CNEA

Conference on New England Archaeology

NEWSLETTER

Vol. 9, No. 1 February 1990

CONFERENCE ON NEW ENGLAND ARCHAEOLOGY
c/o MARY LYNNE RAINEY (Editor)
The Public Archaeology Laboratory, Inc.
387 Lonsdale Avenue
Pawtucket, Rhode Island 02860

Dena Dincauze
University of Massachusetts
Anthropology Department
Amherst MA 01003

COVER: Stages in the lithic reduction sequence for a Neville projectile point, The Oak Terrace Site, Norwood, Massachusetts

CNEA Conference on New England Archaeology

NEWSLETTER

Vol. 9, No. 1 February 1990

CONTENTS

CONFERENCE ON NEW ENGLAND ARCHAEOLOGY 1990 ANNUAL MEETING

SATURDAY MAY 12, 1990

The 1990 meeting of the
Conference on New England Archaeology will be held at the
Conference Center Meeting Hall,
Old Sturbridge Village,
Sturbridge, Massachusetts.

Registration will be from 9:00 to 9:30

Complete details on the program of speakers will be
included in the April issue of the
CNEA newsletter.

Registration Fee: $5.00 *Annual Dues: $10.00*

GENERAL ANNOUNCEMENTS

A FAUNAL REFERENCE COLLECTION at NORTHEASTERN UNIVERSITY, BOSTON, MASSACHUSETTS

The Center for Vertebrate Studies at Northeastern University has an extensive reference collection of large and small mammals which is available for scholarly use. Archaeologists with an interest in, or data from faunal analysis who wish to learn more about the Center are urged to contact: Dr. Gwilyn Jones, Center for Vertebrate Studies, Department of Biology, Northeastern University, Boston, MA 02115. (617) 437-2851

FROM THE OFFICE OF THE CONNECTICUT STATE ARCHAEOLOGIST- A TRAVELING EXHIBIT

The Connecticut State Archaeologist, Nicholas F. Bellantoni and the Staff Archaeologist at the Connecticut Historical Commission, David Poirier, have received funding from the Connecticut Humanities Council for the initial planning of the traveling exhibit "Preserving Connecticut's Archaeological Heritage." The exhibit will focus on prehistoric, historic and industrial archaeology. Co-sponsors of the project are the Connecticut State Museum of Natural History and the Connecticut Historical Commission. The following individuals have been hired to develop the exhibit and accompanying brochure for visitors: Loretta Rivers, archaeological consultant; Marion Leonard, historical consultant; Stuart Parnes, exhibit design consultant and Marina Mozzi, illustrator. Promotional activities, including teacher workshops, will be scheduled during the second phase of exhibit construction. Plans for future exhibit related materials include a curriculum and other resources for the classsroom. A file is being created of similar projects and literature that have been developed for other areas, and will be made available to educators. If you have information you would like to share, please send it to: Loretta Rivers c/o Office of the State Archaeologist, U-23, The University of Connecticut, Storrs, Connecticut 06269, (203) 486-5248.

NEW PUBLICATION AVAILABLE
from the U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

A new book entitled Qantifying the Present and Predicting the Past: Theory Method, and Application of Archaeological Predictive Modeling, is now available from the Bureau of Land Management without charge. The editors of the book include Lynne Sebastian, who is the Deputy SHPO in New Mexico. The book was prepared for the BLM, which provided copies to the National Conference of State Historic Preservation Officers for distribution.

The book is designated "Pamphlet number P-268" by BLM's Printed Materials Distribution Section. To order copies, please prepare a written request specifying the number of copies of pamphlet # P-268 desired, and provide self-addressed mailing labels.

Please send your request and the labels to:

Ms. Janice Lopez (SC-344)
Bureau of Land Management
Denver Federal Center
P.O. Box 25047
Denver,
Colorado 80225-0047

Library of Congress Cataloging in Publication Data:

Judge, W. James, and Lynne Sebastian, eds.
1988 Quantifying the Present and Predicting the Past: Theory, Method, and Application of Archaeological Predictive Modeling. U.S. Department of the Interior, Bureau of Land Management Service Center, Denver, Co. xx, 690 pp.

A NART IN THE NORTHEAST:
AN EXAMPLE OF HIERARCHICAL ORDERING
OF ARCHAEOLOGICAL RESEARCH TOPICS

contributed by Thomas F. King
Advisory Council on Historic Preservation

This paper is adapted from one that I was scheduled to deliver, but failed to deliver when a snowstorm intervened, at a meeting of the Southwestern State Historic Preservation Officers in Charleston, South Carolina in November of 1987. It is meant to illustrate how a "National Archaeological Research Topic" (NART) can be used to give structure and direction to archaeological research. The example it uses is from the Northeast -- involving the Harrisville Historic Rural District in New Hampshire.

The idea of NARTs occurred to me several years ago as a way to get more bang for the substantial bucks being spent on archaeological data recovery under the National Historic Preservation Act (cf. King 1981, 1985). The idea is really pretty simple, but before I describe it, I want to outline what I understand to be the standard operating procedure right now with respect to the treatment of archaeological sites under the Act. The main focus of my attention will be on the treatment of archaeological sites under Section 106 of the Act -- that section requiring Federal agencies to take into account the effects of their undertakings on historic properties. Implementing Section 106 is the major function of the Advisory Council, for which I work, and it is also the authority under which the largest number of bucks are being spent, well or poorly, on archaeology.

At the moment, assuming everything is working right under Section 106, a federal agency, recipient of Federal assistance, or applicant for a Federal permit reviews background information on the area likely to be affected by its highway, resevoir, housing project, or whatever, in consultation with the State Historic Preservation Officer (SHPO) and others, and in all probability conducts an archaeological survey of the area. If archaeological sites are found, the project proponent and/or regulator consults further with the SHPO and others and considers what to do with them. As a result of that consultation and consideration, generally speaking, sites are either preserved in place or subjected to data recovery. All this happens in accordance with the Council's regulations (36 CFR Part 800: See ACHP 1986a, 1986b; ACHP/NPS 1988).

If data recovery is decided upon, the party responsible for footing the bill typically contracts for the work. Depending on agency policy, the arguments of the SHPO, the Council, and several other variables, the scope of work for the project may take a variety of forms. In some cases archaeologists will be given pretty free rein to develop research designs addressing whatever questions they think are worth pursuing. In other cases the scope will be much more restrictive. In some cases, agencies insist on specifying how many holes will be dug, in what kinds of levels,

and through what guage screen the soil will be passed; sometimes this is done because the agency (or somebody) has figured out that the data that will be produced by the techniques specified will be relevant to something, but in other cases the specifics are provided simply to give the agency the warm feeling of having matters under control.

In the best of circumstances, it will be possible to specify in the scope of work what general research topics the contractor will be expected to pursue, and then ask those offering proposals for the project to excercise their brains and offer their best ideas about how such topics can be pursued given the sites to be excavated.

But what kinds of research questions typically get specified? Almost invariably, questions that are either extremely site - or region - specific, or questions that are so vague and general that one could do almost anything with them.

"Was this the site where Paul Revere's horse tripped?"

"Refine the projectile point typology for the middle archaic."

"Investigate the process of culture change in the Old River drainage."

In a very large percentage of cases the topics are what we at the Council have come to call "Triple-S" topics:

"Explicate the Settlement and Subsistence Systems of the early Woodland in the Old River drainage."

I don't mean necessarily to knock any of these topics, though we do see some pretty silly ones from time to time. Perhaps someday, when we've done enough triple-S studies, they'll all be put together to give us some insight into something big about why people settle where they do and subsist -- or fail to subsist -- as they do. There's certainly no guarantee, however, and it seems to me that with the amount of money being invested in archaeology under Section 106, we ought to be able to do better. We ought to be able to bring the information we're extracting from the soil to bear on important questions about the human condition -- things of real importance to humankind and scholarship, things that would generate increased public support for archaeology because it would look more like a tangible benefit and less like a frill. And, not incidentally to those of us who have to do such things -- things that we wouldn't be embarassed to mention to a Congressional committee as the reason for spending megabucks on archaeology. Hence NART's.

So what's a NART? I can describe it best by example -- the example I developed in a bit of detail in an American Archaeology article a few years back (King 1985), that's now being addressed with considerably more rigor in the nation's first full-scale pilot NART project, by the National Oceanographic and Atmospheric Administration and the State of Maryland (NOAA 1988). The NART that's posited in the article can be phrased as a question: "Can we discern

patterns in climatic change across North America over the past few thousand years that might give us a basis for predicting how climate will change in the future?" An important subsidiary question is: "If such patterns exist, how have they expressed themselves in different parts of the country?" -- with the obvious corrollary: "How may they express themselves in the future if they continue?"

