Pyles’ duties began unexpectedly four days before the conference opening with a frantic call at 7:00 a.m. Disconcerted personnel at Boston’s Logan Airport had been trying for some hours to communicate about confused ticket arrangements with a Soviet passenger who spoke no English. Although the passenger, Dr. Nikolay Drootzov, had been able to convey to the officials his destination, there the matter rested. Happily, Pyles, a foreign language professor at the University of Maine, was able to intervene, facilitating the transition of Drootzov on the last leg of his long journey. Even though officially contracted to serve only as interpreter during the plenary sessions, Pyles quickly became a close friend and constant companion of Drootzov’s, greatly enhancing his stay in our country.

Similar bonds of friendship formed between Korean translator Dr. Ken Ann, University of Maine Professor of Public Administration, and Dr. Yung-jo Lee, Chungbuk National University, Korea, particularly after finding that they had grown up only 20 miles apart. Interestingly enough, Ann never actually translated at Lee’s presentation. Impressed by Lee’s grasp of English, Ann instead convinced Lee to present the paper himself, rehearsing and working with him throughout the conference.

One of the most difficult translating jobs went to Spanish interpreter Carmen Ferrero. Ferrero, a graduate teaching assistant from Spain, translated not one, but three papers! Recruited at the last moment to assist in the proceedings, Ferrero had access only to the abstracts prior to the arrival of the participants. Unlike what many observers believe, translating is a far more complex task than the simple repetition of words, and Ferrero spent many hours working patiently with the presenters on timing, language, and organization.

Looking back, the success of Summit ’89 was all the more remarkable in that it occurred on the eve of considerable global turmoil. Proving, perhaps, that real learning knows no political bounds, representatives from China, Korea, the Soviet Union, and South America made the incredible effort to attend the conference. In the years to come, what may be remembered best about Summit ’89 are not the scientific insights which were revealed during the proceedings, but the barriers which were broken down and the friendships that were formed outside the auditorium.

—Editor

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An impromptu flint knapping session at the dormitory where conference participants were staying facilitated an international exchange of techniques and ideas. Left, Chen Chun and Richard Morlan examine lithic materials while right, Nikolay Drootzov shows Dennis Stanford his flaking technique.
FROM THE END OF THE EARTH

The Center for the Study of the First Americans recently enjoyed the privilege of hosting Fulbright Scholar Hugo Nami during his four month's stay in this country. Nami, who hails from Buenos Aires, Argentina, is presently a doctoral candidate at Buenos Aires University. A specialist in lithic analyses and the replication of stone tools, Nami visited the United States to expand the bibliography for his dissertation, which will focus on a comparison of Patagonian and North American Paleoindian stone tool technologies. His presence in this country is evidence of the growing communication between archaeologists in North and South America, which Nami says, "...is becoming freer all the time.

Nami has worked on excavations in both Chile and Argentina, concentrating chiefly on the region of southern Patagonia since 1979. In 1985, Dr. Maria Martinez of the Instituto de la Patagonia (Magallanes University), Punta Arenas, Chile, invited Nami to excavate the Cueva del Medio, a cave located in the Ultima Esperanza Province of Chilean Patagonia. The cave is approximately 155 km north of the famous Fell and Pail Aike Caves, discovered in the 1930s by Janus Bird of the National Museum of Natural History. For many years, these were the only two known stratified sites in southern Chile where Paleoindian artifacts had been found.

Nami began work at the Cueva del Medio in 1986. Cueva del Medio is a large cave, approximately 90 m long, 40 m wide, and 6 m high. It is located about one kilometer from the well-known Mylodon Cave, a site which contained extensive Mylodon (sloth) and Hippidium (horse) remains. When Nami arrived at Cueva del Medio, he was disappointed to find that the surface of the cave had been defaced by pothunters. Ever since the discovery of Mylodon Cave in 1893, and the subsequent discovery of four hearths. Although one of the hearths had been damaged by water, the other three yielded a profusion of artifacts. In one hearth, the team discovered yet another fishtill projectile point, charcoal, and horse bone. A second hearth contained a heaped-up pile of bones that included the mandible of an infant horse, as well as stone and bone tools; among them, a bone retoucher. Excavation of the third hearth revealed extensive chipping debris, especially debris produced by bifacial thinning. Four radiocarbon samples taken from the hearths produced dates of 10,550±120 yrs B.P., 10,310±70 yrs B.P., 12,390±180 yrs B.P., and 9,595±115 yrs B.P.

