OF APPLES AND ARCHAEOLOGY

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PROLOGUE

Archaeologists expect to be surprised—discovery is their business. Yet, nothing in our experiences could have prepared us for artifacts unearthed in an apple orchard last April. The find, on a terrace 600 feet (200 m) above the Columbia River near East Wenatchee, Washington, went contrary to reason.

At this improbable place, clusters of Clovis spear points lay little more than two feet below the surface and a scant ten yards from a county road. The sandy soil containing the artifacts had supported sagebrush and scattered alfalfa, wheat, and, for the last 29 years, Washington state’s pride—Red Delicious apples. It had been grazed, graded, plowed, disced, ditched, and finally augmented to plant thousands of apple trees. Until the spring of 1987, though, not a single stone tool—not even a flake—had surfaced at the R & R Orchards.

Natural setting and agricultural disturbance seemed to have ruled against recovering any ancient remains. Still, Clovis sites are where you find them. What is known about these early Americans has come more from accident than design. It seems fitting, however, that Washington’s most important Paleoindian assemblage lies buried beneath an apple orchard; Washington State University excels in fruit tree research and in archaeology.

THE APPLE ORCHARD DISCOVERY

My introduction to Clovis came over 25 years ago from Edward F. Lehner, on his ranch near the Mexican border in the San Pedro Valley of Southeastern Arizona (see Mammoth Trumpet 4(4)). Ed’s report of bones protruding from an arroyo wall led to the discovery of extinct mammoth, horse, bison and tapir, with Clovis artifacts and fire hearths.

American archaeologists have traditionally recognized people such as Ed Lehner in naming sites. In Washington, this includes important places of early peoples like Marmes Rockshelter at the confluence of the Palouse and Snake rivers, Manuel Masseon site on the Olympic Peninsula, and now the Richey-Roberts Clovis Cache near East Wenatchee. Vice-provost Robert V. Smith offered the assistance of Washington State University’s Graduate School in starting this study and keeping it on track. Investigations were continued with assistance from the Washington State Historic Preservation Office and through a grant from the National Geographic Society.

The story of discovery, concern, and cooperation that eventually led to the dig last April began nearly a year earlier, and a full six months before the owners asked me to direct excavations. On May 27, 1987, orchard foreman Mark Mickles and employee Moises Aguirre encountered “rocks” while installing sprinklers at the R & R Orchards. Before the digging stopped they had recovered 19 stone tools, including six Clovis points up to 8 1/2 inches long (22 cm). Moises took the collection to the orchard manager. Rich and Joanne Roberts kept the artifacts in their home at the orchard. With time they became more and more curious; they showed the tools to their friends and sought advice. Joanne took them to school to share with her first graders. Later, these same children peered down at artifacts in our excavations. Excitement turned to wonder as they recalled Joanne’s lessons about ancient peoples, mammoths, and the Great Ice Age.

The significance of these unusual stone tools went unrecognized until Russell Congdon, a retired Wenatchee physician, identified them as Clovis. Congdon called Robert Mierendorf, an acquaintance and archaeologist. On August 16 they reopened Moises’ diggings, finding another Clovis point and more.

They refilled the hole, and Mack Richey protected the find with concrete slabs. The site’s fame spread as the Richeys and Roberts discussed their apple orchard artifacts with experts from near and far. Susan Richey and Joanne Roberts traveled all the way to the Smithsonian in Washington, D.C. They had caught the Clovis fever.

Interest was intense because several of these rare Clovis tools were large and exquisitely crafted. More importantly, more artifacts remained in place, perhaps just as they had been left 11,000 years ago. Thus they might be dated and their geologic context understood.

(Continued on page 4)

Part of the Anzick Clovis Cache includes a bone foreshaft (top), several fluted projectile points (center), and a large crescent-shaped biface (bottom) that measures over 10 inches in length. (Photo courtesy of Rob Bonnichsen)

ANZICK COLLECTION REUNITED

Twenty years of patience and perserverence have finally paid off for native Montana archaeologist Larry Lahren—and for all people who care about archaeological research. Largely because of Lahren’s continued interest, the owners of a unique collection of Clovis artifacts have placed the tools on permanent loan at the Montana Historical Society Museum in Helena, Montana, more than two decades after they were first discovered. Because the collection was divided among three different owners—each of whom had faced strong temptations to sell their portion—its final reunification into the safekeeping of a public agency is all the more welcome news. The situation ‘was kind of tragic at the start,” Lahren says now, “but it ended up pretty well.”

The story of the Anzick Clovis cache began in 1968, when two construction workers were digging fill at the base of a sandstone cliff. As Calvin Sarver and Ben Huggins dumped dirt into a chuckhole in a nearby road, they saw a large bifacial knife fall out of the bucket of their front-end loader. Immediately stop-

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CALL FOR ARCHAEOLOGICAL RESEARCH PROPOSALS

The Center for Field Research is accepting archaeological research proposals for review. Approved proposals are funded by their affiliate, Earthwatch, a private, not-for-profit research and educational organization. All funds are derived from the contributions of participating volunteers selected from Earthwatch membership. All research proposals must therefore include a significant role for volunteer fieldworkers. Preliminary proposals may be made by telephone or a detailed two-page letter describing the scholarly background of the research, the goals of the proposed project, the need for volunteer fieldworkers, and an estimated budget. Upon favorable review, full proposals are received not later than one year prior to the projected start of fieldwork, will be invited. All proposals are subject to independent peer review.

The Center for Field Research will consider proposals for prehistoric, historic, and underwater archaeological research anywhere in the world and especially encourage proposals for research in the following regions: North America, Mesoamerica and the Central American Intermediate Area, Scandinavia, Central and South Asia, the Pacific Rim, and Sub-Saharan Africa.

Inquiries and applications may be directed to:
James Chiarello, Program Officer for Archaeology, The Center for Field Research, 860 Mt. Auburn St., P.O. Box 407C, Watertown, MA 02272. Tel. 617/926-8200, FAX 617/926-8352.

Although Paleoindian fluted points lie in a thin veneer across much of North America, we actually know surprisingly little about the makers of these implements. The distinctive and beautifully fashioned artifacts these people left behind attest to their expertise in stone work; the recovery of these points with home, bison, caribou, and mammoth remains bespeaks their skill in the hunt. Yet, what of their ceremonies and beliefs, their rituals and livelihood?

This issue of the Mammoth Trumpet features three Paleoindian sites which may help answer these questions. Crowfield, a late Paleoindian site located in southwestern Ontario, contains evidence of what researches Dr. Brian Deller and Dr. Chris Ellis believe may be a fluted point curation. There, within a single feature, excavators have discovered over 5,000 lithic fragments which have thus far been reassembled into some 200 stone tools. These tools were neither deliberately broken or worn out, but seem instead to have been deliberately broken and placed in a fire.

Twenty years ago, two construction workers unearthed a rare Clovis cache containing several complete Clovis tools and deliberately broken bone shafts, covered by a layer of red ochre. Now, thanks to the generosity of Dr. Melvin Anzick, Mrs. Fay Case, and Mr. Calvin Savre—the three owners of the collection—and the tireless efforts of Dr. Larry Lahren, the Anzick artifacts have been permanently reexcavated in the Montana Historical Society Museum.

A special contribution to this issue’s Mammoth Trumpet, Dr. Peter Meltzer writes of a much more recently discovered Clovis cache. The Kichey-Roberts Clovis Cache has attracted worldwide attention as speculation about its contents escalates. The site, which remains intact in a quiet Washington apple orchard, may hold the key to many unanswered questions surrounding Clovis culture.

There are a few examples of America’s archaeological heritage. The owners of the Anzick collection have ensured that these artifacts, at least, will remain available to us, and for our children and our children’s children in perpetuity. Yet, what of the many other archaeological sites in this country? As the human population continues to grow and natural resources become ever more in demand, the material record of human history in the Americas is increasingly placed in jeopardy. Known sites of all kinds are being vandalized and looted at an alarming rate. More and more, lands that were maintained and controlled by Federal agencies are passing into private hands. At present, precious little privately-owned land has any regulation regarding the preservation of cultural resources.

We now stand at the brink. In response to the immediate need for clear-minded action, a public symposium entitled “The Public Trust and the First Americans” is being held Sunday, May 28 as the conclusion of Summit ’89. It will be a sharing of ideas and insights, a chance to imaginatively explore the possibilities and opportunities before us. Please join us at the symposium or by taking action at the local, state, or federal level—help develop positive steps for the conservation of the fragile fragments of our past. As the public trust moves into private hands, let’s do all we can to ensure our common heritage is handled with care.