The importance of this question is obvious -- not only to a wide range of scholarly disciplines but to those who plan land use and water resource management, who now are basing projections about what's going to happen to rainfall, streamflow, and such, in most areas, on the basis of a climatic record only a century or two old. It's also a question that's not difficult to address through archaeology. We've looked at human/environment relationships for generations; we have the tools to do it. Typically in the past, though, we've restricted our view to a single region and/or invoked climatic and environmental change as an explanation of sorts for what we find in the archaeological record. I propose taking a larger view -- a continental view -- and in a way, turning our normal order of things on its head: asking "If climatic change has followed such-and-such pattern, how might it have been reflected in this-or-that area, and how might that reflection in turn have been responded to by prehistoric societies?" Having posed hypothetical answers to these questions, we would test these hypotheses against the data we recover from fieldwork. And we would, of course, structure our research designs and scopes of work with reference to these hypotheses.

Climatic change is of course not the only conceivable NART. Joe Tainter of the Forest Service in New Mexico, for example, has proposed the collapse of civilization as a NART (Tainter 1987). Since it has worldwide implications, I suppose one might even call it a WART. Basically Joe's question is "What causes cultural systems, at whatever level of complexity, to collapse into similar forms?" The question has obvious implications for our own civilization, and is obviously something that can be addressed by both prehistoric and historic archaeology in comparitive texts.

A somewhat less cosmic, but still quite interesting, NART-like set of questions is being developed by the U.S. Department of Agriculture's Soil Conservation Service, which has realized that archaeology can provide information directly pertinent to its own mission. A lot of soil conservation depends on understanding soil formation, and SCS studies this seriously. Archaeology, of course, can provide pretty detailed chronological data on soil formation, and SCS is beginning to incorporate the pursuit and mobilization of such data systematically into its contracts for survey and data recovery.

On the whole, however, the archaeological profession has been less than wildly enthusiastic about NARTs. Part of the reason for the profession's diquiet is the perception of NARTs as something the Feds are going to ram down the professionals' throats, to the detriment of their own research interests. This might occasionally be a justified perception; there are archaeologists who engage in acts of navel contemplation that just ought not to be supported by Federal bucks. But these are rare I think, and so would be any Draconian application of NARTs. Each NART should be worked out by the archaeological community -- professional and avocational -- and provide the context in which a wide range of more specific research topics can

be fruitfully pursued. This at last brings me to my Northeast example, in which two NARTs, or things very much like NARTs, were constructed by a group of archaeologists and others in connection with a project reviewed under Section 106. Most of the NART's architects didn't know what a NART was, much less that they might be building one, but they built two nonetheless, which may eventually be used to structure a very interesting data recovery project.

The project subject to Section 106 review was a highway planned for construction through New Hampshire's Harrisville Historic Rural District, a large area of grown-over farmsteads dating from the time of the Industrial Revolution and thereafter (cf. Brockway 1984; DPW&H 1985). During the Industrial Revolution, the economy, demography, and patterns of land use in this part of the State changed rapidly, and these changes, presumably, are reflected in the archaeology of the district. "Archaeology," that is, as broadly defined -- studying it would require detailed historical research, study of soil chemistry and structure, study of relict and modern plant communities, and so on, as well as the more traditional studies of field patterns and cellar holes. The highway was controversial; lots of people were trying to block it, and protection of the historic district was one of the strategies they employed. As part of the Section 106 process, the Federal Highway Administration and State transportation agency sponsored a seminar, bringing together a number of archaeologist, historians, and other specialists in the kind of resource represented by the district, along with a bunch of bureaucrats like me. There was a professional facilitator, and we were charged with outlining, in detail, what was signifigant about the district as a research resource, and how one might go about conducting research to address that signifigance.

The facilitator went around the room, in good facilitator fashion, and elicited from each participant what he or she thought was important to study; these were written on big sheets of paper and pinned up around the walls. Predictably, the array of topics, set forth in their unsorted variety as Figure 1, was pretty bewildering.

Referring to Figure 1, the reader will note that the array is not only unsorted, it's also composed of apples, oranges, and marbles. Some items are big and squishy -- "industrial - rural relationships" for example -- while others are much more concrete -- like "evolution of the road system." Some aren't really research topics at all -- "Public education and participation" for example.

By gently questioning the participants about their topics -- "Why the hell do you want to study evolution of the road system?" it was possible to discern two large questions that were, as it were, hovering in the backs of various minds. One had to do with understanding the Industrial Revolution as a socioeconomic phenomenon -- people felt that historical documentation on the period tends to overstress the industrial, the economic, and the deeds of great men, and that there's a need to understand better how the Industrial Revolution affected, and was affected by the Historical Rural District. The other question was in a way even more general -- asking about what general principles may govern the interaction of society and the natural environment to produce a particular pattern of development.

As a result of this probing, it was possible to rearrange the topics from the big sheets of paper into hierarchical order with reference to the two big implicit topics; this hierarchy is

presented in Figure 2. Comparison with Figure 1 will show that everything the group had identified as worthy of investigation remains, but the little things -- the road system, for example, and the development of the landscape's biotic components, are nested under the more general topic of studying the evolution of industrial-rural relationships, which seems to be the practical point at which the two big implicit topics can be addressed. The essentially methodological topics -- integrated archaeological and ecological testing, for example, sort out as what they are -- tools for addressing the little topics whose study should elucidate the larger ones. Finally, the things that aren't research topics at all but that were clearly of concern to the group wind up as considerations to keep in mind in designing the research to be done.

The larger questions, I would suggest, are legitimate NARTs. Understanding how nature and society interact in producing a pattern of economic development is on about the same order of abstraction and relevance as understanding the principles that govern the collapse of civilizations, and the Industrial Revolution is an important historical phenomenon throughout the western world whose ramifications are not fully understood but that remain with us today.

This example shows that eveything that scholars can think of doing with an archaeological resource -- things they intuitively know are important -- can be subsumed within a NART framework. This doesn't mean, however -- and this is extremely important -- that casting things in NART terms is just a matter of meaningless semantic juggling.

Consider, for example, the study of road systems in the region. One could doubtless study road systems from now till those that traverse Hell freeze over, to learn every little minute detail of road construction and use. Using NART, however, one starts off with a larger question than just "how did the road system work and change over time?" One then works out questions about the road system -- among other things -- that relate to the larger question. Instead of "How did the road system change through time, in all possible ways and in all possible directions?" one asks: :Did the road change in this-and-that way as a reflection of this-or-that posited change in the relationship between the industrial and rural communities?" This allows one to ask much more directed, specific, questions -- questions that perhaps one can actually answer, but also questions that, if mobilized and organized, can actually shed light on the larger topic.

This example shows how NARTs can be created, and how smaller-scale research topics that one can actually address directly in the field can be organized to relate to NARTs. There are two other parts to the NARTs proposal.

First, the NART and its subsidiary questions have to be made to serve as the basis for research designs, scopes of work, and contracts. In the case of the example I've just described, the big research topics are referenced in the Memorandum of Agreement that was finally executed as a result of the Section 106 process, and the overall results of the seminar shoauld be used to structure scopes of work and the contracts for data recovery. Of course, this is a lot easier to do with reference to the whole nation, or even a substantial region. This is one of the stickiest wickets in the game of NARTs -- how, once a NART has been created, do we get agencies and scolars to use it?

The last part of the game may be even more sticky. Assuming that agencies and archaeologists all over the country do start orienting research toward addressing questions in

local and regional contexts that will ultimately contribute to the study of a NART, how do we bring all the resulting information together so the NART itself can actually be addressed? To really address the NART we might need to look at the results of the projects sponsored by dozens of agencies in every part of the country; who's going to perform this coordinative, high-level integrated research function, and how? How then are the results going to be fed back to the agencies, the States, and the professional communities so that NARTs and their regional expressions can be adjusted, revised, abandoned, or declared, solved, and replaced?

In my 1981 paper I proposed that the basically coordinative functions of translating NARTs into bases for scopes of work and contracts, promoting their use by agencies, gathering together the results and using them should be the functions of one of the two existing historic preservation coordinative agencies -- the Advisory Council or the Department of the Interior -- working with and through the academic community and the agencies. This approach, with the locus of coordination shifted to a new agency, is essentially embodied in legislation recently introduced in the U.S. Senate (Fowler 1988).