The findings of the Bird I level are significant because they demonstrate a clear Paleoindian context, linking humans with extinct fauna. In addition to horse and sloth, the site has also yielded remains of a paleolama. The Bird III occupation level produced triangular projectile points, also associated with extinct sloth and horse. Nami has not yet radiocarbon dated this level of Cueva del Medio, however, the association of a Bird III occupation with extinct fauna is unusual as these assemblages typically date between 8,000-6,000 years ago. Although he has not yet completely ruled out the possibility that the association between stone tools and fauna is an artificial one, resulting from not yet understood cave formation processes, "I don't have any doubts about the associations between the Bird III period stone tools, and the extinct fauna—Mylodon and horse especially," Nami says. Interestingly enough, late dates have also been obtained on some of the sloth material from Mylodon Cave.

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A Salute to Dick Reinhart

For three months every summer, you can find Dick Reinhart at the Mammoth Mecoacan excavation site in southwest Montana. All day long he answers team members’ questions, inspects the likely-looking pieces of rock they hand him, and pronounces judgment: “What you have here is a beautiful endscrap.” He may say to the hopeful worker, or perhaps it’s a flake, or a blank, or a uniface. Or, sometimes he holds the piece up so light it can catch its curves and planes, and says, with only the slightest twinkle in his eye, “You have here is a beautiful...piece...of debitage.”

Since 1980, Reinhart has worked closely with the Center for American Indian Studies at the University of Montana. In 1992, he was one of the first to dig on digs in Maine, Nevada, and Montana. Along the way, he has trained eighteen teams of Earthwatch volunteers. In addition to his work as site foreman, Reinhart has contributed to the Center during every stage of its development, bringing to bear not only his knowledge of archaeology, but his years of experience as an electrical engineer and manager at IBM.

Reinhart has had a life-long interest in archaeology. Born on a farm in central Ohio in 1922, he grew up in a region rich with the artifacts of the Wyandot Indians. “I became very interested in where the artifacts came from,” Reinhart says, “who made them, and what were they. That started it.”

Only one thing separates Reinhart more than archaeology: “My greatest desire, always, was to become an electrical engineer, and that I did.” After a successful career at IBM, he retired early, went back to school, and in 1982 earned his Master’s degree in archaeology from the University of New York at Albany.

Askd if he has found archaeology and engineering to have anything in common, Reinhart replies that precision is required in both kinds of work, “Math comes in very handy. Laying out a section for a dig requires surveying and math.” In addition, both engineering and archaeology are backlogged in today’s society.

A lot of what he does on a dig, Reinhart adds, is not so different from what he did at IBM: “People management. Encouraging, giving them a pat on the back, and instruction.”

Although it is always exciting for Reinhart when a team member finds an artifact, a few recent finds stand out in his memory: a bone awl found in the summer of 1989, a shaft straightener, and “any artifact that we can associate with a similar artifact that has been dated in another site. This helps us keep track of how far back we are going.”

Naturally, finding heaths is extremely important, not just because they can provide radiocarbon dates, but for Reinhart because they also provide a feeling about the people who once used them thousands of years ago. A hearth “gives you a closeness to the people who were there,” he muses. “They were sitting around this hearth, cooking food, or maybe working.”

Another find that Reinhart particularly enjoys is any sort of decorative artifact. “We did find a drilled elk’s tooth, which is an extremely personal item. That somebody wore or used as a tooth is a real image of a person for you. And it’s a friend. These sorts of things give you a really close feeling to the people who were there.”

Finally, there are the stone tools themselves. “Once in a while, you run into a stone artifact that is made of a particularly beautiful material, and with that one you can sense the pride of the person who made it. After working with artifacts for a while, you soon realize that the makers were artists, More than just making tools to live by, they made them nice. They had a lot of pride in their work.”

Of the things that can go wrong on a dig, Reinhart claims the weather is the most common source of trouble. “One period at Munsungun Lake, we had 11 days of rain out of 13 on the site—we really returned to the Pivot.” Then there was the day in Montana when “I woke up at about six o’clock. I couldn’t figure out what was wrong with my tent.—It was sitting very funny. I touched the side wall and I heard the snow slide off. This was on the eleventh day of July.”

Another potential source of trouble is the food. “You can come in tired and dirty at the end of the day, but if there’s a good hot meal, that satisfies the inner person.” If the food is poor, “It’s probably as demoralizing as anything that can go wrong.”

Aside from these two possible problems, Reinhart says he can’t think of anything else on the various sites he has worked on that really went wrong. “Either I was or I was very good at covering up,” he says cheerfully.

Reinhart believes that a major task of all archaeologists is to teach people the importance of the archaeological record and to educate people “not to destroy their own heritage. What happened way back,” says Reinhart, “is part of us.”

