OHIO FOCUS
ILLUMINATES
WIDER PUZZLE

Conference Examines
1st Peopling of Region

The state of Ohio may constitute only about a quar-
ter of one percent of the land mass of North and
South America, but to participants in the conference
on Ohio's Early Inhabitants last November at Ohio
University, the area clearly represents a microcosm
of the hemispheric puzzle. While the conference,
sponsored by the Ohio Archaeological Council,
focused on the Ohio Valley and Great Lakes, special-
ists who presented papers shed light on the overall
problem of the peopling of the Americas.

J. M. Adovasio opened the proceedings by noting
the great interest in when humans first came to
North and South America with a presentation "Early
Human Populations in the Upper Ohio Valley: A
View from Meadowcroft Rockshelter." Subsequent
participants included Linda Shane, who outlined ve-
etation and climatic changes in the late Pleistocene;
H. Gregory McDonald, who described late Pleisto-
cene fauna in Ohio; Daniel C. Fisher, who discussed
evidence of butchery of the Burning Tree mastodon
unearthed in 1989; Kenneth R. D'Andrea, who
discussed chronologies in Ohio's Paleoindian pe-
riod; and David Brose, who described work at the
Paleo Crossing site. Still other papers included one
by Bradley T. Legge describing problems in locat-
ing Paleoindian sites in Ohio.

Adovasio, anthropologist, geologist, director of
the Mercyhurst Archaeological Institute at Mercy-
hurst College, Erie, Pa., and executive director of
the Archaeology Research Program at Southern
Methodist University, Dallas, is perhaps best known
for his work at Meadowcroft Rockshelter, immedi-
ately east of the Ohio border in Washington County,
Pa. "It has become increasingly apparent even to the
most conservative archaeologists that the so-called
11,500 B.P. 'Clovis' threshold does not signal the
first appearance of human populations in the New
World," Adovasio says in his paper. He believes,
however, it is justifiable to view claims in excess of
20,000 years "with extreme caution or downright
skepticism." Noting that Meadowcroft has been one
of the most controversial archaeological sites, he
said the controversy has arisen because: "Meadow-
croft is the most-intensively studied, most-
extensively published upon, and most-thoroughly
dated of all the potential pre-Clovis sites in the
Americas."

Adovasio said 52 radiocarbon dates at Meadow-
croft are solid evidence. "No other New World loca-
ity and few, if any, Old World localities have so many
internally consistent radiocarbon assays. The 11
attributionally and/or chronologically misplaced strata
at Meadowcroft correctly afford the largest aboriginal
continued on page 3

SITES IN TENNESSEE SUGGEST
CLOVIS ORIGINATED IN EAST

Archaeologists are uncovering evidence that Clovis tool-making
people may have lived in the southeastern United States 12,000 years
ago. If the dates survive scientific scrutiny, their discoveries mean that
Clovis may have originated in the southeastern United States.

Material analyzed from the John-
site (41DV124) on the Cumber-
land River east of Nashville has
been dated at about 12,000 years
old—the oldest so far found in
Tennessee, said John Broster, middle
Tennessee regional archaeologist
for the Tennessee Division of Ar-
chaeology. Broster is more ex-
cited about another Tennessee site.
He believes it, the Carson-Conn-
short site (40CN90), will provide
him a lifetime of work and yield
more evidence of early human habi-
tation in the southeastern United States. So far, it
has produced numerous artifacts and "demon-
strated the existence of an intact Clovis deposit," said
Brositer and colleague Mark R. Norton said in a
recent article submitted to Current Research in the
Pleistocene.

"I'll probably be at that site for the rest of my life," said
Broster of the Carson-Conn-Short site. "I hope
so," he said in a telephone interview. "And I hope
to have a long life." The site is in Benton County, Ten-
ssee, on the edge of Kentucky Lake, which
was created by a dam on the Tennessee River.

The discoveries are part of a Paleoindian survey
begun nearly four years ago. Broster credits ama-
teur archaeologists who took him to the sites
and shared with him artifacts and information they
had collected. A visit from amateur archaeologist David
Johnson resulted in what has come to be known as
the Johnson site, which lies on private land along the
Cumberland River about five miles northeast of
Nashville.