An alternative or adjunct approach that is relevant in a regional context like the Northeast is to consider NARTs in the context of Statewide comprehensive planning, and to use the planning systems of a group of States, or ultimately several groups, as coordinative vehicles. Clearly, for example, the Industrial Revolution was important in the history of all the Northeastern States. I have not reviewed the State Historic Preservation Plans (under whatever namer) that have been developed by these States, but I would expect that those following the National Park Service's preferred format have generated a number of "Study Units" or "Historic Contexts" that explicitly or implicitly deal with the Industrial Revloution. Let's suppose that the northeastern SHPOs, recognizing that they all are spending time and treasure on formulating historic contexts that related to the Industrial Revolution, decide to be explicit about it, make their contexts match one another across state lines, and work with the Federal agencies that are active in the region to translate those contexts into questions relevant to specific areas and areas and projects, and into specific scopes of work and contracts, as was done in the Harrisville case. Let's further suppose that the National park Service used the State Program Review process and periodic regional meetings to help the States and agencies pull the information together and reach conclusions about the Industrial Revolution. Admittedly this would result in addressing the implications of the Industrial Revolution only on a regional basis, but the overall topic would still be a NART because of its general signifigance, and it probably wouldn't be long before other regional congeries of SHPOs and agencies followed the Northeast's lead, both with respect to research topics involving the Industrial Revolution and with respect to other NARTs.

As indicated by Senator Fowler's legislation, the NOAA initiative, and the work of the Soil Conservation Service, the idea of NARTs is beginning to catch on. I hope that this paper has illustrated the fact that archaeologists have nothing to fear, and much to gain, from this fact. The use of NARTs does not need to constrain creativity in the development of research questions -- indeed it should encourage creativity. What the use of NARTs should do is to encourage the organization of research questions into hierarchical order, as we did in the Harrisville instance, so that the "little" subjects that can effectively be addressed in the field will produce data that bear

effectively on larger topics, that eventually can help shed light on subjects as cosmic as the fundamental relationship between natural processes and economic development, the nature of Holocene climatic change, and why civilizations collapse.

Bibliography

ACHP (Advisory Council on Historic Preservation)

1986a Protection of Historic Properties: Regulations of the Advisory Council on Historic Preservation Governing the Section 106 Review Process. 36 CFR Part 800, Washington DC.

1986b Section 106 Step-by-Step Washington DC.

ACHP/NPS (National Park Service)

1988 Identification of Historic Properties: a decision making guide for managers. ACHP, Washington DC.

Brockway, Lucinda A.

1984 Harrisville Rural District. Nomination to the National Register of Historic Places. Historic Harrisville, Inc., Harrisville.

DPW&H (Department of Public Works and Highways, State of New Hampshire)

1985 Draft Supplemental Environment Impact Statement, N.H. Route 101, Dublin-Harrisville, N.H. Concord.

Fowler, Senator Wyche

1988 S. 2912, The Comprehensive Preservation Act of 1988. U.S. Senate, 100th Congress, 2nd Session October 18, 1988, Washington D.C.

King, Thomas F.

1981 The NART: a plan to Direct Archaeology Toward More Relevant Goals in Modern Life. *Early Man* Winter: 35-38, Evanston.

1985 The Once and Future Drought. *American Archaeology* 5 (3): 224-228, Albuquerque.

NOAA (National Oceanic and Atmospheric Administration)
1988 Press release announcing joint initiative with the Maryland State Historic Preservation Officer regarding underwater archaeology and the archaeological study of climate change.

Tainter, Joseph
1988 *The Collapse of Complex Societies*. Cambridge University Press, Cambridge.

FIGURE 1
Harrisville Historic Rural District (HHRD) Research Design Seminar, October 19, 1986.
Initial list of unsorted research topics

* Industrial-rural interrelationships
* Evolution of road systems
* HHRD's representativeness of other HRDs in New England
* Cultural landscape adaptations
* History of community relations
* Landuse, human adaptation, market systems, social networks
* Compare/contrast to northern rural areas
* Social, economic and ecological limiting factors
* The effects of recent, current, and future development
* The validity, feasibility, and difficulty of multi-disciplinary research
* Integrated archaeological and ecological testing
* Natural resources vis-a-vis social development
* Active rural participation in industrialization vs. capitalist "take-over"
* Patterns and relationships of architectural development
* Ethnicity
* Perception of landscape
* Cultural geography
* Development of biotic (flora and fauna) components
* Farming technology
* The value of public education and participation in research.
* Folkways

FIGURE 2
Harrisville Historic Rural District (HHRD) Research Design Seminar, October 19, 1986.

Research topics sorted into hierarchical array

Seek understanding of social factors vs. natural resources in natural and socioeconomic development

Seek understanding of the trasformation of American social and economic systems during and after the American Revolution

by studying
the evolution of industrial-rural relationships

as expressed in.....

* Evolution of road system
* Evolution of HHRD landscape
* History of community relations
* Landuse, human adaptation, market systems, social networks
* Social, economic, and ecological limiting factors
* Cultural landscape adaptations (natural resources vis-a-vis social development)
* Rural participation in industrialization
* Patterns and relationships of architectural development
* Ethnicity, aesthetics
* Perception of landscapes
* Development of biotic (flora and fauna) components
* Evolution of farming technology, and
* Folkways

through:

* Integrated archaeological and ecological testing
* The study of cultural geography, and
* Comparison with other northern areas;

considering:

* The HHRD's representatives of other HRDs in New England
* The effects of recent, current, and difficulty of multi-discipliary researcha and
* The need for public education/participation in research.

CURRENT RESEARCH
BY STATE

CONNECTICUT

The Fort Hill Project...
Americans in Western Connecticut and an Archaeology Against Invisibility

Russell G. Handsman, Director of Research
American Indian Archaeological Institute

The Fort Hill Project, underway at the American Indian archaeological Institute since 1987, is a long term collaborative program of historical and archaeological studies and presentations with two purposes: 1) to open new understandings of the lives and living traditions of the indigenous Indian peoples of western Connecticut and 2) to use these understandings to challenge how the post-Columbian histories of Native Americans are often misrepresented. Despite what contemporary maps and writings suggest about their decline and extinction, Algonkian peoples are still here with their artistic and oral traditions, concerns for sacred sites, and critical perspectives on normal archaeological discourse.

The immediate project area, more than ten square miles in extent, includes portions of the towns of New Milford, Brookfield, and Bridgewater along the Housatonic River in northwestern Connecticut. One of the traditional homelands of the Weantinock and Pootatuck Indian peoples during the late prehistoric and historic period, this landscape was filled with hamlets and wigwam clusters, extensive cornfields, fishing sites, and sacred spaces. The homeland was part of a larger social world within which the Weantinock and Pootatuck interacted with their Mahican and Paugussett kin in southwestern Connecticut, eastern New York, and the northern reaches of the Housatonic in western Massachusetts.

Colonists and later historians characterized these lands as "deep wilderness" and "dense, sublime, primitive forests" occupied only by birds and wild beasts. The oral histories of the Schaghticoke people say otherwise, speaking of enduring traditions of land use, settlement, and exchange. The contrasts between these images are politically significant. The style of discourse which makes Algonkian people invisible in this homeland was repeatedly used throughout New England to appropriate land and hide the presence of indigenous cultures. One of the challenges central to the Fort Hill Project is to conceptualize and undertake an archaeology against this discourse of invisibility. This challenge is both representational - what would a map of the Weantinock cultural landscape 500 years ago show - and methodological - how should archaeologists search for the dispersed wigwaM clusters once so abundant across each homeland. Such settlements consisted of two to five lodges and small garden plots; their small size makes them difficult to locate. Without new approaches for field surveys, many wigwam clusters will be overlooked, once settled lands will be described as unused, and the discourse of invisibility will be

sustained.

Initial archaeological work was undertaken by an Institute field crew this fall. Plowed fields were walked and wooded tracts, pastures and orchards were shovel tested as we recorded new sites and evaluated the weaknesses of standard field methods. Two types of archaeological complexes were identified; both will be significant in future efforts to resolve our representational and methodological puzzles.

A wigwam cluster (Site 96-026) was discovered on a terrace along the Still River. Evidently occupied about 500 years ago, this site is very similar to the Weantinoge settlement about 3 kilometers upstream, partially excavated in 1986. Like Weantinoge, Site 96-026 is well preserved, represented by thin-walled, well fired pottery sherds, chert and quartz tools, and features such as postmolds and charcoal stains. Extensive excavations here would help us understand what wigwam clusters look like: their size, number of house lodges, extent of surrounding gardens, and duration of use. By clarifying the archaeological scale of wigwam clusters, we will be able to develop survey methods appropriate to their discovery.

There are also localities within the project area used repeatedly over thousands of years. Three such complexes have been identified to date, situated on older landforms above the Housatonic River. The surface collections from each locality include projectile points, knives, and scrapers ranging in age between 5000 and 2000 B.P. The assemblages also contain late prehistoric ceramics, triangular points of chert and quartz, and early historic artifacts such as gunflints, pieces of copper or brass, and metal awls. Evidently Weantinock and Pootatuck Indian peoples settled where earlier generations of Native Americans had lived. Their wigwam clusters, built during the last 1000 years, are superimposed over earlier sites, forming extensive archaeological complexes. How can the settlements of Weantinock and Pootatuck peoples be differentiated from those of their ancestors? More specific information about late prehistoric wigwam clusters, resulting from future excavations and remote sensing studies at Weantinoge and Site 96-026 will help provide answers. Undertaking an archaeology against invisibility requires a long-term, comprehensive research effort; the second phase of field studies associated with the Fort Hill Project is planned for the fall of 1990.