—Nancy Allison

SEVEN HONORED AT AWARDS BANQUET

A series of awards were inaugurated at a special conference banquet held on Friday, May 26. During the course of the evening, Dr. H. Marie Worthington was honored for 50 years of commitment to the field of archaeology, while newly created awards were conferred upon six other individuals who have given freely of their time, effort, and devotion to the study of the prehistory of the American.

Following opening remarks by Master of Ceremonies Dr. Charles Schweger of the University of Edmonton, Dr. John Tomenchuk, Center for the Study of the First Americans, initiated the proceedings, welcoming Dr. Worthington, Curator Emeritus of the Denver Museum of Natural History, to the podium. “For many of us here, America’s earliest prehistory is synonymous with the name of H. Marie Worthington,” Tomenchuk said. “The inspiration she has provided during her illustrious career transcends the narrow bounds of academia.”

Tomenchuk then announced the establishment of the H. Marie Worthington Award, to be given annually through the Center for the Study of the First Americans “In recognition of outstanding contribution to early American prehistory by individuals in the areas of preservation, public education, and research.”

Dr. Stephen Williams of the Harvard Peabody Museum continued the ceremonies, presenting Dr. Worthington with an award from Radicliffe-Harvard University. Mr. Danielle Beauchamp of the National Geographic Society then took the stage, honoring Dr. Worthington’s achievements with the Franklin’s L. Burr Prize in the amount of $5,000. The Burr Prize was established in the 1930s under the will of Mary Burr of Washington, D.C., as a memorial to her father; the income to be used for recognition of meritorious field research. Visibly moved, the audience rose to a standing ovation as Dr. Worthington left the podium.

Following these presentations, Dr. Tomenchuk announced the first recipients of the H. Marie Worthington Award: George and Helen Cremer, of Melville, Montana. "Few individuals, professional or otherwise," remarked Tomenchuk, "are as dedicated to the preservation of the earliest archaeological record or as effective in educating the public about the need for archaeological site protection.”

Over many years, the Cremer have supported archaeological study on their land, lent equipment to Rob Bonnichsen’s dig in southwestern Montana, and hosted field schools from the University of Montana and the University of Alberta. In addition, for the past eleven years, the Cremer have hosted an annual weekend gathering, known locally as the "Cremer Event." There, archaeologists and local citizens, alike, come together for archaeological lectures and demonstrations, discussions, a barbecue, and western entertainment. The Cremers received an ornamental plaque and lifetime membership in the Center. Their names will also be inscribed on a larger plaque kept at the Center.

Another award presented for the first time was the Honor Roll, which will be conferred annually to deserving citizens in recognition of meritorious contributions to early American prehistory. Each person named to the Honor Roll will receive a plaque inscribed with his or her name; in addition, the names of all Honor Roll nominees will be inscribed on a larger Center plaque. This year there were four recipients.

Edward F. Lehner, long-time owner of the famed Lehner Clovis site, was honored for the many years of support he and his wife, Lynn, have given to archaeologists interested in the site; located on the Lehners’ 160-acre ranch in Hereford, Arizona. On March 26, 1988, Ed and Lynn Lehner donated the Lehner Clovis site (6.2 acres) to the U.S. Bureau of Land Management to ensure the site’s permanent protection.

(Continued on next page)
plodded across Beringia into the New World (as Drouzdov claimed, is the depiction on the Center logo). Drouzdov funded Borchsenius a drawing of a smiling Soviet cowboy riding a bucking mammoth. The presentation was received with cheers from the audience.

Not surprisingly, many of the papers presented at Summit ‘89 revolved around the question of an American preclovis occupation. Opinions were varied and agreements few, as participants came down on both sides of the preclovis argument. Conventional wisdom has long held that humans did not arrive in the New World until shortly before 11,000 yrs B.P., the earliest undisputed date. Making their way across the late Pleistocene land bridge which connected Siberia with North America, these early immigrants eventually moved through western Canada via the frigid wastelands of the 12,000-mile-long Ice-Free Corridor. Fumed into was to today’s northernmost part of the continental United States, Clovis or proto-Clovis peoples spread rapidly throughout North and South America, reaching the Strait of Magellan about 10,000 yrs B.P.

Opponents of this theory argue that, while mathematically possible, such rapid population expansion and movement is unlikely; that there is little resemblance between the Clovis culture and supposedly ancestral Asian technologies; and that Clovis was only one of several complexes which existed in the Americas by 11,000 years ago.