At the Johnson site, hearths and Clovis artifacts
had washed from the banks of the river near its
confluence with a small creek. Among other finds
recovered from 16 to 20 feet below the surface of the
sloping bank were 25 fluted points, one nearly
complete Clovis point, two nearly complete

Cumberland points, numerous early-Archaic projec-
tile points and a dozen unfinished blade tools. Many of
the tools were made from cobbles of Fort Wayne
chert that is found in the small creek. Others were
crafted of Dover chert, the source of which is about
45 miles away.

Two carbon samples taken from the level where
Clovis material was found yielded dates of
12,800 ± 970 years B.P. (TX 6999), and
11,700 ± 980 years B.P. (TX 7000). While those
dates hover near the 12,000-year mark, Brositer is particularly excited
by a third date obtained from carbon on a feature
continued on page 6

A Geneticist Looks at the Peopling of the Americas

Each of the many disciplines involved in the study of
the peopling of the Americas brings its own specific strengths to the
quest for an ultimate solution. Ar-
chaeologists catalog the physical evidence left by
humans, glaciologists determine Ice Age barricades
and passages, palynologists reconstruct past envi-
ronments to ascertain their habitability. These and
many other specialties primarily examine data from
the distant past; in contrast, linguists and geneticists
study evidence in modern peoples.

Physical anthropologists look both at past and
present evidence, studying skeletal remains of an-
cient people and scrutinizing genetic markers of
living populations. As a physical anthropologist spe-
cializing in genetics, Emilie J. E. Saathmary, profes-
sor at the University of Western Ontario, has long
continued on page 4
Assistant Director Is Helping Center Fulfill Outreach and Research Goals

Rebecca A. Foster has become Assistant Director of the Center for the Study of the First Americans at Oregon State University. She is managing daily operations of the Center, according to Director Robson Bonnichsen, and John Young, chairman of the anthropology department, who announced the appointment in January.

Foster, who has a master's degree in museum education from Pennsylvania State University and a bachelor's degree in history and archaeology from Lycoming College, began duties in the Center's new offices the first of February. As the "everyday boss" at the Center, Foster's responsibilities include budget, writing applications for grants, and coordinating fund-raising activities. She will assist in the production of Current Research in the Pleistocene, help facilitate the involvement of volunteers at Center activities and plan traveling displays. She is expected to play an important role in carrying out the Center's goal of public outreach, as well as to further its involvement in research and education.

Foster worked for more than three years with a corporation that designs and produces scientific and historical displays for educational institutions, museums and visitor centers. She has also worked as a curator, editor and writer for historical societies and an association of museums.

Assistant Director Rebecca A. Foster at her desk in Oregon State University's Weniger Hall.

Assistant Director Foster will be assisted by Patty Good, office specialist, who will continue to handle the increasing clerical duties at the Center's office on the third floor of Weniger Hall, one of Oregon State University's principal science buildings. The Center's new laboratory space is on Weniger Hall's second floor and includes newly refurbished space for lithic, faunal, and hair-analysis laboratories.

The Center for the Study of the First Americans, with initial funding from the Bingham Trust, was designed to focus humanistic and scientific research on the people of the Americas. The Center moved to Oregon State University in 1991, where it has adopted a unique organizational framework designed to carry out its missions of research education and public outreach. Through its department of anthropology, the Center remains a separate entity under a partnership agreement that seeks to combine the talent and resources of the private sector with those of the academic community.

MAMMOTH TRUMPET

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Don Allen Hall

C. & C. Woodruff Foundation

The Center for the Study of the First Americans is a non-profit organization. Subscription to the Mammoth Trumpet is by membership in the Center.
Two 1993 First Americans Expeditions to the Mammoth Meadow site in southwest Montana have been scheduled for July 11–24 and July 28–Aug. 11, Robson Bonnichsen, principal investigator, has announced. The First Americans program provides volunteers the opportunity to be part of key research at an important site.