EARTHWATCH RETURNS TO MONTANA

Few questions about human prehistory are more controversial than that of when humans arrived in the New World. Conventional figures claim that humans first entered the Americas via the Bering land bridge about 15,000 years ago. Many archaeologists now believe that figure to be far too recent.

This summer, Center Director Rob Bonnichsen will again lead Earthwatch teams at a Montana site that may provide accurately dated evidence of the earliest inhabitants of the United States. The Mammoth Meadow site is located in the South Evergreen Creek and Black Canyon drainage system at the base of the Beaverhead Mountains, approximately 50 miles southwest of Dillon, Montana. The site appears to have been a stone tool workshop of early humans, and has yielded evidence of a long Holocene and late Pleistocene archaeological sequence, including Desert Side-Notched, Avenole, Pelican Lake, Bitter Root, Cody, and Grosvenor Lanceolate and Plainview points. Even more intriguing, last years excavations unearthed tools located on upper terraces of the site that appear, on typological grounds, to predate the 11,000-year-old finds.

The Mammoth Meadow site is the target for an Earthwatch expedition this summer, and Earthwatch teams will assist in the Evergreen Creek excavations. While at the site, volunteers camp by beautiful Evergreen Creek at the base of the Beaverhead Mountains, only four miles from the Continental Divide. Meals are prepared by a professional outfitter and cook.

Earthwatchers can participate in “The First Americans” project as a member of one of four teams:

Team I: June 29-July 12
Team II: July 15-28
Team III: July 1-28
Team IV: August 16-21

The staging area is Dillon, Montana; Each Earthwatch participant’s share of expedition costs is $950.

SUGGESTED READINGS

On Possible Cremation at Crossfield


On SUMMIT ’89: The Public Trust and the First Americans


On Of Apples and Archaeology

On Anzick Collection Reunited

Additional Information on Clovis Caches
additional information on Clovis Caches

Hardware incompatibility

Unraveling Cause of Cultural Extinction

POSTHASTE: Send address changes to: Mammoth Trumpet, 495 College Ave., Orono, ME 04473.

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POSSIBLE CREMATION AT CROWFIELD

...the communication of the dead is tongues with fire beyond the language of living.

T.S. Eliot, Four Quartets

In a plowed field about 24 km southwest of London, Ontario lies what may be one of the earliest cremation sites in the New World. The Crowfield Paleoindian site was discovered and excavated by Dr. B. D. Deller, presently associated with the Department of Anthropology, McGill University, Quebec, and Dr. Christopher J. Ellis, Department of Anthropology, University of Waterloo, Ontario. Within the Crowfield site is a roughly circular area, about 1.5 m in diameter, bearing the nondescript title of Feature 1. What belies the simplicity of its description, however, is that Feature 1 contains over 5,000 lithic fragments which have so far been reassembled into some 200 stone artifacts, including fluted points. These tools are neither defective nor worn out, but instead seem to have been deliberately broken and placed in a fire. Although the excavators recovered no bone or charcoal, doubtless because of the plowed conditions in southern Ontario, the most logical inference is that Feature 1 is a cremation burial, and the artifacts a stone "tool kit" for the afterlife.

Brian Deller began searching areas of southwestern Ontario for Paleoindian sites in 1968. "When I first started seriously looking, there were no early paleoindian sites known in the province of Ontario. My initial survey work was based on speculative models used to predict the location of the sites. The more sites we found, the more we developed the models."

The site is located on a landform known as the Caradoc Sand Plain. "During the glacial retreat from this area, a series of lakes formed about 13,000 years ago, one of which was Lake Whiteman," Deller explains. "A proglacial river emptied into the lake and discharged a lot of debris." Following the disappearance of the lake, sand which had settled to the lake bottom became the Caradoc sand plain.

The archaeologists discovered the Crowfield site during a survey for Paleoindian sites in the spring of 1981. "We found two small fragments of artifacts manufactured from Collingwood chert," Deller recalls. "In the area of the site, the Paleoindians were the only prehistoric group who used this raw material, so we were quite certain that we had found a fluted point site. We searched more carefully the plowed field in which we had found these two fragments, and found 15-20 heat-shattered fragments of Collingwood chert within a small area."

"We ended up spending about two weeks in the field in 1981," Deller says. He then returned for the entire summer of 1982. Excavation commenced following the mapping of a two-meter grid system onto the site. Feature 1 was discovered within the second square to be excavated. Of the nearly 5,000 tool fragments recovered from the feature, 86% were of Onondaga chert, a chert commonly used by people of many different time periods in southwestern Ontario. Onondaga chert comes from the north shore of Lake Erie, about 100 km east of the site. The remaining 20% of the tools were manufactured from Collingwood (Fortis Hill) chert, whose source is about 200 km to the northeast. In previous years at the Crowfield site established not only the existence of a Paleoindian component, but also indicated the inhabitants of the site followed a pattern common in the Great Lakes region of frequently transporting their raw materials long distances.

This pattern is particularly significant in light of the fact that the artifact inventory includes about 50 tools, one of which 40 preforms: lithic materialized partly-splayed or celt-shaped stones somewhere between upshaped stone cores and fully finished tools. People who transported their raw materials 100-200 km are going to want them shapped to as usable form as possible; at the same time, they will not wish to remain stuck at the quarry shaping them into final form. Blanks and preforms are a master solution, as they can be worked into any of several possible tools to provide a margin of flexibility.

The remainder of the artifact inventory recovered so far consists of a few (the process of assembling the still going on) consists of 15 backed tools (modified along one edge to facilitate hafting or ease in hand-ling), 2 drills, 24-25 side scrapers, 2 beaked scrapers (longest-pointed implements, with the working edge along the inner margin), 3-4 gravers (spurred tools), about 5 channelled flakes, 2 large alternating blades, 20 bifaces, approximately 30 fluted bifaces (Crowfield points), and about 7 distinctive dixie-shaped biface.

The 50 Crowfield points have both a morphological and chronological significance. "Before I found the Crowfield site, I was aware that there was that point type in existence in southwestern Ontario and in New York State; often they have been called "pumpkin seed" points. But previous examples had all been isolated surface finds; there wasn't a site type for them. A few base camps have now been located, including one by myself. But at the moment, the understanding of the complex develops mainly from the Crowfield feature itself," Deller explains. Crowfield points are probably the widest and thinnest ever reported in central North America. Expanding from a narrow base, they reach maximum width at or beyond the midpoint, with fluted scars extending to the tip.

Although hampered by the lack of an absolute radiocarbon record, Deller and Ellis have tried to fit the Crowfield cultural complex into a total Paleoindian picture. It includes several other cultural complexes frequently found in southwestern Ontario: the Gainey, Parkhill, and Holcombe. "We've created a temporal model whereby the oldest complex that we have good data for is in southwestern Ontario, and indeed adjacent Michigan and northern Ohio, would be the Gainey complex, named after the Gainey site in Michigan," Deller says. Gainey points are the largest of the three point types, with parallel lower lateral edges, and fluting which is often shorter than that of the latter Barnes points (which are diagonal of the Parkhill complex). Deller continues, "I would speculate that the Gainey complex is our area dates to ca. 10,800 years ago, and was probably contemporaneous with Lake Algonquin, which was in existence 11,000-10,500 years ago."

Although Barnes and Gainey points differ, they integrate one into the other. Deller says, "I suspect that they were closely related in time and represent a continuous habitation of the area." Barnes points are slightly smaller and a lot thinner than Gainey points; their ears are knobby and their fluting longer. Their lower lateral edges taper towards the base, and the widest point is at the mid-section. The users of Barnes points probably inhabited the area until the draining of Lake Algonquin. "Around 29 significant Paleoindian encampments have been discovered along a 15 km stretch of the former shoreline. It appears that the lake played an important role in determining settlement patterns. I believe the Parkhill complex people simply went on a seasonal round intercepting the animals to that area along that corridor we have located 15-16 fairly large base camps."