Although several of the papers given at the conference found little support to the preclovis hypothesis, other researchers reported tantalizing traces of possible earlier occupations, challenging traditional assumptions. Dr. Donald Wyckoff (“The Burnham Site and Pleistocene Human Occupation of the Southern Plains of the United States,” see Mammoth Trumpet 5(1)) re- ported findings from the Burnham Site, Oklahoma. One of the most recent of the preclovis candidates, the site contains several small flakes and tool fragments, seem- ingly in association with a 20,000-year-old extinct bison. Evidence of an older occupation has also been found in the northern Yukon Territory at the Bluefish Caves site (Richard Morlan: “The Peopling of the Americas as Seen from Northern Yukon Territory”), where researchers have discovered 14,000-year-old stone tools, as well as possible human-flaked mammoth bone dating back to 24,000 yrs B.P.

The greatest body of evidence supporting a preclovis occupation came, however, during Saturday’s Latin American presentations. On that day, participants from Mexico to Argentina consistently reported sites in the 11,000 yrs B.P. range—or even older!

Undoubtedly, the most controversial presentation of the proceedings was given by Dr. Nide Guindon on her work at the site of Pedra Furada (“Deep in South American Past: Pedra Furada and Brazilian Prehistory,” see Mammoth Trumpet 5(1).A rockshelter lo- cated in a remote region of northeastern Brazil, Pedra Furada has yielded possible 45,000- year-old hearths and associated stone tools.

Skelets of the site contend that the quartzite “tools” are instead the result of rock fall, the “hearth’s” forest fires. Proponents point out that not only was the charcoal at the site concentrated within small, roughly circular areas, but that the tools have been found far beyond the periphery of where geoschafts falling from the surrounding cliffs would normally occur.

Even discounting the very early sites which are claimed for Latin America, however, the plethora of dates which equal or exceed Clovis in age would seem to cast considerable doubt on the “Clovis is earliest” argument. What is also significant about the South American material is the great variety of complexes which characterize these sites. Opponents of the “Clovis is earliest” theory argue that the very diversity of these assem- blages, which bear little resemblance either to one another or to Clovis, indicate considerable developmental time.

AWARDS

Dr. Luther S. Cressman, Professor Emeritus of the University of Oregon, was honored for his long career in the study of the early peopling of the northern Great Salt in addition to numerous excavations and research, Dr. Cressman also traveled and lectured extensively to public audiences about his work. He was instrumental in the designation of Fort Rock Cave as a State Historic Monument, and having it placed on the National Register of Historic Places.

The third recipient of the award, Richard S. Reinhart, was honored for his nine years of participation in Center-sponsored research projects in Maine, Nevada, and Montana. “Drawing upon his past engineering and administrative experience,” Tomenchuk noted, “Dick has served in various capacities, such as logistics coordinator, excavator, archaeological surveyor, excavation foreman, and carpenter.” He has also been instrumental in fund- raising for the Center, and “has served as a sounding board and councillor to the Center’s Director, Dr. Robson Borchsenius.”

Finally, physician Dr. Norman Wright was honored for his many years of work as an avocational archaeolo- gist. “Dr. Wright has been credited with influencing two generations of Ohio archaeologists by tirelessly seeking out everyone in Coshocton County with fluted points in their collections,” said Tomenchuk. Reading from the let- ter of the United States Department of Interior, Dr. Wright stated personal responsibility for discovering 178 fluted points and thousands of other artifacts from a variety of prehis- toric cultures.” Dr. Wright has given a large part of his collection to the Johnson-Humrickhouse Memorial Museum in Coshocton, Ohio.

"Public support," emphasized Tomenchuk, "is vital for the protection and preservation of archaeological sites." Dr. Wright has given a large part of his collection to the Johnson-Humrickhouse Memorial Museum in Coshocton, Ohio.

"Public support," emphasized Tomenchuk, "is vital for the protection and preservation of archaeological sites." It is hoped that awards such as these will serve to develop the sense of community and cooperation be- tween professionals and the public, which is so essential to archaeology.
RED OCHRE USE ON THE PLAINS

(Continued from page 1)

vealed by a comparative study of the contexts of ochre use in the region. No time on the Plains was ochre so intensively used as it was during the Paleoindian period. Ochre is present in Clovis, Folsom, and Plains tradition sites, and is found both in well-defined contexts in these sites. Never does it appear in other than late Holocene contexts at any Paleoindian site (it was found at a few sites best known as kill sites, such as Olson-Chubbuck, but a cultural, although not a causal relationship exists), and in none of these sites is ochre provenance within a camping area associated with the kill. Though rare at kill sites, however, ochre is present in many habitation, cache, and mortuary sites.