Previous excavations have demonstrated that Mammoth Meadow has a unique record of habitation floors where people lived," said Bonnichsen, adding that prehistoric peoples manufactured stone tools from brightly colored local clays. "Approximately two thousand of these stone artifacts, called "flakes", have been recovered from the site.

Volunteers join a season research team including soil scientists and contribution to the University of Wisconsin, geologists Mert D. Turner and Joanne C. Turner of the University of Colorado, and archaeologist and First Americans specialist Bonnichsen of the Oregon State University. On-site training and evening lectures enhance volunteer understanding of the project's mission and objectives. Volunteers assist with import field activities including mapping and flotation of sediments for hair and other organic remains. They also may assist with field geology.

The Mammoth Meadow camp, which is equipped with complete mobile kitchen operated by a professional chef, is near a beautiful mountain stream. Volunteers bring their own tents, sleeping bags and personal gear. Modern living conditions are supported by volunteer field work and financial contributions. Most of the financial contributions from volunteers can be taken as a tax-deductible charitable contribution.

Lithic Technology Journal Is Reborn

George H. Odell has announced a re-establishment of Lithic Technology, a journal that has not been published since about 1988. Odell, of the University of Tulsa's anthropology department, will become editor of the journal, which is scheduled to appear twice a year starting in the fall of 1993. "There will be two issues in 1993 if folks produce enough papers worth publishing," Odell said in a letter to former subscribers and contributors.

Articles will be peer reviewed, usually by two readers for each paper, Odell said, and he hopes that each issue of the journal will contain 60 to 60 pages. The University of Tulsa is providing financial support. Assisting Odell will be an editorial board consisting of Tom Hester, Harry Shafter, John Fagan, Phil Wilke, Barbara Lentzakis, Randall White, Mike Scott and others. The board intends to include Europeans and South Americans in the publication.

Lithic Technology is to have spring and fall editions with a yearly subscription rate of $17. For information, Odell may be contacted at the Department of Anthropology, University of Tulsa, Tulsa, OK 74104-3189, phone (918) 631-3983, FAX (918) 631-2540.
Genetic Field Work Is Demanding

Scientists have made advances in laboratory techniques in recent years, so much so that possible breakthroughs in the samples may be all but forgotten in the excitement.

Ethical problems about genetic surveys of human groups may occur at various stages of a study. They may also have different degrees of importance in different cultures. Obtaining what the medical community calls informed consent from a genetically trying to collect blood or other cell samples. To mention only one such problem in achieving informed consent, many nonurban native groups around the world are not familiar with the terms "genes," "DNA," or even "cells." Among a variety of other problems that may crop up, it is sometimes difficult to come to a common agreement. Some interested researchers are especially penetrating if the initial field and laboratory work was supported by public funds. Fortunately, the availability of DNA samples freely available to the public. This trend has the positive effect of enhancing the worldwide network of investigators interested in studies of human evolution. There is also a growing recognition that the results of these genetic studies should be made known to the world community, thereby helping to provide small, native groups with a sense of self-esteem and belonging on a broad scale.

So what about that migration? What about the "waves" of people moving east and south in the tracks of mammoths and other megafauna?

In reviewing the evidence for Asian migration needs to be conceptualized as a process of demic expansion occurring over a long period of time rather than a rigid event that saw large numbers of populations virtually immune from evolutionary pressures, she writes in the abstract of her Evolutionary Anthropology paper. She sees local populations of people expanding gradually, expanding smaller groups, and were not groups of people on the ground on the trail of game. In the same paper she says: "Biologists consider migration in terms of its involvement in bringing about gene-frequency change, mass migrations means population expansion that may or may not involve gene exchange. Clearly, colonizers of an uninhabited region are restricted to partners from within their own group."