Crowfield points are radically different from the two earlier types. Deller theorizes that the warming trend which caused Lake Algonquin to drain probably introduced new flora and fauna into the region. Then, "Perhaps the earlier people moved elsewhere, for I see a definite break between Barnes and Crowfield. Now, they might be the same population that simply adopted ideas from elsewhere, or Crowfield might represent a new penetration into the area." At any rate, I think it's safe to say that the Crowfield people represent a different adaptive strategy than the earlier fluted point complexes. Crowfield peoples are thought by Deller to slightly postpone the draining of Lake Algonquin, around 10,500 yrs B.P. Points are extremely thin, have pentagonal outlines, and tend to have planar cross-sections and multiple flute scars.

A fourth point type in the temporal sequence, Holcombe points, named after the Holcombe site in Michigan, strongly resemble Crowfield points, but are unfitted. Evidence suggests that these tools, which are also common in southwestern Ontario, are slightly later than Crowfield.

Continuing with the subject of the contents of Crowfield Feature 1, Deller remarks on one tool category that is conspicuous by its absence. "I think it's quite significant that in this wide range of tools we found no end scrapers, nor did we recover any blanks that were suitable for manufacture into end scrapers. End scrapers are one of the most commonly occurring Paleoindian implements. It could just have been a season of the year when they weren't using them, but if the feature is a cremation, I would perhaps interpret the burial as that of a male. The dominant tool types are those that we would generally associate with male behavior—especially the fluted points and fluted knives. It could have been that end scrapers were female-associated elements."

The fire damage to the artifacts is the one of the few clues remaining that there was, in fact, a cremation pit. No fire-redens or other discernable sign of present in the soil. "But the soils of the Caradoc Sand Plain are very acidic," Deller notes, "and most organic materials simply deteriorate or dissolve over the years. I know of many Archaic and Woodland features that were definitely hearths, but where there's no bone or..."
OF APPLES

(CONTINUED FROM PAGE 1)

Events attending their final disposition and their function might yet be revealed by associations, or by direct evidence for their uses. Ultimately, the discovery promised new revelations of a time long past, when people pursued Pleistocene beasts by the banks of the cold Columbia.

THE EXCAVATION

Hopes of revealing secrets of the past like these keep us alive, keep us guessing, and keep us searching. It would require a remarkable and dedicated team effort to make such a potentially extraordinary site. Faculty and students from Washington State University’s Anthropology Department responded to the call. My colleagues, Drs. Bob Ackerman, Dick Daughtery, Carl Goudron, Ken Reid, and Allen Smith, have collectively well over a century of excavation experience in Alaska, on the Great Plains, and especially in the Pacific Northwest. As field foreman responsible for everyday details, Matthew Root and James Gallison, advanced doctoral students, had the most essential job of all. Marilyn Wyss, with help from Anita Hansen and Linda Switzer, kept samples moving through the makeshift laboratory she had organized in the shop of the B & R Orchards.

Other archaeologists with special expertise also volunteered. Dr. Jerry Gilm and Pete Rice came from Eastern Washington University, and Dr. Mel Aikens from the University of Oregon. Former students Peter Van de Water and Scott Williams arrived from Reno and Honolulu. Adelin Fredin, Katherine Womer, and John Dick of the Colville Confederated Tribes joined us briefly as the dig began. Adelin and I talked many times before and after the excavations about the importance of such finds to Native Americans, and the respectful but thorough scientific treatment that the site deserves.

The Pacific Northwest team was drawn up for action, but still without benefit of specialists on Paleolithic archaeology from other areas of North America. After all, Clovis is a continent-wide phenomenon. Whatever we were about to uncover should be witnessed by those most likely to understand it from experience—or at least recognize that they didn’t. So, leading Paleolithic authorities from the Southwest, Plains, and the East came to see and to help, and ended up doing much of the digging. The Clovis crew was completed with Drs. Vance Haynes, University of Arizona; George Frison, University of Wyoming; Dennis Stanford and Margaret Jodry, Smithsonian Institution; and Michael Grandy, Buffalo Museum of Science.

We went prepared to appraise the extent and importance of the site with a week-long excavation. The Richhey-Roberts Clovis Cache had remarkable potential for revealing the ways of the ancient mammoth hunters. On the other hand, the few objects recovered months before could have been about all that survived the vagaries of nature and agriculture. Though these tools were spectacular, they lacked association. We knew that their importance should increase exponentially as their context became clearer.

On Friday, April 8, 1988, a crane removed the concrete slabs. Field foremen Matt Root and Jim Gallison began the mapping. For the next week they would sleep on the site to guard it through the night. The rest of us camped out in the orchard near the shop-turned-laboratory; dignitaries from afar shared the Roberts’ home.

The next morning, after ice left the apple trees, I assisted John Maser and Kirk O’Donnell, geophysicists from Seattle, in their ground-penetrating radar survey of the site area in the orchard and in Leonard Barkerman’s wheat field across the road. This recent addition to the archaeologist’s bag of tricks allowed us to quickly prospect for buried objects which had different densities than the surrounding sandy matrix, and to preclude large areas from further consideration.

The day warmed, the ground dried, and the radar readings became more reliable. They forestalled additional artifact concentrations next. By Sunday afternoon, testing confirmed this prediction when Mel Aikens found a very large Clovis point that nearly matched one recovered by Mosen the year before. But this artifact was in place! It seemed more and more likely that the Richhey-Roberts Clovis Cache would indeed produce the first such assemblage in the Northwest to be seen in situ by archaeologists with the knowledge to decipher its meaning.

Our Paleolithic specialists arrived from Denver early Monday afternoon in time to see Dick Daughtery find a cluster of three Clovis points. Two of these points were about 9 inches long (25 cm)—among the largest ever recovered. Dick insisted we trade places; I agreed and was stunned speechless in a special moment by a mate “matched” pair of translucent chalcedony spears points.

If these tools were to speak as the Sphinx to Tuthmosis, what would they say of magic, ceremony, hunts, and happiness, or the Clovis perception of a peaceful earth and life eternal? At the very least we had uncovered Paleolithic art as finely fashioned and awe-inspiring as any known to the Western Hemisphere. Like the Upper Paleolithic cave paint-

ings of the Old World, the translucent Clovis points whisper the wonder of humanity—to everyone, everywhere.

It was time for a conference. The Richheys and Roberts offered their home and refreshments. We sat in dusty clothes on plush white divans to contemplate the past and discuss the future. It had happened; we had found marvelous undisturbed remains, and the ground-penetrating radar promised more yet. The site was incredible.

We were not, however, prepared for major excavations, only to learn if they might be needed. Therefore, wasn’t it time to consider completing only the excavation units started and to shift efforts away from expected artifact concentrations? We decided to explore the limits of the site and unusual radar readings (one of these turned out to be a rubber boot). We could return for a major excavation another day. Agreement was nearly unanimous. After only three days of digging, we prepared to expose and photograph what was already found, and then begin backfilling.

The Richhey-Roberts Clovis Cache had become something beyond imagination. It was too important to disturb without additional time and planning. Dennis Stanford called it the most important Paleolithic discovery of the century. Vance Haynes was more conservative, ranking the site with the discoveries near Clovis, New Mexico in the 1920s and 30s. George Frison just shook his head; said he had never seen anything comparable. Work was finally halted altogether when we encountered more bone fragments.

There was so much to be learned and so little information, but that didn’t stop the speculation. The bone and antler tools with decorations and beveled ends became, in the minds of the beholders, bone points or foreshafts, chisels, antler wedges for splitting wood, or pressure flakers for finishing Clovis points. Because of their size and perfection, the outlash stone tools were proclaimed ceremonial—never intended for everyday uses. Never mind that some may have been broken in use, others showed wear, and edges had been ground to prepare the spear points.

"If these tools were to speak, what would they say of magic, ceremony, hunts, and happiness, or the Clovis perception of a peaceful earth and life eternal?"
AND ARCHAEOLOGY

Archaeologists and other experts from around the country gathered in a Washington Apple orchard last April to assist with the excavation of an amazing cache of Clovis artifacts. The few tantalizing traces thus far unearthed suggest that further excavations could reveal much larger deposits. A few of the large stone points can be seen in the center pit, as they were found. (Photo by Pete Rice.)

The two drawings (lower right and lower left) show the actual size of a pair of fluted points recovered during the excavation. (Drawings by Sarah Moore.)

for halting. Dim markings and organic residues on several Clovis points also proclaimed their practical purposes.

The site was called a simple tool cache, a habitati on, the last resting place of a Clovis chief, a flintknapper's hut, a hunting shrine, a shaman's tent frozen in time, or even a hoard. I espoused the shaman's tent notion, and suspect that he left, with great white bear as guardian spirit, to follow the caribou home. On Friday, April 15, we removed the last of only five stone artifacts collected during the excavation, and took sediment samples and latex peels from excavation walls. These peels hold a permanent record of the site's sediments and stratigraphic sequences that can be studied later under ideal laboratory conditions.