Bibliography

Handsman, Russell G.

1989 Native Americans and an Archaeology of Living Traditions. *Artifacts* 17(2): 3-5. Washington, Connecticut: American Indian Archaeological Institute.

1989 *The Fort Hill Project. Native Americans in Western Connecticut and an Archaeology of Living Traditions*. Research Manuscript Series of the American Indian Archaeological Institute. Washington, Connecticut.

1989 *Working Against Columbus. Living Traditions, Archaeology, and the Indian Peoples of Northwestern Connecticut*. AIAI Field Guides. Washington, Connecticut. American Indian Archaeological Institute.

1989 Algonkian Wigwams: An Invisible Presence, Political Spaces. *Artifacts* 17(4): 19-21. Washington, Connecticut: American Indian Archaeological Institute.

Handsman, Russell G. and Jeffrey H. Maymon

1987 *Recent Excavations at the Weantinoge Site: An Archaeological Study in Later Prehistory*. Research Manuscript series of the American Indian Archaeological Institute. Washington, Connecticut.

1987 The Weantinoge Site and an Archaeology of Ten Centuries of Native History. *Artifacts* 15(4): 4-11. Washington, Connecticut: American Indian Archaeological Institute.

Research at the Connecticut State University

contributed by Ken Feder

In the field season of 1989, the Farmington River Archaeological Project continued its investigation of the western uplands of the Farmington Valley. We completed excavation of the Wood Lily site, discovered in our survey of Peoples State Forest overlooking an unnamed tributary of Beaver Brook which was, until reservoir construction, a tributary of the Farmington River. A broad range of functional artifact types was recovered including projectile points, knives, scrapers, and drills. We also identified five features and expect to obtain radiocarbon dates for the occupation.

With a grant from the Foundation for Field Research, we will be surveying, mapping, and excavating the Lighthouse Site in 1990. The site was occupied from 1740 until the middle of the nineteenth century by a mixed group of Indian, white, and possibly black outcasts. Analysis of the site will provide us with a unique opportunity to investigate how the different cultures present in northwestern Connecticut in the eighteenth and nineteenth centuries combined to produce what seems to have been a successful settlement.

Report of the Public Archaeology Survey Team, University of Connecticut, Storrs

The Public Archaeology Survey Team will begin a study of the largest of several 18th century Pequot communities identified on the Mashantucket Pequot Reservation. The site

consists of more than 20 structures (wigwams and framed houses), numerous outbuildings and extensive field systems. Archaeological work will be conducted in coordination with palynological research conducted by Gerald Kelso, to identify patterns of land use and subsistence. Previous archaeological/archival research indicated that the site was occupied between 1740-1800, and was abandoned shortly after the Revolutionary War as the inhabitants of the village went to Oneida, Wisconsin as part of the Brotherton Indian Movement.

Norwalk Community College Archaeologist's Discover the Oldest Site in Fairfield County

contributed by Ernest Wiegard II

Patience, persistence, and good old fashioned dumb luck have been the basis for many archaeologcial finds the world over. In southwestern Connecticut, they came together once again in the spring of 1989, when Marie Antignani, a student and recent graduate of NCC's *Archaeology As An Avocation* program, found evidence confirming the status on the A.M. site as the oldest known location of human occupation in Fairfield County. The evidence? - the base of a Clovis fluted projectile point, a diagnostic artifact of the Paleoindian period dating to approximately 10,000-8000 B.C. in the Northeast.

Since the discovery of the site in 1981 by yours truly, it had long been suspected of being a Paleoindian site. While conducting research for the M.A. thesis on the use of rockshelters in southwestern Connecticut, I noticed an area that had been exposed by heavy rains. On the surface of the site were abundant artifacts and debitage consisting almost entirely of very high-quality quartz. Biface fragments, cores and endscrapers made up the majority of the artifacts, although a few Late Archaic period stemmed projectile points were also found.

The Late Archaic projectiles seemed somewhat out of place among the large number of endscrapers, which have only occasionally been found at Late Archaic sites in the region. Several return visits to the site produced, in addition to more quartz debitage and artifacts, a few chert endscrapers and the tip of a well-made projectile point of grey chert, raising the suspicion that the site had been occupied more than once. This suspicion was confirmed the following year, when I found a complete Clovis projectile of black chert. Its being the only diagnostic artifact of the Paleoindian period found at the site raised the inevitable question: "Is this evidence of a Paleoindian occupation or merely a stray point lost during the hunt?"

For the next several years, sporadic work at the site provided more debitage and artifacts, but no second Clovis point. The discovery of an endscraper with a graving spur provided some support for the site's occupation during the Paleoindian period, but we could not settle the issue. What was needed were additional diagnostic artifacts of the period or other materials that could provide a firm date for the site's occupation. The fact that the site had been plowed in the past made the discovery of an intact feature or stratigraphic separation of components remote.

In 1987, the discovery of an almost entirely undisturbed flintknapping station complete with cofitted hammerstone fragments and several hundred pieces of high-quality quartz debitage just below the plowzone raised hopes that more of the site had escaped the ravages of the plow. That such was indeed the case was confirmed late in the 1988 season when Sue Gregor found an undisturbed pit feature containing numerous fragments of charred wood on the same level and within two meters of the flintknapping station.

The charred wood was in the process of being submitted for C-14 analysis this past spring when Marie found the second Clovis point on the surface of the site. The most important aspect of the point (besides confirming the Paleoindian status of the site) is that it was made of the same high-quality quartz as most of the site's assemblage, which provides some support for the assigning of these materials to the Paleoindian occupation, especially in the light of the well known preference by Paleoindians for high-quality lithic raw materials.

Needless to say, work on the site is not finished, and is continuing through the 1989-90 academic year. Recently the results of the C-14 analysis were received, indicating a 2645 +/- 90 yrs. B.P. (circa 695 B.C.) date for the feature. Presently, shovel-test pit excavations are being conducted to establish a firm idea of site size and boundaries. So far, the site is at least an acre in size, although as yet the exact boundaries are not determined. Stay tuned to further updates on the site!

Connecticut Industrial Archaeology

contributed by Suzanne Glover, PAL, Inc.

Suzanne Glover of The Public Archaeology Laboratory, Inc. recently completed an historic and archaeological reconnaissance survey at the abandoned Hop Brook Railroad embankment near Hop Brook Dam in Middlebury and Naugatuck, Connecticut. The survey was conducted for the Army Corps of Engineers, New England Division, prior to planned remedial repair measures involving the stabilization of the extant cinder/slag embankment and 200-foot long stone arch culvert. The research design for the project involved historic background research of the New York and New England and the New York, New Haven, and Hartford Railroad Companies, the Hop Brook embankment, and the regional historic development, as well as limited field investigations. These two methods of investigation were used to verify the presence/absence of a wood frame trestle system within the embankment fill; and document its construction, design, and potential historic/industrial significance in association with the stone arch culvert at this particular former railroad upland valley stream crossing.

Background research revealed that two stone arches and a timber trestle embankment at Hop Brook functioned as part of the western division line of the New York and New England Company from 1881 to 1898. In 1898 the line was acquired by the New York, New Haven and Hartford Railroad Company which operated freight and passenger service along the rail line until the late 1930's. This line constituted the second rail link to Naugatuck and Waterbury, a regionally important industrial valley, during the late nineteenth and early twentieth centuries.

Construction of the two stone arches may have begun as early as the 1860's under the Boston, Hartford and Erie Railroad Company. These structures were necessarily in place by 1879 when construction of the monumental (90 feet high, 300 feet long) wooden trestle was begun by the newly formed New York and New England Company.

The timber (probably white oak) and bolt frame trestle was manually erected in 1879 and 1880, partially filled between 1888 and 1893, and partially rebuilt and completely filled in 1897. The arches were constructed of locally-derived cut granite blocks that were manually fitted together using the keystone arch technique.

Field excavations at the embankment were designed to obtain a sectional plan view of any timber remains at the top of the trestle, and a sectional profile to about two meters in order to document the structure's internal composition. Both background research and field excavations revealed the presence of a relatively intact open-floor wood-frame trestle system within the embankment fill. This embankment was and still is partially supported by the stone arch culvert and timber crib abutments. These types of structures were commonly used by railroad companies at the end of the nineteenth and early twentiety centuries as both a cheap first cost temporary structure (wooden trestle) and as more permanent structures (two stone arches, crib abutments).

A review of regional historic engineering inventories has indicated that the presence of both the intact stone arch culvert and relatively intact trestle and embankment constitute a unique combination of historic railroad construction technology that has survived into the late twentieth century. These structures have been evaluated as being potentially eligible for listing in the State and National Registers of Historic Places. The information and recommendations presented in this reconnaissance survey report will serve as a guide during the proposed remedial repair measures to the railroad embankment and stone arch culvert.