The problem for geneticists, she says, is attributing the cause of existing genetic diversity: is it the result of recent population migrations or the product of genetic differentiation? The "archaeological view of migration as an event," she continues, "lends itself to the idea of a discrete, massive, Asian group expanding over a huge area. However, we now recognize that many genes that remain entrenched in descendents populations, virtually immune from evolutionary forces. Migration, then, is a process of populations adapting to different environments, making sense of the driven forces of evolution, and more amenable to the idea that the evolutionary process operates as population expansion."
TOKYO CONFERENCE HAS FOCUS ON PEOPLING OF AMERICAS

Seven Foreign Scientists Invited To Give Keynote Papers

Japanese organizers recently brought together scientists from several disciplines for the First World Conference on Prehistoric Mongolid Dispersals, held in Tokyo Nov. 16–21. A primary objective of the conference was to assess the results of four years' research by the Japanese conference participants. Scientists from eight other countries were involved; their primary disciplines included prehistory, archaeology, physical and cultural anthropology, human genetics, ethology, geornorphology, and computer sciences.

Studies of the peopling of the Americas played a prominent role in the conference.

Seven foreign scientists gave keynote presentations. On the opening day, three keynote addresses were given by scientists from the Americas, offering a diversity of views. They were Milford H. Wolpoff of the University of Michigan, who advocates multiregional models and sees Homo sapiens as originally living in Asia; Peter Bellwood of the Australian National University, who presents a single origin model for the peopling of Asia; and Emile R. Sisson of the University of Western Ontario, who challenges both. Additional presenters included a number of anthropologists.

By focusing on the peopling of Asia, the Japanese conference serves to emphasize the importance of early Asian populations.

East Asia has only recently become a focus for testing theories of human evolution.

Neandertals, and the justifiably renounced Coon theory of parallel evolution for the human races, in which different rates of evolution were attributed to the various races. The modern theory is further supported by data from this area as well as from other parts of the world. For example, in the study of human origins, Dr. J. S. Clark has found evidence for the presence of early humans in Africa and Asia that dates back to at least 200,000 years ago. This evidence suggests that modern human populations in both regions evolved from a single ancestral population that spread across the globe, rather than from separate lines of descent as had previously been thought.

In conclusion, the conference on the peopling of Asia highlights the importance of Asian populations in the development of human evolution. It underscores the need for continued research in this area and encourages further collaboration among scientists from around the world.
Tennessee

continued from page 1

from the same level and containing two Clovis fluted preforms. It came back as 11,950 ± 110 years B.P. (TX 7454). "I like that date because of a low sigma," Broster said of the 110-year margin of error. Further, he noted that these dates suggest the fluted material from the Southeast may well be as old as 10,000 years or older than that found at Blackwater Draw, the "Clovis" type-site in New Mexico.

Some have questioned the validity of dates from the Johnson site by suggesting that background carbon in the alluvial units from which the material was taken could have skewed the readings. Broster doesn't argue about that; he remains cautious and agrees that the site needs more excavation and radiocarbon dates before it can be confirmed as the earliest Clovis typology. "I want more dating from test pits and more profile drawings," he said of the site, which is approximately 150 m in length. "In a couple of more seasons out there, I anticipate we will get quite a bit more information."

Broster has high expectations for the Carson-Conn-Short site, which also was brought to his attention by amateur archaeologists for whom the site was named—H. "Kit" Carson, Gary Conn, and Hal Short. "They have been extremely generous," Broster said of the trio of amateurs. "They not only showed us the site, but they gave us their collections from it for study and they don't want them back. They want to see it done properly and published."

Initial testing has produced finds including blade tools, a uniface scraper, channel flakes, and one

Uniface scrapers.

Uniface end scrapers.

Blade tools.

"It's beginning to look like the Tennessee River area is one of the densest locations for Clovis material we've ever seen."

Clovis point tip. Broster said it may be the largest known Clovis site in the East, and it is possibly comparable to the Quad site in Alabama. "We are getting a pure Clovis assemblage," said Broster, who expects to get as many as 10,000 tools from a part of the site that he says will become the focus of a "point provenience pickup." To date, the surface collection from this site contains three Clovis projectile point bases, 32 Clovis preforms, 231 blades/blade knives, 134 uniface tools and 32 blade cores. This represents less than five percent of the total artifacts exposed on the surface.

Broster reports 43 deflated, exposed hearths on the site that could yield a considerable amount of datable material. "It's beginning to look like the Tennessee River area is one of the densest locations for Clovis material we've ever seen."

No kill sites have been found in the Southeast, Broster said. He suspects that in Tennessee, such sites may have been flooded by the damming of rivers. No human remains have been found in either the Carson-Conn-Short or Johnson sites.