Mack Richley maneuvered the tractor with the front-end loader as we back-filled the excavated squares. With that completed, everyone left. The orchard was quiet except for the buzz of bees exploring spring's first apple blossoms.

The few days' testing had revealed several stone and bone tools, in addition to those previously recovered by the orchard workers. The largest Clovis points came as "matched" pairs in translucent chalcedony and banded chert. At the very least, these are spectacular examples of Paleolithic art, inspiration for reverent contemplation, and eternal testament to the incomparable skill of a Clovis flintknapper.

POSTLUDE

Near the end of the last ice age catastrophic floods, glacial outwash, ice-rafter debris, and landslides cloaked the landscape of the cold Columbia, while volcanos in the Cascades occasionally spewed out ash that cloaked sagebrush in the vast frigid steppe to the east. Soon after, Clovis people trod the Great Terrace, left high and dry by the down-cutting Columbia. They paused on the gentle slope, near the present Panghorn Memorial Airport, and looked northward to the high basalt rim beyond a small valley. We don't know why, or how many times they stopped there. What they left, however, gives reason to ask what drew them to this particular place.

The Richley-Roberts Clovis Cache is remarkable in the large number and size of its Clovis spear points. Though we yet don't know what the site represents, it is clearly more than a simple tool cache. More importantly, these artifacts are in place; their age and context will surely be known. The site is also a sign that much remains to be learned about the fluted point makers of the Pacific Northwest. It has unparalleled potential for revealing their lifeways, and something of their beliefs as well. This improbable discovery, and excavations in an apple orchard last April, have perhaps brought us closer to the core of Clovis cosmology.

Editor's Note: The preceding is adapted from an article which appeared in the Winter, 1989 issue of Universe (vol. 2 no. 1 pp. 2-8), published by the Washington State University Graduate School.

UPDATE

In a recent interview with the Mammoth Trumpet, Dr. Mehringer discussed developments at the Richley-Roberts Clovis Cache and possibilities for the future of the site. Thus far, the cache has yielded 10 bifaces, 2 stone knives, 1 small flaked tool, 2 end scrapers/flutes, and 14 complete Clovis points—all within two square meters. The 14 projectile points range in length from 4 3/4 inches (12 cm) to an astonishing 9 1/16 inches (33 cm).

"The question foremost in many peoples' minds," Mehringer says, "Is when are you going back?" Although an excellent team was committed to completing excavations at the Richley-Roberts Clovis Cache during 1989, future investigations now await clear agreements with the landowners on such matters as final disposition of the artifacts, ready availability of tests, and arrangements for study of whatever is found—in short, predictability. "There can be no mistakes or misunderstandings— from start to finish," Mehringer hastens to add, "we've had great cooperation with the landowners thus far. However, our understandings have tended to be somewhat incongruent.

"If, or when, the site is reopened," Mehringer speculates, "the Richley-Roberts Clovis Cache will reveal important evidence about the Clovis culture. Despite the prevalence of Clovis artifacts, we know very little about their makers. It may well be that the Richley-Roberts Clovis Cache will bring us closer to an understanding of these early peoples."

Several WSU colleagues are cooperating in this study. Carl Gustafson is describing the decorated bone tools, and Steve Samuel is preparing computer maps. Nick Foit, chairman of WSU's Geology Department, is investigating mineral crusts on the artifacts, which may tell something of how the artifacts were deposited and of their environmental setting over the last 11,000 years.

Bruce Huckell, of the Arizona State Museum, and Bruce Bradley, from Crow Canyon Archaeological Center, visited Washington State University recently with George Frison to complete descriptions of the stone artifacts from the cache. In addition, organic residues recognized on the artifacts, when analyzed by Margaret Newman, University of Calgary, may tell which animals, if any, were dispatched or butchered. (See "Blood will Tell," Mammoth Trumpet 3:3, for more on blood residue analysis.)

"Right now, the five artifacts removed during testing can be replaced in the ground in their original positions, because very little of the site has been disturbed. We can't, however, open up a larger area without completing the excavations. If we start the job," Mehringer continued, "we'll have to finish it. Otherwise too much information would be lost forever. Although the site is small, maybe 10 by 20 meters, such an excavation will take considerably more man hours and good will. In addition, it will require a strong team effort, with all the expertise and knowledge that can be mustered. "I'm not certain about the landowners' plans or where we go from here," Mehringer muses, "but I'm confident it will be in a good direction."

—Karen L. Turnmire
ANZICK COLLECTION REUNITED

(Continued from page 1)

ping work, the two men closely examined the knife, as well as the rock and dirt surrounding it. Returning to the site at the base of the cliff with a shovel, they uncovered a small, compact site cache containing close to 100 stone and bone artifacts.

For a while, they kept the knowledge of their discovery to themselves. Eventually, however, Sarver and Hargis contacted an anthropologist to find an archaeologist to identify the artifacts, named Jeff Skillman, in the nearby town of Willsill. Skillman reported the find to Lahem, who was then a graduate student at Montana State University. Lahem looked over the collection. "They wouldn't tell me where they'd found the tools," Lahem recalls. "They showed me the materials and I explained to them the importance of it and the site.

At about the same time, Sarver and Hargis met with 24 landowner, Dr. Melvyn Anzick and told him what they had found. The three men agreed to split the collection three ways. The men also consulted a university archaeologist. "He pretty much washed his hands of the site," Lahem says now. The archaeologist maintained that because the tools had not been excavated by professionals keeping appropriate records, the context, and therefore the value of the findings, had been lost. He believed that the tools, now all mixed together, could be more than a jumble of artifacts from different periods. Disappointed, Anzick and his partners did nothing further until 1971, when Anzick invited Lahem to look at the collection again.

"That's when I contacted Robin Bonnichsen, who was a graduate student at the University of Alberta in Edmonton," Lahem says. Lahem was by then a graduate student at the University of Calgary and had met Bonnichsen at a meeting on stone tool technology. Lahem wanted to apply Bonnichsen's expertise in lithic technology to the collection. On seeing some of the artifacts, Bonnichsen became very interested in the tools, because he could see that they shared similar baking patterns. Like Lahem, he believed that the tools were a unified collection of tools from one time period and not a random assemblage of tools from different periods.

The two graduate students returned to Willsill, where Anzick and his partners pointed out the site. Lahem and Bonnichsen began excavating the original site, as well as new test pits. Perhaps the most notable discovery was a zone of red ochre, revealed by the wall of a test pit. The ochre was about one centimeter deep and covered an area about one and a half meters by one and a half meters. This same ochre had been used in the tools themselves.

In addition to working on the excavations, Lahem and Bonnichsen examined the collection, Bonnichsen concentrating on the tool manufacturing process. The collection was extraordinary, not only in the number of tools it contained, but in the range of variation in lithic technology that it revealed. The complete set of tools contained 7 projectile points, about 80 bifaces, 4 bone shafts, scrapers and flakes that had been used as tools, partial bifaces, 1 end scraper, and a spurred end scraper. All of the tools were complete, ranging in size from small hand-held scrapers to large bifaces that were up to 0.1 inches (25 cm) long, 5 inches (7.5 cm) wide, and 1/2 inch (1.25 cm) thick.

Another intriguing aspect of the collection was the realization that the bone tools had been deliberately placed before they were placed in the cache. These tools, the layer of red ochre, and the discovery of a pieces of human bone, suggested that the cache may have had ceremonial significance.

The completeness of the collection also made it unusual. Lahem examined all the Clovis tools from Clowl normally came from mammoth kills where you just have waste products and broken points, but this was a complete Clovis assemblage.

As their knowledge of the collection grew, the two students tried to interest other archaeologists in the Anzick site. They soon found, however, that the academic community's attitude towards the site was one of still skepticism. As Lahem puts it, "The academic community, being somewhat conservative, said, 'Well, nothing like this has ever been found before, therefore it can't exist.'" Some scholars echoed the objection that the site had no value because it had been improperly excavated by the construction workers. Furthermore, Lahem and Bonnichsen were regarded as inexperienced graduate students who had not yet "made a name" for themselves.