RHODE ISLAND

The Public Archaeology Survey Team on Block Island

The Public Archaeology Survey Team is continuing work on an early Woodland Village on Block Island. Five charcoal samples have been dated, ranging between 600-100 B.C. The site is relatively large, encompassing 3-4 acres, and is quite complex, containing a wide range of features, structural remains and food remains. Analysis of faunal and botanical assemblages suggests a year round occupation. Stratified midden deposits are currently being analyzed to determine if the site represents a single episode of year-round occupation, or a series of successive seasonal occupations.

The Public Archaeology Laboratory, Inc.
Educational Programs Department Report on the Lambert Farm Site in Warwick, Rhode Island

contributed by Alan Leveillee

PAL, Inc. is entering its third year of research on the Lambert Farm prehistoric site in Warwick, Rhode Island. The National Register site will be impacted by the building of a housing complex in Late 1990. Because no federal or state legislation protects Lambert Farm, a unique agreement between the developer, the State and City Historic Preservation Commissions and PAL, Inc. has given us time to excavate the site prior to its destruction. Under the direction of Alan Leveillee and Jordan Kerber, summer field schools, weekend workshops, university field methods classes and local school groups along with PAL, Inc. staff members have excavated, and will continue to excavate this predominantly Woodland Period site. With minimal initial funds to work with we have been fortunate, through grants, to have the support of the National Endowment of the Humanities, the Rhode Island Heritage Commission, the Rhode Island Historical Preservation Commission, The Rhode Island Foundation, The Solomon Fund (Brown University) and the June Rockwell Levy Foundation.

While the research potential of this complex prehistoric site promises some exciting insights into early lifeways along Narragansett Bay, we are especially gratified and encouraged by the enthusiastic response of the public toward the project. To date, over two hundred non-professional archaeologists have had hands-on experience at the site. They have not only helped to record and save its data, but they have come away from the experience as advocates for preservation and conservation. One of last years grants allowed us to produce a video, "Back To The Past", which chronicles our work on Lambert Farm and serves as a curriculum tool for Rhode Island's middle and high schools. Last winter, a series of five lectures on our research was open to the Public and thanks to the support of the Roger Williams Park museum, was very well attended and successful. The broad-based grass-roots interest and support for out project is punctuated by the fact that despite considerable publicity through television, newspaper, magazine and radio time, no site destruction through vandalism or looting has occurred. If the third and final field season proves as productive as the last two, we look forward to several years of analysis and copious amounts of new information. An extensive range of features including post molds, storage pits, hearths, middens, and ceremonial dog burials is yielding sometimes staggering amount of floral, faunal and lithic materials for us to analyze. For further information about the field school or other aspects of our educational programs, please contact PAL, Inc. at 401-728-8780.

MASSACHUSETTS

An Overview of Current Research in the State of Massachusetts, Organized by Topic

contributed by Brona Simon, State Archaeologist
Massachusetts Historic Commission

PREHISTORIC SETTLEMENT PATTERNS: BOSTON HARBOR

Beth Bower (Bechtel/Parsons Brinkerhoff) reports that an archaeological site examination has been completed on Spectacle Island in conjunction with the Central Artery/Third Harbor Tunnel project. Spectacle Island is included in the Boston Harbor Island Archaeological District, which is listed in the National Register as a district of islands. The site examination, which was conducted by Boston University's Office of Public Archaeology under the direction of **Ricardo Elia**, confirmed the presence of an extensive prehistoric shell midden on the southern end of the island which may have been used as early as the Middle Archaic period.

PREHISTORIC SETTLEMENT PATTERNS: COASTAL AND ISLAND AREAS

Edward L. Bell and **Brona Simon** (Massachusetts Historical Commission) recently were called to Nantucket to investigate the accidental discovery of prehistoric burials at a construction site near the Nantucket Cliffs. With the cooperation of the Commission on Indian Affairs, the Archaeology Committee of the Nantucket Historical Association and the property owner, the burials were recovered for analysis. Preliminary observations in the field revealed the presence of a double interment of two adults nestled together in a flexed position, who apparently were buried at the same time, probably during the Woodland period.

The Wareham School Site, a prehistoric campsite which was used intermittedly between the Late Archaic and Transitional Archaic periods near the Broad Marsh River estuary in Wareham, Massachusetts, was subjected to a data recovery program by Timelines, Inc. **Michael Roberts** and **Elena Decima** report that of central interest to their research are the areas of the site which contain evidence of the Susquehanna Tradition (Orient fishtail, Wayland Side notched and Atlantic points) as well as Small Stemmed and Squibnocket points, in order to come to a better understanding of the relationship of these two lithic technologies. Functional analysis of the lithic assemblages will be coupled with analysis of the faunal remains, flotation and soil samples (for evidence of microfauna and otoliths) in order to understand the prehistoric use of the site within its paleoenvironmental context.

Fred Dunford (Cape Cod Museum of Natural History) reports that archaeological investigations near a freshwater pond in Orleans, Massachusetts have discovered a significant prehistoric site, which contains an assortment of Woodland period artifacts, ceramics, and features. An unusual discovery of a copper tubular bead was also made.

Timelines, Inc. is continuing its study of the Boylston Street Fishweir in Boston. A new area of study has been opened up for the construction of 222 Berkley Street, which will be joined to 500 Boylston Street, the area previously studied by Timelines. **Michael Roberts** reports that additional information on the paleotopography of the site has been gathered by the research team under the direction of **Dena Dincauze** (UMass, Amherst) and **Elena Decima** (Timelines, Inc.). This information will aid in the reconstruction of prehistoric landforms in the Charles River estuary during the period of fishweir use (4th millennium) in order to understand the modifications made to the fishweir construction and location in relation to sea level rise.

PREHISTORIC COASTAL SUBSISTENCE

Current research on the subsistence base of Late Woodland period people on outer Cape Cod is being conducted by **Arthur E. Spiess** of the Maine Historic Preservation Commission, and **James W. Bradley** of the Massachusetts Historical Commission. Based on the analysis of faunal remains excavated from sites in the Cape Cod National Seashore under the direction of **Frank McManamon**, and supplemented by large samples collected from sites in Wellfleet and Truro early in the century by Fred Luce, a clearer understanding of pre-contact subsistence patterns is emerging. Initial results indicate a stronger than expected reliance of maritime resources, especially marine mammals, and good evidence for year round resources exploitation. Other collaborators on this project include **Greg Early**, Chief biologist at the New England Aquarium, and **Gwilym Jones** of the Center for Vertebrate Studies, Department of Biology, Northeastern University.

PREHISTORIC SETTLEMENT PATTERNS: UPLAND ALLUVIAL SETTINGS

Peter Mills reports that the Massachusetts Historical Commission has recently investigated the accidental discovery of prehistoric burials above the Deerfield River in Deerfield and the Connecticut River in Chicopee, both apparently dating to the Woodland period. The MHC is presently seeking and compiling information on prehistoric burials in the Deerfield and Chicopee areas, in order to help establish a context for regional mortuary practices. Background research conducted to date has documented numerous instances where burials have been exposed on sandy terraces adjacent to the Deerfield River, yet little information on their archaeological context has been located to date. The MHC would appreciate any information researchers may have on these sites.

HISTORIC PERIOD RURAL SETTLEMENT

The well-known Parting Ways Site in Plymouth, Massachusetts, has been reopened for investigation by Parting Ways, Inc., in conjunction with the UMass-Boston Archaeological Field School. Directed by **Constance Crosby** and **Stephen Mrozowski**, the 1989 summer fieldwork was principally locational in nature. Preliminary results indicate the presence of stratigraphic differences separating the early 18th century white occupation of the site from the late 18th-early 19th century freed African settlement. Two previously unidentified activity areas were also discovered, one of which might be a house site

URBANIZATION IN THE COLONIAL PERIOD

The Central Artery-Third Harbor Tunnel project has provided archaeologists with an opportunity to study further the growth of Boston from a town to an urban center during the Colonial Period. **Beth Bower** (Bechtel/Parsons Brinkerhoff) reports that the locational survey and site examination phase of investigation has been completed by Boston University's Office of Public Archaeology (**Ricardo Elia**, Director). Three significant sites were discovered in the North End of Boston, including one wharf site and two backlot sites, which are located within the project impact area and will be subjected to an archaeological data recovery program in the future.

INDUSTRIAL ARCHAEOLOGY

Michael Roberts, Jane Carolan and **Larry Gross** have completed an interpretive plan for the Blackstone River Valley National Heritage Corridor in Massachusetts and Rhode Island. Timelines, Inc.'s plan includes interpretive themes, locations for visitor centers, and recommended programs for communities and the Park Service. While the principal focus was on industrial history of the valley, the plan viewed the corridor as a system of many parts contributing to the whole, from prehistoric times to the modern era.