Although dates of occupation of these sites may not yet be positively determined, Broster is able to make some educated speculations about the sites. He says that unlike Clovis kill sites in the West, these Southeast sites appear to represent locations for manufacture and maintenance of stone tools. The people appear to have located close to the rivers, bringing back large bifaces and cores to their camps and finishing the tools there. "I suspect from the use wear on the tools, they were doing a lot of hunting in these areas."

Broster hopes that continuing research will corroborate the 12,000-year-old dates. "Maybe the origin of Clovis was in the East," he suggested, "and maybe they moved out West."

—George Wiser ©
UPCOMING CONFERENCES


May 5–9—Canadian Archaeological Association, 26th Annual Meeting, Montreal, Quebec. Contact: Françoise Bugay, Association des Archéologues du Québec, 4061, rue Saint-Hubert, Montreal, Quebec H2L 4A7. Telephone and Fax: (514) 525-7071.


May 18–21—International Conference on Computing for the Social Sciences, Annual Conference, Urbana, IL. Contact: Bruce Torrie, Oak Ridge National Laboratory, Oak Ridge, TN 37831-2607. (615) 574-4041 Fax: (615) 574-3895.

June 11–15—International Association for Impact Assessment, 12th Annual Meeting, Shanghai, China. Sessions on cultural resources and remote sensing. Contact: E. Pendleton Banks, Wake Forest University, P.O. Box 7807, Winston-Salem, NC 27109.

June 14–16— Lithic Analysis Conference, Tulsa, OK. Contact: George H. Odell, Department of Anthropology, University of Tulsa, Tulsa, OK 74104. (918) 631-3082.

July 5–9—International Conference on Fluvial Sedimentology, Brisbane, Australia. Modern and ancient fluvial sedimentology—their importance to humans. Contact: Continuing Professional Education, University of Queensland, Queensland 4072, Australia. 61-7-365-7100 Fax: 61-7-365-7099.

July 26–31—13th International Conference for Caribbean Archaeology, San Juan, PR. Contact: Miguel Rodriguez, Instituto de Cultura Puertorriqueña, Apartado 4184, San Juan, PR 00902-4184. (809) 724-1844.


Aug. 17–23—Seventeenth International Conference on Hunting & Gathering Societies, Moscow, Russia. Deadline for abstracts: April 15. Contact: Linda Ellana, Department of Anthropology, University of Alaska, Fairbanks, AK 99775. (907) 474-0751 Fax: (907) 474-5877.


SUGGESTED READINGS

Of Ohio Focus Illuminates Wider Puzzle

Of Sites in Tennessee Suggest Clovis Origin in East

Of A Geneticist Looks at the Peopling of the Americas

Of Genetic Field Work Is Demanding

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See other side for more publications and payment instructions.
northern dispersals into the New World, Guthrie described the Pleistocene environment of a vast region of northern Eurasia and North America, termed the Mammoth Steppe—an arid, windy grassland. Barriers of severe aridity and bitter cold inhibited the spread of various woodland animals into the Mammoth Steppe except during relatively warm and wet interglacial periods. “These same barriers apparently prevented human colonization of the Eurasian far north, and hence the New World, until the Holocene,” says Guthrie in his published abstract.

Bonnichsen opened the session on Mongolid dispersals into the Americas with a presentation on dating early New World populations. After an overview, he focused on dating archaeological sites by their hair record. The use of accelerator mass spectrometer dating of individual strands of hair promises to allow archaeologists to bypass all the arguments about association and establish absolute dates, he noted. Further, Bonnichsen said that preliminary investigations indicate DNA might be extracted from ancient hair preserved in archaeological sites. If so, genetic analysis of the ancient hair can be compared with studies done on living populations. He described new methodology for extracting ancient hair from clay-rich archaeological deposits and said he and his crew have recovered hair from humans as well as other mammals large and small at the Mammoth Meadow site in southwestern Montana. The session also included a number of other papers on the peopling of the Americas. The first, by Lionel E. Jackson and Alejandra Duk-Rodkin of the Geological Survey of Canada, was on the geology of the ice-free corridor, the hypothetical region between the great Laurentide ice sheet that blanketed most of the north part of the continent and the Cordilleran ice sheet that covered mountain ranges of the northwest. They said that the ice-free corridor was closed both north and south for an extensive period when Laurentide ice pressed against mountains on the west. They dated the closure at about 30,000–25,000 years ago in the north and 29,000–23,000 years ago in the south with reopening sometime before 16,000 years ago in the north and about 14,000–12,000 years ago in the south. Jackson and Duk-Rodkin emphasized that geological conditions in the south make many published dates for an earlier ice-free corridor suspect.