Plains habitations sites provide important data on ochre use during this earliest period of North American prehistory. At several sites in Wyoming and Colorado, notably at Shearman (Clovis), Agate Basin, Hanson, and Cattle Guard, ochre has occurred. The only Clovis site where ochre was found at all, and was well preserved (i.e., not de-fluted or redeposited), and comprehensively reported Clovis and Folsom sites on the Plains.

Cache sites have also been reported from several habitation sites of the Clovis-Folsom period as lumps in all cases. The sites include the Leve site in Texas, the Trail Draw site in the Black Hills of South Dakota, the Jurgens site in Colorado, the Red Smoke site in Nebraska, and Bottleneck Cave in the Big Horn Mountains of Wyoming. Ochre may have adhered to grinding stone surfaces in several instances.

In addition to the habitation site records of ochre, this mineral is found in abundance in most recorded Plains Paleoindian cache and mortuary sites. Its appearance in Clovis sites is sometimes termed 'the Oregon (Clovis) age in Montana is well known. Ochre was also present at the similar, although less well known, Simon site in Idaho. I find fascinating to note that ochre was not present in the Drake Cache in Colorado (recently reported in Current Research in the Prehistoric): because, while ochre in the late Pleistocene was lacking, the stone from which the cache items were manufactured in Arizona agitated dolomite—a raw material with a bright red (ochre-like) color!

Cache-lined Plaza tradition artifacts are not reported (this is already an indication of change in ritual?), but several mortuary sites of the late Paleoindian period contain ochre in these sites. Perhaps the two best-known Plains tradition mortuary sites are the Gordon Creek burial in Colorado and the Brown Valley site in western Minnesota. Ochre was lib- erally sprinkled on the grave goods and bones at both sites. Ochre was not sprinkled over the burials in the Horsethief Shelter, but a large block of the material and a granite abrader were also found in a utilitarian tool kit found with one of the burials.

Overall, ochre use seems somewhat more limited in Plaza tradition sites than in the earlier sites. This may be attributed to a lack of recognizable habitation floors or possible house-plans in Plaza tradition sites (perhaps this too is no accident, but instead reflects a changing

SUGGESTED READINGS

On Red Ochre Use on the Plains During the Paleoindian Period


On The End of the Earth


in caches of tools of types normally associated with hunting, and in these cases was applied directly to the tools. It also is relevant to observe that ochre is red, usually bright red, and therefore, in the color of blood. Blood, in turn, is a vital force of life, both for the humans and the animals they hunted.

To go beyond these observations is to engage in speculation, of course. Many number of scenarios are possible and any specific a speculation probably is wide of the mark. I do not, however, think it too fanciful to suggest that the commonalities in context of ochre use by the Paleoindians (particularly those of the Clovis and Folsom complexes) are not coincidental. The Paleoindians, after all, faced sub-arctic conditions. Societies living in such environments must subsist largely on the flesh of large animals. The life of humans, therefore, is sustained by taking life of animals, and animal life is taken using hunting weapons. Ochre symbolically linked human life, animal life, and weapons during the late Pleistocene.

Several writers on the organization of technology have pointed out that the organization of technology can characterize the weapons systems used by societies living under conditions similar to that which occurred in the late Pleistocene. But specialized, reliable weapons are utterly useless if there is nothing to kill or if the hunter handles them poorly. I suggest, then, that the ideological function of ochre during the late Pleistocene was to symbolize an invasion—a request for spiritual aids—to see that prey was encountered and that its pursuit was successful. That the symbol used in this invocation was one virtually syn- onymous with life surely was no accident.

set by itself became much more secure on the Plains in the immediate post-Pleistocene period as the grassland ecosystem developed and matured. Bison became more plentiful, encounter potential was higher, and a generally greater resource diversity meant that, ultimately, prey was available. The invocation symbolized by ochre may have been less necessary and lost its meaning in this period. Ochre was used in mortuary context by some Plains Archaic complexes, such as Oxbow, and this context can be considered to fall within the ideological realm. It may have changed its meaning, however, and perhaps simply represented a carry-over of ritual, with less significance attributed to the symbol.