ARCHAEOLOGICAL METHODOLOGY - BURIAL GROUND SURVEYS

The Massachusetts Historical Commission conducted an archaeological site examination of an unmarked 19th-century poor farm cemetery in Hudson. **Edward L. Bell** reports that the placement of long, narrow trenches was very efficient and effective in intercepting burial shafts and determining the horizontal extent of the burial ground, without harm to the contents of the graves. The placement of the trenches was made by considering the

orientation of a single gravestone base, which was discovered by gently probing the site area with a narrow metal probe. Trenches measured 0.5 m wide and were placed in a NNE/SSW orientation to encounter graveshafts, which were predicted to be aligned E/W, the liturgically correct orientation for Christian burials. Graveshafts were most readily observed at shallow depths, above the junction of the A and B soil horizons, where the dark A soil matrix contrasted sharply with the lighter, mixed graveshaft fill. A total of 15 graveshafts were identified within an eighth of an acre area. The MHC and the town of Hudson are presently consulting with the property owner to establish a preservation restriction on the site.

HISTORIC NATIVE AMERICANS: ETHNOHISTORY AND ARCHAEOLOGY

The Massachusetts Historical Commission and the Department of Anthropology at UMass-Boston, under the direction of **Brona Simon** and **Stephen Mrozowski**, have conducted archaeological investigations at the Chapman Street Praying Indian Burial Ground in Canton, Massachusetts. Initially discovered in the fall of 1988 by workmen at a construction site, the burial ground has been investigated under the state's unmarked burial law. Research conducted to date indicates that the burial ground was used by Ponkapoag Praying Indians from ca. 1650-1720. The fieldwork resulted in the spatial definition of the boundaries and internal configuration of the burial ground. Over 40 individuals have been identified. A sample of burials were examined, resulting in information concerning the position of burials, mortuary practices and grave goods, which show evidence for the persistence of traditional beliefs and customs in this Praying Indian community. The MHC is continuing to consult with the property owner and the Commission on Indian Affairs concerning the future treatment of the site.

A Seventeenth Century Hugenot Fort in Oxford, Massachusetts

In June of 1989, The Public Archaeology Laboratory, Inc. conducted an intensive archaeological survey at the historic Hugenot Fort Site in Oxford, Massachusetts and prepared a management and Interpretive Plan for implementation by the town. The seventeenth century fort, listed in the National Register of Historic Places and in the State Register, is the oldest stone fort in Massachusetts. The fort is significant for its ability to address historical and anthropological research questions regarding the early and brief Hugenot settlement; frontier technology; the interactions of English settlers, French settlers, and Native Americans; and methods of human adaptation to hostile environments and stress. The project was conducted for the Town of Oxford which received a Massachusetts Preservation Projects grant from the

Massachusetts Historical Commission.

Background research was conducted and systematic and judgemental subsurface archaeological testing was completed inside the walls of the Huguenot Fort in order to define features, activity areas, and the present condition of the fort site. The testing program and plan preparation expanded upon limited testing conducted by Boston University in 1984. The PAL, Inc. field investigations confirmed the presence of structural features previously described, and in some cases possible exposed and partially reconstructed, by late nineteenth and early twentieth century antiquarians. The recovered cultural material dated almost exclusively from the period of Huguenot occupation of the area. The recommendations for future management, preservation, and interpretation of the Huguenot Fort site include stabilization and monitoring; additional analysis of existing collections; construction of a model; walking tours and a teaching curriculum.

VERMONT

Archaeologcial Sites in Alluvial Settings

contributed by Peter A Thomas

During the past ten years, the Consulting Archaeology Program at the University of Vermont has been evaluating the archaeological potential of alluvial settings throughout Vermont. During the past year, attention was focused on floodplains along the middle and lower sections of the Winooski River, in the towns of Bolton, Waterbury, and Duxbury and in the City of Burlington.

Several problems are common to all studies. First, because all floodplain environments are dynamic, the archaeological potential of any alluvial study area cannot be assessed until something is known about the local geomorphological setting. Floodplains vary in a number of ways - relative and absolute age, rate of floodplain development, and depth of the point bar and overbank deposits to name but a few. Second, once the general patterns have been sorted out at the observational level, it may be very useful to employ techniques which can refine the observational data.

At the observational level, the basic approach is to use extended backhoe trenches in conjunction with topographic information to determine the number of alluvial sequences represented, to develop a general geochronology for the specific study area, and to describe the structural characteristics of the sequences by recording detailed profiles., The recovery of logs

and other organic remains at the base of a number of floodplains has helped considerably in developing floodplain chronologies. (Basic methodologies are presented in Brackenridge, Thomas, Conkey and Schiferle 1988)

The archaeological potential of any specific floodplain sequence will depend a great deal on the rate of alluvial deposition and whether stable surfaces were present long enough for there to be a reasonable probability of encountering evidence of a cultural occupation. One good indication of such a possibility is the presence of buried soils within a floodplain sequence, since most recognizable soils probably require several hundred years to develop. Unfortunately, some soils are not always observable, or are at least not easily observed. For this reason, CAP has been experimenting with techniques which might assist in such identification. The results obtained from subjecting 10 cm interval column samples derived from the trench walls to particle size, pH and element analysis are encouraging.

Particle size analysis to determine percentages of sand, silt and clay is done using the Bouyoucos hydrometer method. Determination of pH is made using a Fischer Accumet pH Meter with a 2:1 ratio of solution to soil. The percentage of organic matter is determined by the wet combustion of Walkly-Black method. Quantities of iron, aluminum, reserve phosphate, calcium, magnesium, zinc, manganese and potassium are obtained using a Leeman Labs Plasmaspec 2.5, an inductively coupled plasma atomic emission spectrophotometer.

Summary results from Winooski River floodplain studies in Duxbury are presented as illustration *(not included here)*. Three alluvial terraces are present. The highest terrace, referenced as T2, is the oldest. Comparative data suggest that it formed some 5,000 to 7,000 years ago. Subsequently, the river downcut approximately 3.7 m and, by moving laterally from south to north, created two lower alluvial terraces, referenced as T1 and T0. The T0 terrace is essentially modern, having begun to develop ca. 120+/-70 B.P.

The T0 terrace is approximately 3.5 m thick. Bedded course sands and gravel at the base of the sequence mark the bed of a former channel of the Winooski River. As the channel moved north towards its present location, a point bar sequence consisting of sands, loamy sands or sandy loams accumulated to a depth of 2.5 m along the edge of the channel. The upper 90-100 cm of the T0 terrace consists of overbank deposits of sandy loam or loamy sand.

The chemical data derived from the T0 column sample show a number of trends. Percentages of organic matter and the quantities of iron and aluminum are low in the rapidly developed basal point bar sequence. Because weathered soils are frequently characterized by increases in all three elements and no soils were observed here, this pattern was expected. Slight increases in organic matter, iron, aluminum and calcium are associated with two historic Ap horizons in the overbank sequence above. A third trend in the chemical data is intriguing. The pH values per 10 cm interval in both the point bar and overbank sequences are both erratic and relatively higher when compared to the column profiles from the older T1 and T2 terraces where pH curves are fairly smooth and where pH values generally fall into the range of 5.4-6.6. Sample data from other sites will be required to test the inference, but substantial variability in the vertical pH curve may indicate modern alluvial sediments.

The historic overbank sequence not only caps the T0 terrace, but blankets the surface of

the T1 terrace and extends to the top of the T2 terrace. However, on the T1 terrace an older sequence of overbank deposits is present at depths ranging from 35 to 150 cm below the surface. It was felt that prehistoric deposits might be present, because at least four buried soils were distinguishable within this overbank sequence. These soils are characterized by very dark grayish brown organic stains and/or by a yellowish brown discoloration produced as a soil weathers and iron compounds accumulate.

A plot of the chemical data derived from the column sample exhibits noticeable increases in the percentage of organic matter, iron, aluminum and calcium between 70-78, 100-120 cm below surface, correlating positively with three buried soil horizons identified visually within the overbank sequence. Samples from the two bottom soil horizons also show slight increases in amounts of clay, which may also be a product of soil development. On the basis of what appeared to be organic staining, a fourth soil horizon was noted. Except for a very minor increase in organic matter, the chemical data do not confirm this as a soil horizon. The organic staining may simply represent a surface that was exposed for so brief a period that soil development did not occur.

Because the T2 terrace is old, it was assumed that evidence of any prehistoric occupation would occur within the upper weathered soil horizons but along terrace fronts, older and more deeply buried surfaces sometimes exist. Although the presence of a buried soil was not observed in the field, chemical and textural data derived from the T2 column sample, including concurrent increases in clay, organic matter, iron, aluminum and calcium at a depth of 90-100 cm suggest the presence of a buried soil.