Russell W. Graham of the Illinois State Museum gave a presentation on mammal resources available to first human immigrants to North America. He described how computer mapping of data available on each species is adding to the understanding of the environments late in the Pleistocene and into the Holocene. (See Archaeology Has Adopted Computer, Mammoth Trumpet 7:4). Graham said computer-generated maps document that mammal communities did not respond as a unit to the ending of the Ice Age, but each separate species responded along environmental gradients affecting its own needs. Thus these conditions lack modern analogs. Extension of the megafauna and emergence of new landscapes combined to contribute to the evolution of human settlement and subsistence patterns, he said, adding that the change to “less patchy” environments may have been a primary factor that influenced subsistence patterns. Graham said that understanding environmental changes at the end of the Pleistocene might give an insight into future changes in the climate.

Robert L. Kelly, a University of Louisville anthropologist, discussed a model for explaining the puzzling differences between Paleoindian sites in South America and those in North America. Kelly noted that the earliest sites seem to be in South America, and he outlined other apparent inconsistencies presented by the archaeological record. “Theoretical arguments and empirical data still suggest a rapid movement from North to South America when we compare the data,” said Kelly.

Judith Ann Willig of INFOTEC Research, Eugene, Ore., offered insights on the Clovis tradition, noting that what can be termed “Western Clovis” does not fit the model of wide-ranging big-game hunters. Western Clovis sites are associated with a wide variety of environmental settings, occurring mostly along the margins of shallow lake-marsh-stream systems of the late Pleistocene and early Holocene. She said they suggest a more “tethered” mobility pattern.

After Willig, the session’s focus moved to South America with presentations by Lautario Núñez, of Chile’s Catholic University of the North, and Hugo Nami, of Argentinian’s Prehistoric Studies Program (see Paleoindians of Patagonia Using Fluted and Notched Tools, Mammoth Trumpet 8:1). Then Tom D. Dillehay of the University of Kentucky gave a presentation on human migration and late-Pleistocene changes in culture in South America.

Noting that change is characteristic of all late-Pleistocene human cultures in the Americas, Dillehay suggested that a fundamental goal of those studying the peopling of the Americas should be understanding the process of long-term change in South America. He presented existing models for the peopling of South America and discussed cultural diversity there in Paleoindian times. Dillehay described findings at his own Monte Verde site in Chile and compared these with findings at various other sites in South America.

The final presentation of the day devoted to the Americas was by Satoshi Horai of Japan’s National Institute of Genetics, who described research that led him and two co-investigators to conclude that the Americas were founded by four major lineages of mitochondrial DNA. “We postulate that at least four ancestral populations gave rise to different waves of migration to the New World. From the estimated coalescence time of the Asian and Native American lineages, we infer that the first migration across the Bering land bridge took place and 21,000 to 14,000 years ago,” Horai, Shinuho Sonoda of Kogoshima University’s virology department, and Kanso Tajima of the Aichi Cancer Center Research Institute said in their published abstract. (The research of Horai and his colleagues will be featured in the Mammoth Trumpet’s next issue.)

The First World Conference on Historic Mongolid Dispersals concluded the following day with nine presentations on human dispersals into Pacific islands.

Oxford University Press is scheduled to publish a book on the proceedings, but abstracts of presentations may still be requested through the Prehistoric Mongolid Dispersals Project office, Department of Anthropology and Prehistory, The University Museum, University of Tokyo, Hongo 7-3-1, Bunkyo-ku, Tokyo 113, Japan.