The two archaeologists were not about to give up, however. The turning point finally came at a meeting of the Society of American Archaeologists in Norman, Oklahoma, in 1971. After presenting a paper, the two graduate students showed some of the artifacts which Anzick had lent them to others at the conference. Upon examining the collection, the senior scholars concluded that the tools were indeed Clovis, and not a mixture of tools from different time periods.

Lahem and Bonnichsen were encouraged by knowing that other scholars were finally taking the Anzick site seriously. However, this did not materially change the fate of the Anzick collection. The site continued to be split among three different owners in three different locations. The possibility also remained that the collection would be further broken up, and sold to new owners who might not allow their acquisitions to be studied. Lahem and Bonnichsen received no funding for their research. Study of the Anzick material was done during spare time, and when they gained access to the collection. In the early 1970s, Den- nis Stanford of the Smithsonian Institution created plastic casts of the artifacts which are now housed in the Smithsonian Institution and the University of Maine.

Since 1971, however, the importance of the site has been clearly established. It is now recognized that the Anzick site produced the most complete collection of Clovis artifacts in the New World. At the time of its discovery, no other evidence of Clovis occupation had been found in that region. The site also provided the earliest evidence of religious belief and practice in North America.

The exact purpose of the site is unclear. Some scholars have concluded that the tools were never intended for ordinary use, but for some sort of ceremonial function. Lahem disagrees. He believes that these are ordinary tools employed to hunt and butcher a large animal like a mammoth. As evidence, Lahem points out that some of the large tools show use wear. However, he also believes that these tools were placed in the cache in a religious ritual of some sort.

In the twenty years since he first became involved with the site, Lahem never gave up hope that the owners of the tools might someday place the collection into safekeeping. During that time, many institutions and private collectors offered to buy the tools from their owners. Perhaps in light of Lahem's persistence, the owners never did sell.

Finally the situation changed. Lahem describes the event: "Last winter I taught a course at the McLeod school, a little rural school, at their 8th class. I also gave Saturday lectures, and I asked Dr. Anzick if I could borrow the artifacts to show . . . because we were teaching. After I showed the artifacts, I asked the people to thank him for letting them see the artifacts, and the kids all wrote him thank you notes."

He called me and said 'Larry if the collection belonged to you, what would you do with it?' And I said, 'Well, if it was up to me, I'd take it to the State Historical Society.' Lahem gave his reasons for choosing a state-owned institution, and somehow that's what convinced him". Lahem and others then got in touch with the two other owners, Calvin Sarver and Fay Case (widow of Ben Hargis), who ultimately decided to place their part of the collection in the museum as well.

While pleased with the outcome of his twenty years of patience and persistence, Lahem notes that there is much work remaining to preserve archaeological finds. Although laws protect sites located on Federal land, there are no laws in Montana which protect sites found on private land. "I mean, even the best intentions of landowners cannot preserve a site. Lahem gives an example: "Right now, here in Montana, the latest thing is using archaeological sites to sell land for real cheap. An owner may find a site that I did my dissertation on was supposed to be set aside by the landowner for future research, but the landowner passed away and ended up in a subdivision. They used the site to advertise the property and took quotes of my dissertation about the age of the site. It makes you feel pretty sad," he says quietly. "It's a real loss."

Lahem, who presently runs an archaeological contract firm, frequently teaches classes on archaeology to schoolchildren and community groups. It is clear that he believes in education about the importance of the archaeological richness around them. He puts particular emphasis on teaching children. "Maybe someday, he says, 'they'll be legislators and they'll know you shouldn't use archaeological sites to sell land.'"

—Nancy Allsion

ANZICK COLLECTION ON DISPLAY

Thanks to the generosity of Dr. and Mrs. Melvyn Anzick, Mrs. Fay Case, and Mr. Calvin Sarver, owners of the Anzick Clovis Cache, the Anzick collection is now available for public viewing at the Montana Historical Society Museum. The Anzick tool assemblage forms part of a larger exhibit entitled "Montana Homeland." This display covers the time span from the earliest evidence of prehistoric activity in Montana to life today. The exhibit, which opened last fall, culminates a three and one-half year planning period, and marks Mont- tana's 100th year of statehood.

The Montana prehistoric collection represents a close cooperation between State Historical Preservation Office staff and museum planners. In addition to the remarkable Anzick artifacts, museum visitors can also view casts of tools from the 11,300 year-old Clovis site. A realistic portrait by Blackfoot artist Gary Schildt, depicting a prehistoric family band moving across Montana's landscape, allows visitors to better make the connection between the exhibit's ancient stone tools and the people who used them.

The Anzick collection and other reminders of Montana's past can be viewed from 9:00-5:00, Monday through Saturday (summer hours include Sunday 9:00-5:00). The Montana Historical Society Museum is located at 225 North Roberts St., Helena, Montana 59620.

CURRENT RESEARCH IN THE PLEISTOCENE

Volume 6, 1989

Volume 6 of this annual journal contains summaries of summaries from the globe reporting ongoing research from the several interdisciplinary sciences as they relate to the question of the earliest people in the Americas. Topics covered in this volume include: Archaeology, Lithic Studies, Paleoanthropology, Paleoecology and Paleoenvironments—Plants, Invertebrates, Vertebrates, and Geosystems. Articles are cross-referenced in subject author, and geographical indices. Volume 6, 1989 due out July, 1989

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Dear Members and Friends of the Center,

Eight years ago, we invited you to join us on a new and exciting venture. Our goal: to find and follow back into time the faint traces of the first people to inhabit the Americas. You joined us, supporting us with your membership and enthusiasm.

And where are we today? We are on the threshold of the First World Summit Conference on the Peopling of the Americas. Forty scholars from around the globe will present new and potentially revolutionary information to our understanding of the first peopling of the Western Hemisphere. All who attend SUMMIT '89 will have the opportunity to gain a global perspective—a perspective that will better allow us to plan a coherent and realistic strategy for conducting research and preserving the archaeological record that documents our heritage.

Who is the conference for? It is for you. Scholars, teachers, students, public policymakers, avocational archaeologists, and interested citizens will soon be coming to Orono, Maine. SUMMIT '89 will have something for all. The conference opens Wednesday evening, May 24, with a public talk by popular author Jean Auel, focusing on the public and prehistory. Three days of illustrated presentations will follow.

An Awards Banquet Friday evening will honor several avocational archaeologists who have made significant contributions to the understanding and preservation of America's earliest archaeological record. A Patrons' and Presenters' Dinner Saturday evening features a buffalo barbecued over a mesquite fire. Special friends and supporters of the Center and SUMMIT '89 will have an opportunity to meet each other and the invited conference speakers in a congenial social setting.

Sunday, May 28, is devoted to an all-day symposium entitled "The Public Trust and the First Americans." This session will focus on the current status of public policy and private sentiment about the archaeological record. It is an open forum in which to express the need for planning research, conservation, and education policy to insure the protection that this irreplaceable resource deserves.

Additionally, SUMMIT '89 features a poster session illustrating important sites and new developments. And, for the first time ever, some of the oldest and most important artifacts bearing on the question of the peopling of the Americas will be on display. This combined artifact exhibit includes collections from Asia and South and North America. It is a once-in-a-lifetime opportunity to see the evidence for yourself.

The schedule of events for both the General Session and the Symposium, as well as program highlights, travel information, and a registration form are to be found in the following special section.

The Center's mission is to "stimulate and organize research into the earliest peopling of the Americas and to tell that story to the public." SUMMIT '89 promises to help fulfill that mission. We couldn't do it without your continued support. As thanks, we offer you a special Members' Discount on conference registration fees, if you act right away. Please join us for what promises to be an exciting and rewarding step forward into the past.

I look forward to seeing you in May.