Textural and chemical analysis prove highly useful for interpreting alluvial settings and for drawing inferences about their archaeological potential. In the Duxbury example, they have helped to confirm the lack of stable soil horizons within the T0 terrace sequence, support the observations of at least three buried soils within the T1 terrace sequence, and identify the presence of a buried soil within the T2 terrace sequence which was not observed in the profiles of test pits used to sample this terrace.

Bibliography

Brackenridge, C. Robert, Peter A. Thomas, Laura E. Conkey and Jane C. Schiferle
1988 Fluvial Sedimentation in Response to Postglacial Uplift and Environmental Change, Missisquoi River, Vermont. *Quaternary Research* 30:190-203.

Thomas, Peter A.
1989 *Phase Ia Archaeological Reconnaissance Survey: Waterbury-Duxbury-Moretown BRF 013-4(10), Washington County, Vermont.* Consulting Archaeology Program, Report No. 101.

Progress on the Champlain Pipeline

contributed by Brian S. Robinson, Archaeology Research Center, UMF

An archaeological survey of the Champlain Pipeline was begun in 1989 with surface walkovers of plowed fields conducted by the University of Vermont and subsurface testing conducted by the University of Maine at Farmington. The pipeline corridor runs from the Canadian border at Highgate, Vermont to West Medway, Massachusetts. Only the Vermont section of the pipeline was tested, concentrating in the northern half of the Champlain Valley. The University of Maine effort was directed at testing an environmental scoring model, using an eight meter interval offset grid within standard-sized sample units along the corridor. The original model called for 180 sample units to be tested, 60 each in high, medium and low priority areas. A total of 110 model test units had been completed when the Champlain Pipeline project was suspended on October 12, 1989. Approximately 90 prehistoric sites and 10 potentially significant historic sites were identified through the combined efforts of UVM and UMF. Funds for close-down costs, including cataloging, report preparation and preliminary analysis of the model are currently being negotiated between UMF and ANR Pipeline Company.

MAINE

Aboriginal Settlement and Subsistence Patterns: Interior Alluvial and Lacustrine Settings

contributed by the University of Maine at Farmington

The University of Maine at Farmington (UMF) Archaeology Research Center, under the direction of **James B. Petersen** and **Thomas R. Baker**, had a very busy season in 1988 working on a variety of consulting and individual research projects. Over 60 employees were busy in the field and laboratory with funding provided by corporate contracts, college and work-study, and the summer youth employment program; a small number of volunteers have also participated in both the field and laboratory work. The majority of the 15 consulting archaeology projects have been supported by Central Maine Power Company (CMP) and Great Northern Paper Company (GNP).

More than 650 archaeological sites were relocated or have been newly identified in the project areas of the consulting projects, of which nearly all are attributable to Native American aboriginal populations of the long span of regional prehistory. Although components can be

assigned to all periods of prehistory and early history from ca. 8000 B.C. onward, most sites are simply attributed to prehistoric aboriginal occupations of unknown antiquity since relatively few diagnostic artifacts and radiocarbon dates are available yet. The consulting projects have been largely undertaken in the upper portions of the Penobscot River, Kennebec River, Androscoggin River, and Saco River drainages in Maine and one small area in New Hampshire. Although highly significant sites have been identified along the main stems of all of these rivers, the focus of work in 1988 has been on upland lakes, such as Moosehead, Chesuncook, Pemadumcook-Twin, and Richardson lakes which are currently being studied for hydroelectric relicensing environmental impact assessments. One major new license for the proposed Hydro-Quebec transmission line was also studied. Smaller scale relicensing efforts are being conducted along the rivers as well, with a new hydroelectric facility in New Hampshire being studied. Several proposed subdivisions and two salmon hatcheries have been examined as the result of Maine Department of Environmental Protection permit requirements.

Some highlights of the recent consulting research include definition of several relatively rare Paleoindian sites, including both Early and Late manifestations, ca. 8500-7000 B.C. At least one of these is likely to require a phase III excavation in the near future due to ongoing erosion. Elsewhere, stratified sites on the Penobscot, Kennebec, Androscoggin, and Saco rivers preserve variably deep sequences of Archaic period, ca. 7000-1000 B.C., Woodland (Ceramic) period, ca. 1000 B.C.-A.D. 1550, and later Contact period occupations down several meters deep in a few locations. Ultimately, some of these will be subjected to varying degrees of phase III excavation because of the highly significant scientific value they exhibit for documenting aboriginal culture change and continuity at the same time that they are undergoing erosion due in part to operation or proposed development of a particular project.

Another highlight of 1988 was the identification of burned plant remains from several sites within the Bonny Eagle Project area on the Saco River. Botanical remains from previous phase I work at the Early Fall site were analyzed by Nancy Asch Sidell and included aboriginal maize (corn), squash, and beans from a sample waterscreened in the laboratory. These burned food scraps were recovered from a pit feature in association with late prehistoric or very early historic aboriginal ceramics that can be cross-dated to ca. A.D. 1400-1700. This feature was recently radiocarbon dated to 460+/-60 B.P. (Beta-29079), or A.D. 1490. This fortunate association of aboriginally cultivated plants is the first well documented find of its kind in Maine archaeology, even though we have previously known that some native Mainers were cultivating plants during the early 1600s on the basis of historical records of comparable importance. Nancy Asch Sidell also identified maize, squash, and beans in fill from one feature at the Skitchewaug site on the Connecticut River in Vermont. This feature was dated to 830+/-60 B.P. (Beta-24210), or A.D. 1120. Maize was also identified in two other features from the site, one which was dated to 730+/-80 B.P. (Beta-29831), or A.D. 1220.

The UMF Archaeology Research Center was engaged in numerous other large and small volunteer research projects during 1988. In particular, several of the supervisory staff have continued research for the Piscataquis Archaeological Project (PAP) which was initiated at the same time that the Center was founded in 1984. Analysis of nearly all faunal remains from the

deeply stratified Sharrow, Brigham, and Derby sites in Milo has been completed, and over 25 radiocarbon dates are now available for a composite sequence that began by ca. 8000-7000 B.C. Several summary articles have been published, several others are in preparation, and a comprehensive report for the three-meter-deep Sharrow site is nearing completion. Analysis of various private collections from the greater drainage area of the Piscataquis River is ongoing also. Master's thesis research on several of the stratified sites within the PA study area is still underway through the University of Maine Institute for Quaternary Studies.

Other volunteer efforts include public speaking engagements in schools, community organizations of various sorts, and avocational and professional archaeology meetings. Ongoing research also includes compilation of information about aboriginal ceramics and fiber industries from Maine, analyses of selected artifacts from the Early Woodland period Boucher site located in Vermont, and continued collaboration with colleagues from the Carnegie Museum of Natural History in the study of collections from Martha's Vineyard.

REGIONAL

Towards a Better Understanding of Metal Use in Native American Cultures...

Research on copper artifacts of the contact period has been carried out over the past year by **James W. Bradley** of the Massachusetts Historical Commission and **S. Terry Childs**, a post doctoral fellow at the Center for Materials Research in Archaeology and Ethnology (CMRAE) at MIT. Through a grant from the Rochester Museum and Science Center, technical analysis was conducted on a series of diagnostic 16th century artifact forms. Results include a better understanding of how native craftsmen converted European brass and copper into new forms, as well as a more precise basis for determining the sources of European metals available to native people in the Northeast. This fall Terry relocated to the University of Florida in Gainesville to set up her own archaeo-metallurgy lab under the auspices of the Center for African Studies. Inspite of this change of address, both Terry and Jim are continuing their work on metals from sites in the northeast. Current projects are underway with other researchers including **Fred Dunford**, Cape Cod Museum of Natural History, for analysis of a copper bead from the Bolands Pond site, an early Late Woodland period site on Cape Cod, and **James Petersen** of the University of Maine at Farmington, for analysis of copper artifacts from the Boucher site, an Early Woodland period site in northwestern Vermont.

Regional Large-Scale Surveys - United States Military Installations

contributed by Suzanne Glover, PAL, Inc.

Virginia Fitch and **Suzanne Glover** of The Public Archaeology Laboratory, Inc. completed large-scale historic and prehistoric reconnaissance surveys at five U.S. military installations: Fort Devens and the Army Materials Technology Laboratory (AMTKL) in Massachusetts; Fort Monmouth and Picatinny Arsenal in New Jersey; and Detroit Arsenal in Michigan. This project was conducted for the Army Corps of Engineers, New England Division, as part of the Base Closure and Realignment Act of 1988.

The research design and goals of the project focused on the documentation of known and potential archaeological properties, as well as pre-military and military standing structures, in order to formulate a general archaeological sensitivity assessment and an historic building evaluation for each installation. The cultural resource data base was then placed within a regional cultural research framework, which included a facility and national military history. The information provided in the survey reports is intended to serve as a guide for future historic documentation and archaeological surveys prior to new constructions, reuse, or transfer of property at each installation.