Ochre never disappeared from Plains assemblages. Never again, however, was it as intensely used as during the late Pleistocene. I have shown that in use in this region was spatially restricted during the Archaic period, and that used almost exclusively in mortuary context. Its use also was specialized during the Woodland period, during which period it is usually found as a pigment; even in mortuary context it normally was a decorative medium on grave inclusions rather than a burial offering in itself. Much the same is true on plains Village-period ochre use. Thus, while ochre may have been a medium through which symbols were created and stylistic information was conveyed in post-Pleistocene societies, never did this medium by itself serve the symbolic role it did for the Paleoindians.
MAMMOTH TRUMPET

JULY, 1989

CONFERENCEs

Megaflauna and Man: Discovery of America's Heartland

During the last glacial advance of the Great Ice Age, humankind hunted mammoths across the heartland of North America. Moving into the High Plains States of the United States and the Prairie provinces of Canada, these hunters discovered an environment teeming with herds of large Pleistocene fauna which had never been hunted by humans. What was this late Pleistocene environment like? What evidence do we have for an Ice-Free Corridor? Did these early hunters cause the extinction of the Pleisto-
cene fauna—or was their demise due to rapid envi-
ronmental change?

A renaissance of internationally renowned scholars will examine clues to these questions at "Megaflauna and Man: Discovery of America's Heartland," a unique symposium focusing on the late Pleistocene flora, fauna, and paleoen-
vironment of the Northern Plains and Black Hills of the southern Great Plains and Southwestern Canada - Ice-Free Corridor. The con-
ference will be held September 7-9, 1989, at the Mueller Civic Center, Hot Springs, South Dakota. Organized by Dr. Larry Agnew and Dr. Jim Mead of Northern Arizona University, "Megaflauna and Man" is co-sponsored by The Mammoth Site of Hot Springs, South Dakota, Inc. and Northern Arizona University.

SCHEDULED SPEAKERS AND PRESENTATIONS INCLUDE:

The Siberian Perspective
Irena Dubrova (Paleontological Institute, Moscow)
Quaternary Geology/Geomorphic/Paleoclimatic Set-
ing
Jim Mead (Northern Arizona University, Flagstaff) "A Wisconsin Glacial Biotic Community at the Mammoth Site, Black Hills, South Dakota"
Robert Lawry (Southern Methodist University, Dallas) "Terraces, Collapse Events and Late Quaternary His-
tory of Fall River, South Dakota"

Panelists:
Gary Haynes (University of Nevada, Reno) "The Ani-
imals That Walked Like Mountains: Life and Death of Heartland Mammoths"
Larry Agnew (Northern Arizona University, Flagstaff) "The Mammoth Population of the Hot Springs Site; and Associated Megaflauna"
Nicholas Czaplowski (University of Oklahoma, Nor-
mor) "Microfauna from the Hot Springs Mammoth Site"
Dale Guthrie (University of Alaska, Fairbanks) "Col-
lectivity of an Ecosystem: Perspectives from a Mam-
moth-steppeland"
Ross Graham (Illinois State Museum, Springfield) "Individual Recognition of Mammothian Communi-
ties During the Late Pleistocene"
The Canadian Ice-Free Corridor
Jim Burns (Provincial Museum of Alberta, Edmonton) "Paleoecological Perspectives on the Ice-Free Cor-
rider"
Carole Mandryke (University of Alberta, Edmonton) "Could Man Survive the Ice-Free Corridor?"
Norm Catto (University of Alberta, Edmonton) "Ge-
ology of the Postulated Ice-Free Corridor" Preparing for the New World
Adrin Hamus (Augustana College, Sioux Falls) "The Lange/Ferguson Site: A Case for Mammoth Bone Butchering Tools"
George Frison (University of Wyoming, Laramie) "Clovis-PreClovis-Goshen Relationships in the Northern High Plains"
Extinction
Paul Martin (University of Arizona, Tuscon) "Mega-
flaunal Hoax: What or Who Ruined our Ice-Age Eden?"
Tom Stafford, University of Colorado, Boulder) "Geo-
chronology of Late Pleistocene Megafaunal Extinc-
tions"
The Modern Environment
Ron Weeden (Chadron State College, Chadron) "The Modern Black Hills Environment"
Discussion
B. Miles Gilbert (Sedona, Arizona) "Symposium sessions are open to the general public; registration is required. Due to limited seating, early reg-
istration is recommended. Registration cost, which in-
cludes reception, lunches, coffee breaks, dinner, and public}

Lubbock Lake State and National Landmark—50 Years of Discovery

A week-long series of events recognizing a half-century of discovery, exploration, and community involvement at the site. The activities will be held in Lubbock, Texas, October 1-6, 1989. The celebration will place regiona-

Lubbock Lake State and National Landmark—50 Years of Discovery

facilities of Lubbock Lake Landmark, and guided tours of the walking trails. A reunion follows that evening for those individuals who have worked on the Lubbock Lake Landmark project sometime during the past 18 years. If you are one of those dedicated individuals, be sure to put this on your calendar!

October 6 - A guided tour especially for school children in the region, classes from Amarillo to El Paso, grades 1-
12, will visit Lubbock Lake Landmark for first knapping, baskeriet, and potterymovements, and guided tours of Texas' newest state park.

October 6-8 - Regional field trips to other Late Quater-

narchaeological, geological, and paleontological lo-
calities. Public tours of Lubbock Lake Landmark will also be available.

Lubbock Lake State and National Landmark—50 Years of Discovery

The conference is organized by Dr. Eileen Johnson of Texas Tech University, Lubbock. Sponsors include: the Texas Committee for the Humanities, the South Plains Friends of the Humanities, the West Texas Museum Association, the Museum of Texas Tech Uni-
versity, the Lubbock Tourist and Convention Bureau, the International Center for Sites of Arid and Semi-Arid Land, John and Ryla Lott, the Lubbock Independent School District, the Lubbock Library, and the City of Lubbock. Texas. All activities are open to the public.

For further information or registration, contact: Dr. Eileen Johnson, Lubbock Lake Landmark Director, Texas Tech University, The Museum, Box 4449, Lub-

ACKNOWLEDGMENTS

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box, TX 79409; tel. 806-742-2442.

Lubbock Lake State and National Landmark—50 Years of Discovery
MAMMOTH BRIEFS
A New Mammouth from Utah

Ongoing study of a Utah mammoth skeleton and associated dung bosulles may lead to a rethinking of the ecological and climatic conditions generally ascribed to this animal. The mammoth was discovered last August at Huntington Reservoir, Utah, during a dam reconstruction project. Excavations led by Dr. David D. Gillette, Utah State Paleontologist, and Dr. David B. Madison, State Archaeologist, resulted in the recovery of a single Mammothus columbi specimen.

The site, which is located at an elevation of about 3,000 m., significantly exceeds the altitude of previously recorded mammoth finds. Geological research indicates that the mammoth—an old bull—induced an alpine glacial canyon only miles from the toe of Huntington glacier. In contrast to the popular view that all mammoths were ice marginal creatures, Columbian mammoths typically occupied open prairie.

Interestingly, enough, recent faunal and dung analyses imply that the somewhat unusual habitat of the Huntington mammoth may not have agreed with the animal. Preliminary analyses suggest that the mammoth was affected with severe bone loss, possibly caused by poor nutrition. Clues to this condition may be contained in the preserved dung bosulles found at the site.

The mammoth dung sampled from the locality typically reveals a grass and sedge content exceeding 80%. Examination of the Huntington bosulles indicates that conifer needles formed a large portion of the specimen’s diet, which was rich in cane, roots, and other plant material. A diet more in keeping with that of a mustodon, than of a mammoth. The burls analyses suggest the mammoth may have been surviving in a marginal habitat.

FROM THE END OF THE EARTH

(Continued from page 3)

suggesting that this area of Patagonia may have acted as a refugium for Ice Age fauna.

The discoveries at Cueva del Medio have given Nami major opportunities to put his special interest in lithic technology into practice. The abundance of tools and debitage recovered from the cave provides clues about the typology of the stone tools of the Bird I and II periods, particularly the technology of the Faltash and triangular projectile points from central Patagonia. For example, Nami points out that, with few exceptions, the flint-laid points in southern Patagonia are not found. "Junius Bird must be right", he says. Nami says, "but I would like to emphasize this attribute."

In studying the stone tools produced by his excavations, Nami has begun simply studying the artifacts in a laboratory. In an attempt to see what artifacts were made in ancient times, Nami makes his own stone tools, keeping a careful record of the flint knapping techniques he uses to produce each new tool. In making almost one thousand lithic artifacts, he has replicated projectile points from different periods and regions of South America, including Patagonia, northern Argentina, and southern Chile. While it is clear that these documents all stages of manufacture in order to compare the different flint-knapping technologies used in South America. His ultimate objective is to understand the relationship of lithic technology to the archaeological record. 'I think,' says Nami, "that experimental archaeology is a good way to explore the archaeological record."

While the United States, Nami looked for a Paleolithic stone tool assemblage to use in his research.

The MEDIA COMES TO SUMMIT '89

The First World Summit Conference on the Pooping of the Americans attracted considerable attention from the press. Not only was the conference reported in local Maine papers, it was also featured in a lengthy article in the May 30th edition of the New York Times and in a Science brief (volume 244).

Representatives from three television production companies were in attendance at the conference as well. Ms. Akiko Carniglha and Mr. Tesuya Murayama of NHK television in Japan (the equivalent of PBS): Mr. Simon Campbell-Jones from the BBC in Great Britain; and Ms. Anne Stanaway and Mr. Henry Nevison, who are producing an independent documentary for the American Public Broadcasting System (PBS).

The Japanese television crew concentrated on the first Americans' migration through North and South America. Mr. Murayama explained through his interpreter, Ms. Carniglha, that he and his team came to the Summit to obtain information not so readily available in Japan. "It is much easier," remarks Murayama, "for the Japanese to get archaeological information from China or Siberia.

For the American people," he continues, "According to the theory that the first Americans came from northeast Asia, we [think about] the ancestors' trip. How did they make the trip? In structuring the television programs, Murayama explains that "We will start [with people] from northeast Asia going through Siberia and then coming all the way down to the tip of the continents of America."

The film crew's first project will be a short, preliminary project that will be shown in Japan at the end of June. If this program is approved, the crew will then produce an extended feature to show in Japan and PBS's Odyssey, which will be seen in 1991 or 1992.

Mr. Simon Campbell-Jones of the British Broadcasting Corporation Channel 2 also attended the conference. Campbell-Jones is hoping to do seven programs on the original Americans "up to the present day, starting from..." wherever the dates start from! "The first of these programs will focus on Summit '89. 'It's very much a neglected area, certainly as far as British television is concerned,'" Mr. Campbell-Jones says. "We have done big series about ancient China and ancient Africa, and modern America—at least, post-Columbus America." But while the BBC has aired programs about Mayan architecture or Incan ruins, there has been no coverage of North, Central, and South American sites. "It's a unified whole.

"No one has looked at that complexity and variety in terms of a television series."

Campbell-Jones adds that, while the BBC is similar to the American Public Broadcasting System, it is somewhat more journalistic than PBS. "This series will not be trying to educate the public about what's going on...al though that will be a part of it—we're much more in investigation," he says. Speaking of the controversy surrounding the earliest occupation of the Americas, Campbell-Jones explains "I want to know what it is that [people] find interesting; why do they get so excited about this, that, and the other."

A third television crew, led by Producer/Writer Anne Stanaway and Director Henry Nevison, was also present at the conference. Veterans of a number of award-winning documentaries, Stanaway, head of Sunlight Productions, Ltd. (Lebanon, PA) and Nevison, president of In Vision Communications (Philadelphia, PA) are collaborating on a hour-long documentary focusing on early sites in the Americas. With a working title of "The New World—At the Threshold," the production will examine early sites in South America, the Yukon, Pennsylvania, and Montana. Inquired by the early pooping debate, Stanaway hopes to bring several North American experts to the South American sites, so that they may examine the data first-hand.

Stanaway became interested in the early pooping question during a trip to South America about a year ago. While there, she visited a number of early sites, including Furdara and Monte Verde. Struck by the dates from these sites, as well as their visual impact, she began putting together plans for a documentary.

Clockwise from left, Marie Worthington and Wl Xinhui; Jose Lorenzo examines the avocational artifact exhibit; Anne Stanaway and Fabio Parenti take in the poster exhibit; and Marilyn and Harry play a "mammouth" salute at the opening of the conference.

As part of his dissertation Nami intends to compare lithic technologies between two Paleoindian sites: one from South America and one from North America. Nami hopes to use a North American assemblage that is contemporaneous with the South American Bird I flint-knife technology, probably a Folsom assemblage. He plans to replicate the stone tools, emphasizing the entire manufacturing process from raw material procurement to finished product.

During his stay in Orono, Maine, Nami met with Rob Bonnichsen and other interested individuals for informal flint-knapping sessions. "I can see Bonnichsen's skill," Nami says. "He's a master Paleoindian flint knapper." Nami notes that he and Bonnichsen differ slightly "in our holding positions and how we use the arms to do percussion and pressure flaking."

While in the United States, Nami traveled extensively, meeting with fellow archaeologists and flint knapping enthusiasts, including: Dr. Dennis Stanford, Smithsonian Institution; Dr. Ernest Callahan, Pitlhow Productions, Virginia; and J.B. Sollberger, Dallas, Texas. Present-day flint knappers are rare in South America, and Nami expressed delight at his opportunity to interact and share ideas with other individuals who have similar interests.

Prior to his arrival in the United States, the young South American was slightly apprehensive about his reception in this country, fearing that he would find North Americans cold and distant. Happily, this was not the case, and Nami returned to Argentina saying of his stay in this country, "A good feeling was born."

—Nancy Allison