Robson Bonnichsen
Director
WEDNESDAY–SATURDAY MAY 24–27

PROGRAM—GENERAL SESSION

I. Wednesday May 24
Registration in Hilltop Commons Lobby, Orono campus
3:00–7:00

EVENING
Welcoming address by Chancellor Robert L. Woodbury,
Hutchins Auditorium, Maine Center for the Arts
Message from the office of the Governor of the State of Maine
Jean Auel "The Public and Prehistory"
Reception at the Bodwell Lounge, Maine Center for the Arts

Thursday May 25
Registration in Hilltop Commons Lobby
7:30–12:00

MORNING
Welcoming Comments

Presentations I. METHODS AND THEORIES
David E. Young et al. "Exploring the Usefulness and Validity of the Cognitive Approach to Lithic Analysis"
Thomas W. Stafford "Accelerator C-14 Dating of Human Fossil Skeletons: Assessing Measurement Accuracy and Experimental Results"
R.L. Taylor "Frameworks for AMS C-14 Dating of Bone"
Merritt Ruhlen "Linguistic Evidence for the Populating of the Americas"
Enőke Szathmary "Modelling Ancient Population Relationships from Modern Population Genetics"
Christy G. Turner II "Relating Eurasian and American Populations Through Retraced Morphology"

AFTERNOON
DISCUSSIONS:

Jane Kelley
Swante Paabo
Rolf P. Beuken

Presentations II. ASIA
Xianzi Wu "Pleistocene Peoples of China and the Populating of the Americas"
Takuru Akausa "Pleistocene Peoples of Japan and the Populating of the Americas"
Yung-jo Lee "Report on the Upper Paleolithic Culture of Suyanggae Site, Korea"
Antoni Derevianko "The Mousterian and Early Paleolithic of the Alta"
Nikola L. Dzedov "The Projectile Point Tradition of the Late Paleolithic of Northern Asia and Its Coming to Northern America"
Chen Chun "A Preliminary Comparison of Microblade Cores between North China and North America"
Reception at Bodwell Lounge
Dinner at Hilltop Commons

EVENING
Participant Workshop in Memorial Union:
Exhibit and discussion of key artifact collections

Friday May 26
MORNING
Thomas D. Hamilton "Late Pleistocene Environments and Populating of Eastern Beringia"
DISCUSSIONS:
Fumiko Ikawa-Smith
Richard Davis

Presentations III. NORTH AMERICA
Richard Moran "The Populating of the Americas as seen from Northern Yukon Territory"
Ruth Gruneh "The Pacific Coastal Route of Initial Entry: An Overview"
Michael Wilson "Early People in Canada: An Overview"
George C. Frison "Pleistocene Prehistory of the Northwestern Plains"

AFTERNOON
Bradley T. Lepper "Pleistocene Peoples of the Midcontinental North America"
R. Michael Gennaly et al. "What is Known and Not Known about the Human Occupation of the Northeastern United States until 10,000 B.P."
Alan L. Bryan and Donald R. Tuohy "Final Pleistocene/Early Holocene Cultural Adaptations to the Great Basin and the Snake River Plain"
Albert C. Goodyear "Pleistocene Peoples of the Southeastern United States"
Dennis Stanford "Humans and Late Pleistocene Environments in the Central Plains and Southwestern United States"
David J. Meltzer "The Discovery of Deep Time: A History of Views on the Populating of the Americas"

DISCUSSIONS:

George C. Frison
Charles Schweger
Mixer at Bodwell Lounge

Awards Banquet
Saturday May 27

Presentations IV. CENTRAL AND SOUTH AMERICA
MORNING
Jose Lorenzo and Lorena Miramontes "The Populating of the Americas and the Inhabitants of Mexico during the Upper Pleistocene Period"
Gonzalo Correal Urruge "Early Man in Colombia"
Gerardo I. Ardila-Calderón "Pleistocene Peoples of Northwestern South America"
Ernesto Salazar "The Early Populating of Ecuador"
Augusto Cardich "Pleistocene Peoples of Peru"
Pedro Ignacio Schmitz "Pleistocene Peoples of Eastern South America"
Lautaro Nunez and Calogero M. Santoro "Early Peoples of Chile"

AFTERNOON
Nichole Guidon et al. "The Site Toca do Boqueirão do Sítio da Pedra Furada"
Calogero M. Santoro and Lautaro Nunez "Early Human Occupation of the South Central Andes"
Wesley R. Hunt "The Paleolithic Cultures of Uruguay"
Gustavo G. Polis et al. "The Late Pleistocene-Early Holocene Peopling of Argentina"
Thomas D. Dillehay "Pleistocene Peoples of Monte Verde, Chile"

DISCUSSIONS:

Thomas F. Lynch
Thomas D. Dillehay

"Mammoth Mixer" and Dinner at Hilltop Commons

or

PATRONS' AND PRESENTERS' DINNER

SPECIAL EXHIBITS OF ARTIFACTS

Presenters at SUMMIT '89 have been asked to bring important artifacts from their collections for a special display which will be mounted for the Conference. This is a unique opportunity to view and compare some of the significant artifacts that have led scholars to the current understanding of the early populating of the Americas.

Additionally, SUMMIT '89 welcomes the participation of avocational archaeologists, and invites them to share their collections of Paleoindian artifacts with other amateurs as well as with professionals from around the world. This is a rare opportunity to exchange valuable information about early prehistoric sites. Exhibit abstract forms and additional information are available by writing directly to the Conference Developer, 495 College Ave., Orono, ME 04473, or telephone 207/581-3197.
SUNDAY

If you have only one day to spend at SUMMIT '89, this is it! Following a synthesis of current investigations into the peoples of the Americas, as reported in the General Session, moderators will guide panel discussions, with time for questions and comments from the floor. The objective: to define gaps in current research and to establish research priorities for the next decade.

In the afternoon, we will look at the legal environment for addressing archaeological resource management, the need for better public education, and the availability of funding in the 1990s. Finally, we will hear from each of the day's panels a brief, impromptu commentary which focuses on recommendations for action to protect the public trust.

This Symposium is open to everyone—archaeologists, teachers at every grade level, public policymakers, authors, publishers, and taxpayers—all of whom have important roles to play in sharing the stewardship of America's archaeological record.

One-day only registration fee (for people not attending all of SUMMIT '89) is $15. Enclose check with Registration Form and mark the appropriate box.

SYMPOSIUM PROGRAM

Opening remarks by Robson Bonnichsen
Ruthann Knudson "The Public Trust and Archaeological Stewardship"

1. Long-term multidisciplinary research needs and key issues; scientific perspective.
   A. FINAL SYNTHESIS: SECTION OVERVIEWS
      Moderator: Robson Bonnichsen
      Panelists: Jane Kelley Svante Paabo
                 Roelf Beukens Fumiko Iwasa-Smith
                 Richard Davis George C. Frison
                 Charles Schweger Thomas F. Lynch
      B. PALEONENVIRONMENTAL/PALEOClimATIC CONSIDERATIONS
         Moderator: George H. Denton
         Eric Grimm Palaeoclimatology
         George L. Jacobson Jr. Palaeoclimatology
         Cathy W. Barnosky Palaeoclimatology
         William Farrand Pleistoceene geochronology
         Russell W. Graham Vertebrate palaeontology

2. Public Trust and Societal Obligations
   A. LEGAL ENVIRONMENT FOR ADDRESSING ARCHAEOLOGICAL RESOURCE MANAGEMENT NEEDS
      Moderator: Bennie Keel
      John Fowler North America
      Charles McGimsey III Asia, Central America, and South America
      Dennis LeMaster Natural resource management in the Americas

3. Action Needed to Meet Public Trust Objectives to the Year 2000
   Moderator: Ruthann Knudson
   Panelists: Judith Bense John Fowler
              Harold Borns Jr. Bennie Keel
              George H. Denton Dennis LeMaster

4. Closing remarks by Robson Bonnichsen "The First Americans: Challenges into the Twenty-First Century"

MAY 28

B. PUBLIC EDUCATION AND THE FIRST AMERICANS
   Moderator: Leslie Hart
   Judith Bense Public-private partnerships
   Heather Devine School curriculum and archaeology
   Roy A. Gallant Public education through public media
   George S. Smith Public information from government sources

C. PRIORITYIZATION AND FUNDING: GLOBAL RESEARCH SUPPORT OVER THE NEXT DECADE
   Moderator: Harold W. Borns, Jr.
   Patty Jo Watson Federal U.S. funding, scientific research
   Bennie Keel Federal U.S. funding, government resource and land management support
   Martin Magne Government support in Canada
   Margaret MacLean Avocational support
   Stephen Williams Private financial support

SUMMIT '89 REGISTRATION FORM

Use this form to register for Conference attendance, Symposium attendance, special events and/or Center membership. Check the boxes to the left of the events and room packages you are requesting. Please total your fee separately from your Membership fee. (Conference record-keeping is being handled by a separate offer). Note the additional cost of the Awards Banquet and the Patrons' and Presenters' Dinner. Use this form to reserve on-campus (dormitory-style) housing ONLY. Registrants are responsible for making their own off-campus housing and meal arrangements.

Sponsors and other guests are welcome whether registered for SUMMIT '89 or not, however they must pay to attend conference events and for on-campus accommodations and meals. Our recordkeeping requires a separate form for each person using the University's facilities; please use photocopies for spouse or additional registrants.

To order any of the publications or merchandise advertised in the Mammoth Trumpet, send a check for the advertised price, your name and shipping address, and a note telling us what you are ordering to Center for the Study of the First Americans, 495 College Ave., Orono, ME 04473 (Maine residents add 5% sales tax on all books and merchandise).

CENTER MEMBERSHIP

All members receive a subscription to the Mammoth Trumpet and special discounts on Center publications and events. Membership at higher levels helps support the ongoing work of the Center.

Membership categories:
- Regular and Institutional, worldwide $12/year or $35/3 years
- Contributing (premium—Mammoth stick pin) $25/year
- Sustaining (premium—Pin, 10% book discount) $50/year
- Patron (premium—Pin, 50-minute video) $100/year
- "In Search of the First Americans"
- Lifetime (premium—Pin, video, up to 5 free books) $1500

Please keep any premiums you may be entitled to and contribute all of membership, except the direct cost of the Mammoth Trumpet, to the Center.

Total membership fees enclosed $________

Make check for membership payable in U.S. funds to Center for the Study of the First Americans, Mail to CSFA, 495 College Ave., Orono, ME 04473

ON-CAMPUS HOUSING

Check days desired ____________ Wed ____________ Thu ____________ Fri ____________ Sat ____________ Sun ____________
- Single—$17.50/person/night @$17.50=
- Double—$35/person/night @$35=
- Preferred Roommate: ____________

EXCURSIONS
- Bangor Shopping Spree (Friday) $__________
- LL Bean (Friday, return late) $__________
- Bar Harbor Coastal Bus Tour (Saturday) $__________

TOTAL CONFERENCE FEES ENCLOSED $__________

Make check for conference fees payable to University of Maine. Send this form and your check to: CID, 206 Chadbourne Hall, University of Maine, Orono, ME 04469.
SUMMIT '89: THE PUBLIC TRUST AND THE FIRST AMERICANS

Anticipation is mounting at the Center for the Study of the First Americans as the date for SUMMIT '89 draws ever nearer. The conference marks the first time that specialists from the world over will gather to present their findings on the First Americans. The entire conference will be an exciting summary of recent discoveries, new methods, and emerging theories regarding the peopling of the Americas.

Even more important than the current state of scientific knowledge, however, are questions concerning the direction of future archaeological research, education, and resource conservation. To this end, a working symposium entitled "The Public Trust and the First Americans," to be held on the final day of the conference, will focus on the concept of archaeological resources as part of the world's public trust.

The fundamental issue of who owns the archaeological record has not been resolved, either in the United States or in many other nations. Approximately two-thirds of the United States is open to unregulated collecting, site destruction, or both. Looters of archaeological sites within the United States is increasing at an alarming rate. Prehistoric ceramic vessels from the southwest bring $20,000 to $250,000 on the international market. Montana real estate developers advertise the presence of archaeological sites as an enticement to potential purchasers (see "Antick Collection Reunited," at issue).

Mindless vandalism of archaeological sites is a problem of equal, if not greater, magnitude. A price-list standing Anasazi structure in Chaco Canyon bears the words "Led Zeppelin" scrawled across its walls. In Colorado, the U.S. Forest Service estimates that 80 percent of its identified archaeological sites have been casually or commercially vandalized. Professional and avocational archaeologists, themselves, are not above reproach. Too often, sites are improperly excavated or inadequately reported; collections lie forgotten in museum back rooms or state storage facilities. Even under the best of circumstances, only selected remnants of an excavated site are stored for the future.

Archaeological sites are excavated on a piecemeal basis according to local and state concerns. At present, no national plan exists for evaluating the importance of each site. Sites affected by developments on private land usually fall through the regulatory net entirely. Dr. Ruthann Knaub, organizer of the public trust symposium, estimates that 98 percent of all archaeological deposits from before the year 2000 A.D. will be destroyed by the year 2050.

Why should we be concerned about this possible loss of our national heritage? A primary goal of archaeology is, of course, the reconstruction of the past. The Western hemisphere, however, possesses a broad geographic diversity, a diversity that gave shape to an equally heterogeneous collection of native cultures. Archaeology charts the paths taken by these different peoples—their adaptations and innovations, their successes and failures—recovering information that would otherwise be forever lost. If archaeology provides us with a glimpse into the past, however, it also holds the potential to act as a window into the future.

It can provide baseline data for understanding human adaptation to the world's natural resources, from which guidelines can be developed for modern environmental management. Archaeology can also be used to derive information on the packaging of "waste" materials that society has decided to dispose of in earth or water media. Indeed, archaeology possesses the only well-established set of scientific theories, methods, and techniques to address the investigation, evaluation, and remediation of contemporary solid wastes, especially landfills. Finally, archaeology can provide recreational benefits and local income from cultural tourism developments or wilderness experiences.

Archaeology, though, is a non-renewable resource. Once a site is destroyed, whether by looters, vandals, or trained excavators, it cannot be put back. It is therefore imperative, that a comprehensive plan be formulated to conserve and develop our national heritage for the maximum benefit of all.

The concept of the public trust maintains that human history and the archaeological record belong to all people for all time, and that this record shall be used for the benefit of human kind. At present, the idea of a public trust includes a range of natural resources held to be necessary to human welfare. Yet, no national legislation or policy statement exists to ensure that our archaeological heritage is among these national resources. "The Public Trust and the First Americans" marks the beginning of a long-awaited initiative that seeks to identify priorities of research, conservation, and education in the field of early American prehistory. This working symposium is co-sponsored by the National Park Service and the Center for the Study of the First Americans.

The symposium will open with panel discussions designed to define gaps in current research and to establish research priorities for the next decade. In the afternoon, session participants will look at the legal environment for addressing archaeological resource management, the need for better public education, and the availability of funding in the 1990s. The session will close with a brief commentary by each of the panel discussions for recommendations of actions to protect the archaeological aspect of the public trust. Following the conference, a White Paper will be published. It will include a series of research, management, and educational objectives that will be discussed and reviewed by specialists and other interested parties.

The "Public Trust and the First Americans" is open to professionals and laypersons alike. All are encouraged to attend. Together, we have the opportunity and the responsibility to ensure the protection and continuation of America's fragile archaeological record.

Once a site is destroyed, whether by looters, vandals, or trained excavators, it cannot be put back. Human history and the archaeological record belong to all people for all time.

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PROGRAM HIGHLIGHTS

JEAN AUEL

An address by popular author Jean Auel (Clan of the Cave Bear) opens the conference on Wednesday evening. The talk and reception following are free and open to the public.

AWARDS BANQUET

A memorable night is planned for Friday at SUMMIT '89 honoring some outstanding men and women whose contributions to the field of early American prehistory have guided us to the present day. Both professional and avocational archaeologists will be featured. Indicate your choice of lobster or steak dinner on the Registration Form (inside).

If you would like to nominate someone for inclusion on a special Honor Roll, submit a letter outlining your candidate's contributions to early American prehistory. In preparing your letter, consider your candidate's contributions to research, public education, and efforts to conserve the archaeological record. Send all such nominating letters to: Rob Bonnichsen, CSFA, 495 College Ave, Orono, ME 04469.

PATRONS' AND PRESENTERS' DINNER

All SUMMIT '89 registrants are invited to reserve a table at the table for this evening of good food, good fun, and good company. Meet Conference presenters and other special guests over a barbequed buffalo dinner. Just enclose the $100 reservation fee and check the appropriate box on the Registration Form (inside), and we'll send you an official invitation and more details.

OTHER EXCURSIONS

The University of Maine is situated on a wildlife refuge along a beautiful stretch of the Stillwater River, where it rejoins the mighty Penobscot River. The salmon season will be in full swing and fishing or canoe trips are available locally. Excursions to Acadia National Park on the Maine coast and shopping trips to Bangor and the famous outdoor outfitter, L.L. Bean, in Freeport will be organized if enough interest is expressed. See Registration Form (inside) for details.

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OFF-CAMPUS HOTEL/MOTEL ACCOMMODATIONS

Savings at some off-campus hotels and motels are available to all SUMMIT '89 registrants between May 22 and May 29, 1989 providing they identify themselves as SUMMIT '89 registrants. Blocks of rooms have been reserved at the following:

1) Bangor Motor Inn—Single ($32.00 + 7% tax); Double ($42.00 + 7% tax) Telephone: Local 207-947-6211
2) Comfort Inn—Single ($57.00 + 7% tax); Double ($57.00 + 7% tax) Telephone: Local 207-942-7899 or Toll Free 1-800-228-5150
3) University Motor Inn—Single ($32.00 + 7% tax); Double ($42.00 + 7% tax) Telephone: Local 207-866-4211
4) Bangor Motor Inn—Single ($32.00 + 7% tax); Double ($42.00 + 7% tax) Telephone: Local 207-947-0356 or Toll Free 1-800-525-4321

Only the University Motor Inn is located within walking distance of the Conference site.

A limited number of reserved rooms are still available. While we may be able to reserve additional rooms for conference attendees, you should book your room as soon as possible. Late May is the beginning of "the Season" in Maine and accommodations are in demand.

Shuttle service will pick up once in the morning and return once at the end of the day. Taxi service is available 24 hours a day for $10-$15, one way.

NOTICE TO AIR TRAVELERS

You are advised to book reservations to/from Bangor International Airport as early as possible due to heavy air travel during late May. Direct flights to all major U.S. and Canadian cities connect through Boston. All incoming flights on Wednesday, May 24 and Thursday, May 25 and outgoing flights Sunday, May 29 and Monday, May 30 will be serviced by shuttles to/from the Conference site.

Orono is immediately accessible from Interstate Route 95. It is four hours north of Boston by car, and only one and one-half hours from the Canadian border.

CHILD CARE

Neither SUMMIT '89 nor the University of Maine can accept any responsibility for or endorse any child care providers, but a list of providers is available by writing to Conferences and Institutes Division, University of Maine, Orono, ME 04469.
THE FLUTED POINT PEOPLE

A RECONSTRUCTION

We call them "Clovis" because, in the mid 1990s, their large and beautifully fashioned spear points were recovered with the remains of animals at Blackwater Draw near Clovis, New Mexico. They could just as well have been named for Dent, Colorado, where similar artifacts appeared with mammoth bone a few years earlier, or for Fort Laramie, Idaho, where a Clovis point was among Nez Perce "etnographic" items forwarded to the Smithsonian Institution in 1867.

Clovis people descended from immigrants who packed their cultural and technological baggage westward across ice ages steppes onto Beringia. As abundance permitted, these Upper Paleolithic Eurasians came together to renew traditions and to join in ceremonies that guided them through each year and through their universe. They expressed their values and traditions, art, and, no doubt, in songs and legends. They knew well the migratory ways of the ice age mammoths—wooly mammoth, horse, bison and reindeer. They excelled in working stone, bone, ivory, wood and skins. Their warm, tailored clothing and hide-covered houses were a match for northern winters.

These hardy hunters eventually trailed herds over the land bridge to Alaska. By 12,000 years ago, when glacialists of the Canadian Rockies diminished and rising seas drowned the Bering Land Bridge, pioneers continued south to wherever receding ice exposed expanding green vistas and uncontested territory. New opportunities and curiosity lured them through Canada to a world beyond the ice; destiny drew them on to Mexico.

By 11,000 years ago, Clovis peoples held dominion on the plains. They left distinctive signatures in stone by removing flakes from the bases of lanceolate spear points. The resulting broad shallow grooves, or flutes, crisscrossed flared bases and enhanced their ease and strength of attachment.

These fluted points exhibit the unsurpassed skills of the New World's most accomplished flintknapper-artisans. They show variation with time and region, and are known by many names—"Clovis" followed by "Folsom" in the West, "Debert" from Nova Scotia, and "Cumberland" points from Tennessee. Between 11,500 and 10,000 years ago, people who produced fluted points shared in North America's first distinctive and most widespread technological tradition.

The Clovis people were probably opportunistic foragers; their kill sites show their inclinations toward taking bison, horse, and especially mammoth. It is even likely that success of these fluted point hunters contributed to the rapid demise of North America's giant ice age mammals.

The most intriguing aspect of America's fluted point cultures is the rapidity with which they filled the continent—west, east and south to the shores of its southern sea—then north behind retreating glaciers. Whether this expansion occurred through a new or indigenous population, the marvel of this wide distribution is only compounded by evidence of a significant Clovis presence in eastern Washington. Perhaps fluted point peoples were more abundant in the Northwest than their few recorded leavings might suggest.

Unusual concentrations of Clovis artifacts, exposed and mixed by earth-moving machines, come from the Simon and Anzick sites in south-central Idaho and southwestern Montana. Artifacts, exposed around the placas of Alkali Lake, in eastern Oregon, suggest an important Clovis camp there as well. In fact, much of the western U.S. seems covered by a thin veneer of Clovis points—mostly out of place, without context, or in the clutches of casual collectors. In the Pacific Northwest, artifacts discovered at the Richelieu-Robertson Clovis Cache last April remain the only such finds with potential for revealing what can come from artifacts carefully excavated from undisturbed contexts.

—Peter J. Mahringen, Jr.

MAMMOTH TRUMPET

UPCOMING CONFERENCES


May 10-13, 1989 Canadian Archaeological Association Annual Meeting. Lord Beaverbrook Hotel, Fredericton, New Brunswick. 11 sessions, many including papers relevant to the early peopling of the Americas. Contact: Archaeological Services, P.O. Box 600, Fredericton, NB E3B 5W7; tel. 506-453-2756.


July 9-15, 1989 26th International Geology Congress. Washington, D.C. Contact: Bruce E. Hannah, Secretary General, 26th IGC, P.O. Box 1001, Herndon, VA 22071-1001; tel. 703-248-6053.


September 8-10, 1989 Megaliths and Man: Discovery in the American Heartland. Community Building, Hot Springs, South Dakota. Theme: The paleoenvironment of the "Ice-Free Corridor" region through the Late Pleistocene, culminating with the arrival of humans. Contact: Larry Agee, Dept. of Geology, NAU, Flagstaff, AZ 86011.

October 1-4, 1989 Lasbello Lake Landmark: 50 Years of Discovery. Lubbock, Texas. The week-long series of public events will include a symposium focusing on the integration of the geological and biological sciences as a driving force behind the current era of Quaternary research. Contact: Eileen Johnson, Museum of Texas Tech U, Lubbock, TX 79409; tel. 806/742-2641.


November 9-12, 1989 22nd Annual Chacoan Conference. University of Calgary, Calgary, Alberta, Canada. Topic: "The Archaeology of Gender." Discussions will focus on recognition of gender roles and their identification in the archaeological record; theoretical approaches; and the sociology of archaeology. Contact: Dept. of Anth., Univ. of Calgary, Calgary, Alberta T2N 1N4.


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Special pre-publication prices are good only through June 30, 1989. BONE MODIFICATION is expected to be shipped by mid-July, 1989. TAPHONOMY is expected to be shipped by early May. Prices include shipping and handling inside North America. All orders must be prepaid in U.S. funds. Make check or money order payable to Center for the Study of the First Americans.

Send to: CSA, 495 College Ave., Orono, ME 04473. Allow 4-6 weeks for delivery after expected shipping date. Prices subject to change without notice.
POSSIBLE CREMATION AT CROWFIELD

(Continued from page 3)

In addition, "We have found what I term is a habitation site of the Crowfield people approximately 8-9 km east. At the moment it's unnamed, but we do have Crowfield-type points from it, a fairly wide range of implements, including end scrapers, and a considerable amount of debitage."

Returning to the significance of the Crowfield site, Deller says, "It's unique because most Paleoindian sites consist of base camps where tools have been accidentally broken or discarded, or kill sites involving a lot of projectile points and butchering implements. The Crowfield site has a wide range of tools in all stages of manufacture, from flake blanks to finished artifacts; hardly any of them discarded because they were exhausted implements, yet intentionally smashed and burned. The tools are also unique in being related to a single event in time—the fire. Archaeologists can examine these implements and see what the range of variability in a single tool kit is. And finally, it is one of the few known Paleoindian sites that gives us indication of ritual behavior."

There is, in short, much work to be done and too few hands to do it. Deller, who holds a master's degree from Wayne State, Ohio, and a doctorate in anthropology from McGill University, also has a master's degree in education and teaches elementary school. For Deller, archaeological survey and excavation are largely restricted to the summer. Deller can think of any number of projects to be done on the Crowfield complex, and, in fact, extends an invitation to anyone interested in getting involved in the research.

Michael Doban