The Fort Devens facility occupies a 9,338 acre tract within the upland and valley zone bordering the Nashua River of central Massachusetts. Fort Devens was founded in 1914 as a troop mobilization and training facility, and has since become the largest Army installation in New England. The reconnaissance survey documented the presence of four prehistoric and six historic sites within the installation, as well as a moderate to high resource potential for numerous additional cultural resources in undisturbed areas. There are 1200 military buildings presently located at Fort Devens that represent all phases of military construction within the facility. One historic district, the 1930's Permanent Cantonment consisting of 150 buildings, has been recommended for listing in the State and National Register of Historic Places. Additional potentially significant structures identified within the installation include one nineteenth century house; eight World War I temporary buildings; 110 interwar period permanent buildings; and 366 World War II temporary structures and a small number of permanent buildings.

The AMTL facility in Watertown, Massachusetts covers 45 acres of land bordering the north bank of the Charles River. The installation was established in 1816 as an ordnance supply depot known as the Watertown Arsenal, and presently operates within one-half of its original configuration as the U.S. Army Materials Technology Laboratory (AMTL). This facility lies within a known local core area of prehistoric estuarine settlement, dating predominantly from the Transitional Archaic Period. One known prehistoric site is documented within the AMTL facility, and several other sites have been recorded in the immediate area. The area encompassed within the AMTL facility has been assessed as possessing a moderate to high potential for containing significant prehistoric cultural resources in areas exhibiting minimal earth-moving disturbances. A number of potential pre-military and military historic resources have also been identified within the boundaries of AMTL. The installation contains 27 buildings, the majority of which have been identified as potentially significant historic properties. These include one

individual property, the Commanding Officer's Quarters, currently listed in the National Register of Historic Places. Two individual buildings and two eligible building complexes, including an Olmstead-designed landscape, as well as seven U.S. Category I *(properties of major importance)* and nine Category II (properties of importance) properties have also been identified as potentially eligible historic properties within the facility.

In Monmouth County New Jersey, the Main Post of Fort Monmouth occupies a 626 acre nearly level neck of land bordered by two estuarine river drainages that empty into the Atlantic Ocean. This Post was activated in 1917 as the training center for the Army Signal Corps, and presently functions as the Communications and Electronics Command (CECOM). Six locations within the main Post reportedly contain evidence of prehistoric occupations dating from the Early Archaic to Late Woodland Periods. This facility has been assessed as having a moderate to high potential for prehistoric archaeological deposits in the small, remnant undisturbed portions bordering the rivers and wetlands. One historic archaeological site is documented on the Main Post, along with several potential historic pre-military archaeological site locations. These include the grounds and structures associated with the late nineteenth century Monmouth Park Racetrack. Numerous early twentieth century military structures no longer standing have also been identified on the Post. The Main Post contains 419 permanent, semi-permanent, and temporary buildings. Potentially significant historic properties include one proposed historic district, encompassing 115 buildings dating from 1927 to 1937; one historic property listed in the New Jersey State Register, Hangar #1 Site; and 121 U.S. Army Category III buildings (properties of minor importance), including 114 of the buildings situated within the proposed historic district. These standing structures represent military construction phases dating from circa 1920 to the present. No buildings remain from the early periods of military construction.

Picatinny Arsenal encompasses about 6,500 acres in the north-central highlands region of Morris County, New Jersey. The Arsenal began as a U.S. Army powder storage depot in 1880, and presently serves as headquarters of the U.S. Army Armament Research and Development Command (AARADCOM). Four surface collected areas of prehistoric activity have been tentatively identified within the arsenal boundaries. The Arsenal has been assessed as possessing a moderate to high potential for prehistoric resources, particularly in undisturbed sections near the various freshwater sources situated within the installation limits. Seven historic archaeological resources have been documented within the Arsenal, including the remains of two historically significant forge sites. A large potentially historic archaeological resource base that includes both pre-military and military structures has also been identified. Picatinny Arsenal contains over 1,000 buildings that represent most phases of military construction. Potentially significant historic properties identified at the Arsenal include seven Category I, 55 Category II and 248 Category III buildings. No properties at the Arsenal are currently listed in the State and National Register of Historic Places.

Detroit Arsenal is located on a 352 acre tract of land just north of Detroit within the glaciated Great Lakes section of Michigan's central lowlands. The installation was established in 1940 by the U.S. Army for the production of tanks, and operates today as part of the U.S. Army Tank Automotive Material Readiness Command (TACOM). No prehistoric or historic

archaeological sites have been identified within the arsenal. Background research indicates a moderate potential for containing prehistoric resources in the few relatively intact areas of the Arsenal. Six potential pre-military homestead sites have been identified within the Arsenal property. Detroit Arsenal contains 87 buildings that represent military phases of construction from 1940 to present. The potentially significant historic properties identified at the Arsenal include the 25-acre Tank Plant listed as a U.S. Army Category II structure, and one Category III Administration Building. Presently no buildings at Detroit Arsenal are fifty years old or older, and none are currently listed in the National Register of Historic Places. Both the Tank Plant and Administration Building have been recommended for listing in 1991 when they reach 50 years of age.

Regional Large-Scale Surveys - Reservoir Projects

contributed by Marsha K. King, PAL, Inc.

In July and August 1989, Marsha K. King of The Public Archaeology Laboratory, Inc., conducted cultural resource reconnaissance surveys within two Army Corps reservoir project areas: Blackwater Dam, in the towns of Salisbury and Webster, New Hampshire, and Barry Falls Dam in the towns of Barre, Hubardston, Oakham, and Rutland, Massachusetts. The Blackwater Dam project area encompassed 3,581 acres along the Blackwater River, part of the upper Merrimack drainage. The Barre Falls Dam project area included 1,869 acres of flowage easement with 557 acres held by the Army Corps in fee simple, located on the Ware River in the upper Chicopee drainage.

The research design developed for the reconnaissance survey included the collection of data on known cultural resources and information on the physical environment. This data was used to develp predictive models for the location of prehistoric cultural resources within the project areas. The predictive model for prehistoric resources was field tested through the application of limited subsurface sampling (shovel test pits). Historic cultural resources identified from documentary sources or the walkover inspection were also recorded (sketch maps, photographs) during this fieldwork phase of the survey. During the field testing/recording phase of the survey, additional observations were also made on the nature and extent of previous disturbance and effects of current project operations at the reservoirs.

No prehistoric cultural material was recovered during either survey. One possible Contact Period site and a single collector's find spot were noted from historic documents and an informant for the Blackwater Dam project area. No prehistoric sites or findspots were located or noted from the survey of the Barre Falls Dam project area. A number of areas of high and moderate prehistoric archaeological sensitivity were identified and an archaeological sensitivity maps were prepared for both reservoir areas.

Fifty-four (54) historic period cultural resources were identified from historical

documents and maps, informant interview, and the reconnaissance survey within the New Hampshire reservoir, with two of these historic sites possibly located just outside the project area boundaries. A total of seventy-five (75) Historic period cultural resources were identified in the Massachusetts reservoir, with seven of these lcoated on or just outside the project area boundaires. A number of the historic sites from the two project areas are considered to be potentially significant based on the limited information collected during the survey. Recommendations of additional intensive level survey work were made for known sites and areas considered to be archaeologically sensitive.

CONFERENCE ON NEW ENGLAND ARCHAEOLOGY

REQUEST FOR ARTICLES

Please submit a brief paragraph on your current New England Archaeological research for inclusion in the next CNEA Newsletter. Also submit any new bibliographic titles for books, articles, reports, etc. in American Antiquity format. Thank you.

Please return by March 31, 1990 to:

Mary Lynne Rainey
The Public Archaeology Laboratory, Inc.
387 Lonsdale Avenue
Pawtucket, RI 02860

or to your local CNEA Steering Committee representative. If possible send your contribution on a computer diskette (with paper copy) using a Macintosh application or an ASCE file format. Please specify the computer model and word processor operating system used to create your file. Your diskette will be returned to you. Begin by stating your research topic, research questions, and how your data are used to answer your research questions.

NAME:

INSTITUTION:

MAILING ADDRESS:

BIBLIOGRAPHIC ENTRY:

RESEARCH TOPIC:

C-14 DATES (See page 35)

PLEASE MAIL AS SOON AS POSSIBLE

RADIOCARBON DATES

Please report C14 dates as fully as possible.

Date: _____ +/- B.P.

Laboratory: _____ Lab number: _____

Institution responsible for the excavation: _____

Principal Investigator(s): _____

Name of Site: _____

Town: _____ U.S.G.S. Quad: _____ State: _____

Sample (charcoal, shell, bone, etc.): _____

Describe feature or object that was dated:

Diagnostic artifacts (temporal or cultural) directly associated with the date:

Bibliographic references: