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Information for Parks, Federal Agencies, Indian Tribes, States, Local Governments, and the Private Sector

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Archeology and the Public

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Cover photos from top left clockwise: Rock House Reservation, West Brookfield, MA., photo by Edwin C. Esleeck; Rachel Sayet examines Native American pottery with Jeff Bendremer, consulting archeologist for the Mohegan Tribe, photo courtesy of the Norwich Bulletin; *all volunteer recording crew of the Northern New England Chapter of the Society for Industrial Archeology at New Hampshire's Franconia blast furnace ruin, photo by George Todd.*

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Poster courtesy Connecticut Historical Commission.

David A. Poirier and Kenneth L. Feder

Sharing the Past with the Present

It is not that long ago that one of us heard the following perspective expressed at an archeology conference (where, not coincidentally, all of the attendees were either professional archeologists with higher degrees or graduate students): "Amateur participation in archeology is about as appropriate as amateur participation in dentistry." The assertion was simple and clear; non-archeologists could not—and should not on any level—be involved in archeology. That was the exclusive purview of us knighted professionals.

Though perhaps at one time a widespread belief, almost certainly such a view has been largely abandoned by most professional archeologists. It should be clear by now that we are able to devote our careers and our lives to a profession that produces little more than knowledge because large numbers of non-archeologists think that this knowledge is interesting—and they are willing to pay taxes and museum admissions, take courses, and purchase books in an attempt to share in that knowledge.

It is, therefore, self-defeating or even, in a disciplinary sense, suicidal to attempt to eliminate the public from the archeology that they support with their dollars and their fascination. A publicless archeology would survive about as long as would, for example, public art, if painters supping at the public trough refused to display their paintings to the taxpayers, arguing that the masses simply were too unsophisticated to appreciate the import of their creations. Try running that by the current U.S. Congress!

And, in fact, American archeology has undergone important changes in recent years. No longer are archeological sites the restricted intellectual province of the scientific community. To

our credit, archeologists have done far more than merely grudgingly accept public participation in archeology; most of us have embraced it. Instead of waiting for the public to knock on our doors meekly inquiring of us archeological brahmins to please share in our great wisdom, we often have taken the initiative and knocked on theirs, inviting them to come along with us on our intellectual odysseys to the human past. From the often haphazard lecture circuit, to well-funded and marvelously organized archeology weeks springing up all over the country; from the preparation and distribution of detailed curriculum materials to PBS documentaries; from living museums to open sessions at the SAAs; from actual tours to real places to virtual visits on the Internet, a truly "public" archeology has emerged—an archeology open and accessible to the public, not just paid for by them. Many of the most important and successful approaches to this new public archeology are presented in this issue of *CRM*.

For part of the history of our discipline, archeology survived because wealthy individuals wished to participate in great discoveries by writing the checks that allowed for these discoveries to take place. Today, archeology survives under far more egalitarian circumstances. Our discipline survives—and even thrives—because we have many friends in the public who recognize the importance of what we do, and like to be reminded of it. No discipline was ever hurt by cultivating too many interested friends. Perhaps we have finally figured out that we accomplish this goal simply by making what we do accessible to them.

We believe this new outward-looking perspective is critical to the future conservation and preservation of the nation's diverse archeological heritage. Putting people first is vital if archeologists are to create an educated and caring constituency for protecting archeological sites. The past is dead; therefore, we must demonstrate and share its continued relevance to a diverse public in a meaningful way or witness further degradation of our fragile cultural heritage.

Most archeologists, whether academic or public servants, recognize that long-term preservation of the country's archeological treasures will require both legislative foresight and educational creativity. Archeologists must reach out in a multitude of ways to America's diverse public to ensure the broadest possible exposure to and sharing of archeological insights on America's past.

Scholar, Steward, Storyteller—these are the personalities which every archeologist must vigorously embrace if America's past is to be professionally interpreted, skillfully managed, and meaningfully shared with the public. Education and public outreach must be increasingly sophisticated in order to successfully reach its intended audiences. Archeologists must exercise creativity and discover new and challenging approaches for accessing the technologically-enabled, visually-oriented public of the soon-to-be-present 21st century.

Simultaneously, archeologists, land managers, and site interpretors must increase direct public accessibility to the nation's sites and archeological data. Significant public participation in hands-on archeological activities, whether characterized as heritage tourism or leisure tourism, reflects American fascination for all aspects of archeological research. This increasing public interest in local heritage must be further enhanced by the archeological community for the mutual benefit of both the public and site preservation.

Archeologists should seek to improve their communication skills with the general public. Non-technical popular reports and educational materials must be recognized as an integral aspect of all archeological research projects. The academic and bureaucratic realms of American archeology must share the responsibility for providing the various "publics" with a collective appreciation for and understanding of all aspects of archeology, particularly the significance of a conservation ethic for archeological resources.

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The authors coordinated this issue of *CRM* and served as co-guest editors.

STATE OF CONNECTICUT

CENTRAL CONNECTICUT STATE UNIVERSITY

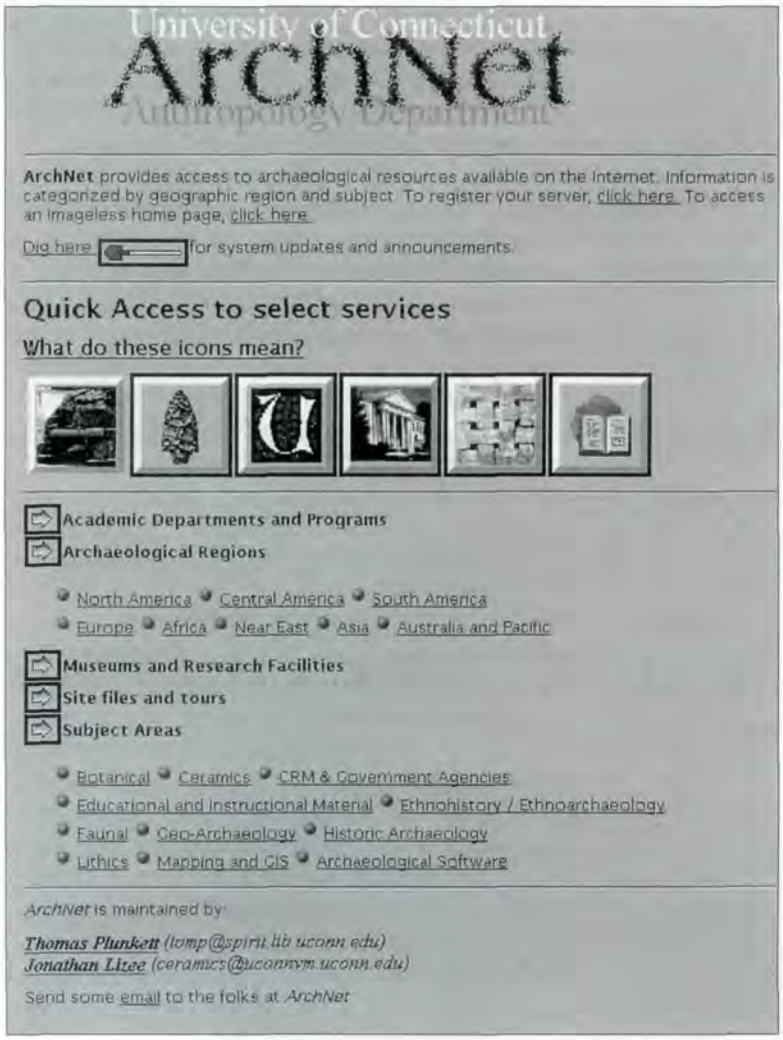
NEW BRITAIN 1849

Thomas K. Plunkett and Jonathan M. Lizee

ArchNet and Archeological Cyberspace

In the 1970s and 1980s, archeologists adopted computers as storage devices for large data sets and as engines for the analysis of data. In the 1990s, archeologists have begun to use computers as electronic libraries or archives for data and multimedia presentations which are accessible worldwide via the Internet. One such resource known as ArchNet, developed at the University of Connecticut, provides links to global Internet resources of interest to archeologists. These resources consist of data, images, and reports including artifact type catalogs, site reports, and historic documents. Using ArchNet as a model, we will outline existing and potential applications for cultural resource management and historic preservation.

The main or "home" page of ArchNet.



Digging the Information Super Highway

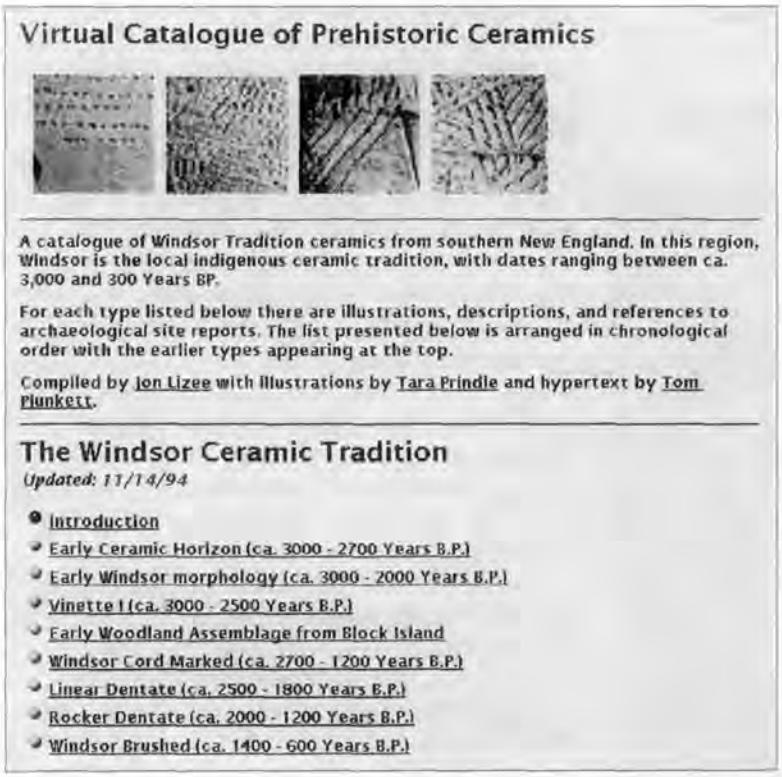
In recent months, there has been considerable press given to the proposed National Information Infrastructure (NII), referred to by the popular media as the *electronic highway* or *information super highway*. Much of the publicity has been generated by poorly informed politicians and corporate developers, and conveyed by journalists who portray the transfer of information in seductive and appealing terms. The Internet or information super highway has, in fact, been in place since the early 1980s. In its present state, the Internet is literally a network of networks linking tens of thousands of institutions. There is no single computer that comprises the information highway and despite the popular conception there are no on-ramps or off-ramps. Worse yet, there are no road maps to the information super highway. ArchNet, in essence, provides a "map" of the Internet for archeologists and historic preservation professionals by creating links with existing and developing computer networks.

In the late 1980s, the European Center for Nuclear Research (CERN) developed a method for the exchange of multi-media resources over the Internet. This protocol is known as the World Wide Web (WWW). Using the Internet and the WWW protocol, computers around the globe can be used to transfer and share archeological data.

To access the ArchNet and the World Wide Web, users require a direct Internet connection and browsing software. The necessary browsing software is freely available from the National Center for Super-Computing Applications (NCSA) via http://www.ncsa.uiuc.edu. The address (URL) of ArchNet is: http://spirit.lib.uconn.edu/ArchNet/ArchNet.html (case sensitive).

Using hypermedia, the WWW allows for the exchange of text, graphics, sound, full motion video, and large data sets across the Internet. The advantage of hypermedia is that it allows the user to interact with all elements (text, graphics, sound, etc.) of a "virtual document" thus expanding the potential applications (education, publishing, visual databases, etc.) while making it easier to use. All of ArchNet (and the Internet) can be navigated and browsed using only a mouse. This protocol has greatly increased the accessibility of the Internet by making it easier to use. The development and acceptance of the WWW as a standard for exchanging data has allowed for the creation of electronic or "virtual" libraries and museums which could not be constructed using traditional publishing methods. For example, the black and white illustrations presented in this article appear on ArchNet as high resolution color images which can be viewed and/or downloaded by users worldwide. Color imaging for journals like *CRM* has traditionally been cost prohibitive. The WWW provides a foundation from which journals can be made interactive and globally available in a cost effective manner.

Users can access the WWW using browsers or client applications on a variety of desktop computer platforms. The current suite of browsing software includes Mosaic (developed by the National Center for Super Computing Applications at the University of Illinois, Urbana-Champagne), Cello, Netscape, and Lynx. The electronic documents used in hypermedia presentations can be archived on a variety of computer platforms (Macintosh, DOS, Unix, and others). The material available on ArchNet is provided via Internet links to computers located around the world, yet clients using ArchNet do not need to know of a given document's physical location. This collaborative aspect of the WWW is one of its greater strengths.



Virtual Catalogue of Prehistoric Ceramics

A catalogue of Windsor Tradition ceramics from southern New England. In this region, Windsor is the local indigenous ceramic tradition, with dates ranging between ca. 3,000 and 300 Years BP.

For each type listed below there are illustrations, descriptions, and references to archaeological site reports. The list presented below is arranged in chronological order with the earlier types appearing at the top.

Compiled by Jon Lizee with illustrations by Tara Prindle and hypertext by Tom Plunkett.

The Windsor Ceramic Tradition

Updated: 11/14/94

- Introduction
- Early Ceramic Horizon (ca. 3000 - 2700 Years B.P.)
- Early Windsor morphology (ca. 3000 - 2000 Years B.P.)
- Vinette I (ca. 3000 - 2500 Years B.P.)
- Early Woodland Assemblage from Block Island
- Windsor Cord Marked (ca. 2700 - 1200 Years B.P.)
- Linear Dentate (ca. 2500 - 1800 Years B.P.)
- Rocker Dentate (ca. 2000 - 1200 Years B.P.)
- Windsor Brushed (ca. 1400 - 600 Years B.P.)

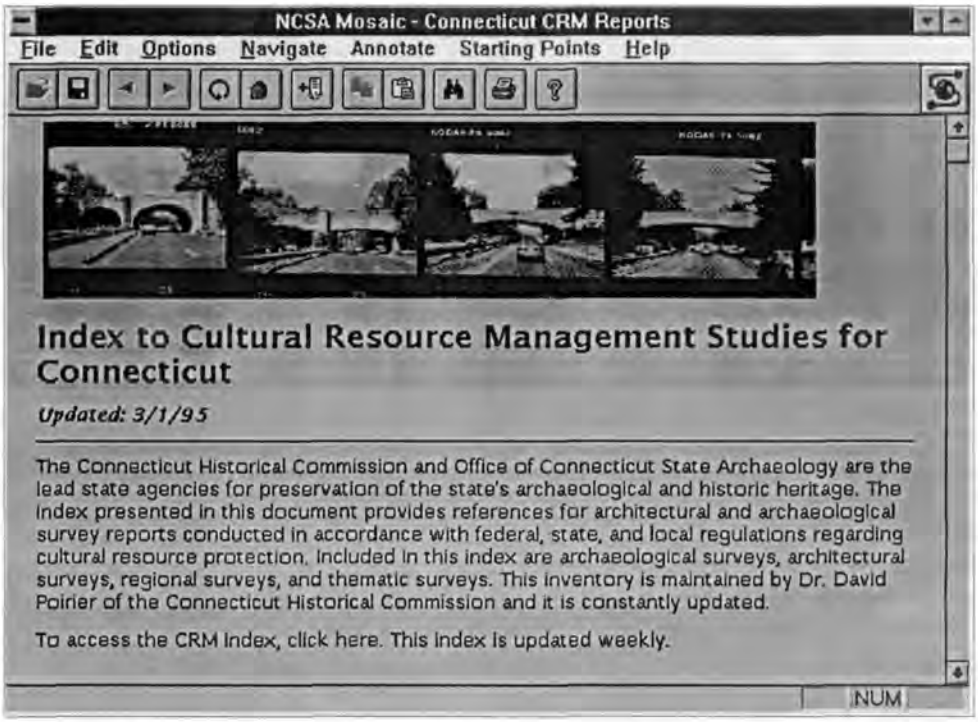
First page of the type catalogue for Windsor Tradition ceramics. Clicking on any of the balls leads to detailed type descriptions and illustrations for the prehistoric ceramics of southern New England.

ArchNet is organized by geographic region and subject area. Current subject areas include: Botanical, Ceramic, Faunal, Educational, Ethnohistory, CRM and Government Agencies, Lithics, Mapping and GIS, and Software. Current offering for Historic Preservation and Cultural Resource Management include links to the National Register of Historic Places (via University of Maryland), the National Archaeological Database (University of Arkansas), and hypertext versions of the National Historic Preservation Act, National Environmental Protection Act, Native American Graves Protection and Repatriation Act, and others. In addition, summary documents describing preservation-related legislation for Connecticut and Massachusetts are available. The Connecticut Historical Commission and ArchNet staff have also developed a searchable index to cultural resource management reports for Connecticut.

High Tech Resources for Prim-Tech Studies

ArchNet provides access to hypermedia documents and "exhibits" using data generated at the University of Connecticut (UConn) and in collaboration with researchers at other institutions. ArchNet also offers "pointers" or links to all other sites on the Internet containing related information useful for archeologists and students of archeology. In a sense, ArchNet provides "one stop shopping" for archeologists who want to explore the Internet.

The graduate program in anthropology at UConn focuses on the prehistoric archeology of the northeastern United States. As part of the formal program, many of the students participate in field surveys and projects related to state- and federally- mandated cultural resource management studies. ArchNet allows data, artifact images, and reports from archeological research projects to be shared among students and researchers at UConn and beyond. The WWW protocol has been used to construct interactive artifact catalogues for prehistoric ceramics, projectile points, lithic tools, and histological thin sections of faunal specimens. In



This page introduces users to the Index to Connecticut CRM Reports. This document is updated daily as new sources of information become available.

addition to the available artifact catalogues and data sets, ArchNet has been developed as an instructional resource for northeastern prehistory, historic preservation, cultural resource management, and other courses in the Anthropology Department. Current educational resources include on-line versions of state, federal, and international cultural resource management policies and regulations, links to the National Archaeological Database, National Register of Historic Places, indexes of cultural resource management reports for Connecticut, and hypertext versions of site reports. All of these resources are useful in the instruction of archeology and the identification of archeological materials. ArchNet also provided the first implementation of an Internet resource used in teaching an undergraduate course at UConn in Social Anthropology.

Archeological Cyberspace: Future Directions

ArchNet has evolved to become a vital resource to archeologists on the Internet. Since its inception in November 1993, the use of ArchNet has expanded from approximately 300 to over 5,000 accesses per day. The future holds exciting possibilities as we continue to develop new resources for cultural resource management, historic preservation, and archeology. Several interactive databases, allowing user controlled queries and input, are currently planned as future additions to ArchNet. These include Connecticut site files and National Register sites which will include photographs, artifact illustrations, and site descriptions which can be updated by the Office of the Connecticut State Archaeologist and the Connecticut Historical Commission (SHPO) from remote locations. We further plan to develop resources for education and use by professionals in historic preservation which will include type catalogues for historic and prehistoric artifacts and a hypertext culture history of southern New England.

In developing ArchNet, we have found that the WWW is cost effective and easily expandable. At the same time, sharing of data and collaboration is facilitated by allowing "owners" of disparate data resources to be integrated within a single application framework. After a year of system development, reports from users around the world indicate that the WWW provides a virtually limitless environment for the exchange and development of innovative resources for historic preservation.

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Jonathan Lizee is a lecturer in Anthropology at the University of Connecticut and serves as a consultant for several cultural resource management groups in New England.

For more information, contact the authors via email at: archnet@spirit.lib.uconn.edu.

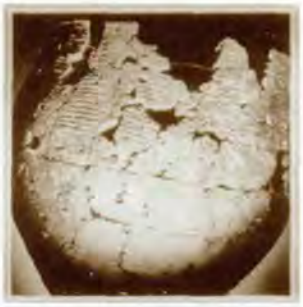
What's out there?

A number of universities and United States government agencies are making material available on the World Wide Web. Some of the current government sources include the United States Geological Survey, the National Wetlands Inventory, Soil Conservation Service, National Oceanographic and Atmospheric Association, National Park Service / Department of the Interior, and the National Science Foundation. All of these agencies are accessible through ArchNet.

Collin Harty

The Language of Images

Producing a Poster for Your Archeology Awareness Week



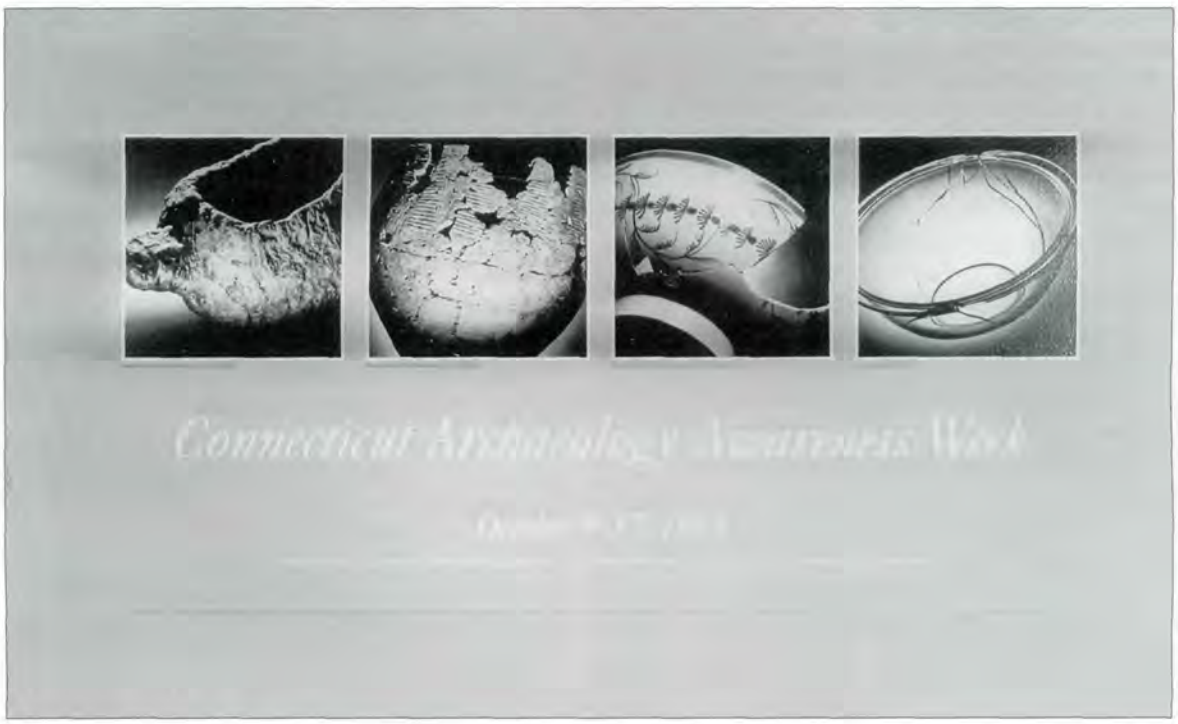
The production of an annual archeology awareness week poster has potential benefits far beyond simply advertising the event. At its best, an annual poster becomes a tangible icon for the event, a piece that is easily recognized, anticipated, shared, and contributes to your education effort. At its worst, it does little more then squander time, money, and divide the people charged with its production.

As a designer, my experience has been that the fundamental problem of producing a poster is not primarily one of design. Nor is an effective poster necessarily the result of a handsome budget, use of an accomplished design firm, or a high-end printing house. The success of the project is based, first and foremost, on those involved in reaching a shared view of what it is you are trying to communicate.

Graphic design is not simply the act of "making pretty." Like the words in this sentence, graphic design is an act of communication. The designer uses scale, color, graphic images, and typography in conjunction with one another to transfer facts, evoke emotion, build anticipation. He is in essence an interpreter, taking the goals presented to him by the planning group and interpreting them in the language of graphic design. If the goals are muted, then so too will be the poster.

At first glance the goal for an archeology awareness week poster seems obvious: let people know about the event. It is a good place to start. Set six archeologists around a table and they will readily agree on it, but then things quickly become complicated. After only a little discussion the perception about what the event should be, will be as varied as the personalities at the table. Who is this event meant to reach? Are we appealing to professional archeologists, amateurs, educators, lay people, children? What is it you want to get them thinking about? What are their preconceptions about archeology? What are the most unique aspects of archeology in your state? Are there particular events that should be focused on?

Consider the designer's role as interpreter—literally. Draft a statement of intent for the event that everyone agrees on, and share it with him/her. If you have samples of graphic work you respond to, even if they are not related to archeology, share those. They might help the designer identify a tone or feel you think is effective. At this stage in the game do not concern yourself too much with cost. You are



Connecticut's 1993 Archaeology Awareness Week poster. (The poster received honorable mention in the 1994 American Association of Museums Publications Design Competition.)

Working with Graphic Arts Professionals

To the uninitiated, working with designers, artists, photographers and printers can feel like travel in a foreign land. Each speaks a language that seems alien and obtuse. Rule number one is to **trust your instincts**. Ask to see samples of work comparable to the one you will be producing. On the creative side of the process (the realm of designers, artists, and photographers), you will simply respond to certain works more than others. Try to define and articulate what it is you are responding to. Craftsmanship is evident in a printer's work, even to the layman. Look for accurate alignment among the different colors being printed, even saturations of color where there are broad surfaces of ink, clarity in the reproduction of photographs, and natural looking colors in color photographs. These will be clear indicators of how much pride the printer takes in his/her work.

The most important consideration in working with graphics professionals, however, is finding someone you feel comfortable working with. No matter how creative a person is, no matter what a company's record is for getting a project in on time and within budget, no matter what praise others have showered on them, if you cannot effectively communicate with the person you are dealing with, if you do not feel like they are open to your input, if you don't get to a point where it is clear that everyone involved in the project shares the same vision of what it is you're trying to create, the project will show it.

working with the designer to develop a conceptual model for the poster, an idea, and any designer worth his/her salt will be able to adapt an idea to a variety of budgets.

Keep your conceptual model simple. If everything goes well you will end up with a poster that holds people's attention for about 10 seconds. In that time your aim is to break them from the distractions of the everyday world, draw them in, pique their curiosity, make them want to know more, tell them when and where to find out more and hope that you have made an impression that is strong enough to last until the event begins. Everything in the poster should be there for a reason—if it does not serve your message, it distracts from it.

If this is an annual event, consider how a body of posters will function over the years. In Connecticut we settled on a conceptual model that presents similar artifacts over time. Through a series of four photographs a visual time line is created that strives to connect the past with the present. By repeating the concept, but choosing a new series of artifacts, we are able to significantly vary the visual feel of the poster each year, while still making it easily recognizable as an icon of our event. This promotes a fresh feel to the event, while at the same time allowing us to create a very diverse image of what archeology is in Connecticut. By creating some continuity in your poster you will save yourself some work (Why reinvent the wheel?), and potentially make it more effective.

Once you begin to develop a vision of what your poster might look like, you must enter into that region of inevitable compromises. The project itself is essentially one large equation, that must balance in the end. You may be hiring designers, artists, photographers, printers, a mailing service; each offering a measure of quality and convenience to the project. Buried within the equation are further choices on the number of posters to be printed, its size, whether it will be one color, two colors or four colors, the quality of the paper it will be printed on, whether it will be mailed in tubes (more expensive), or folded into envelopes (less expensive). Within a finite budget, it will be these compromises that most determine the final look of the poster.

The equation is not solely balanced against finances. Time will be spent organizing and attending meetings, raising funds, searching out and working with graphics professionals, tracking down artifacts and/or locating sites to be photographed, compiling mailing lists, stuffing mailing tubes. It is hard to stress enough the price such a project can extract in time. If the project is managed by committee, make sure it is clearly understood who is responsible for each task. A simple misunderstanding can quickly become a major stumbling block.

If every state produced an archeology awareness week poster, the equation would be different for each. It is hard to offer any tangible advise to help you grapple with these compromises, other than chance to anticipate some of the choices you will have to make. Again, the best tool you have to gauge the compromises will be a clear vision of what it is you are trying to create.

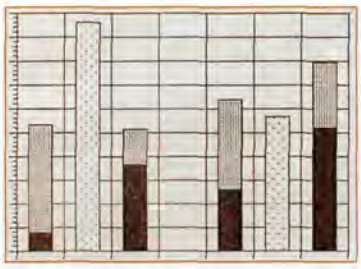
A poster project can seem to take on a life of its own. What starts as an adjunct to an event, becomes an event in itself. This may appear like more of a burden than it is worth, but it can also be a blessing in disguise. If carried out with clarity and determination your archeology awareness week poster can become something that is anticipated and even searched out, and what more effective advertisement can you have for your event than that?

Collin Harty was trained in design at Rochester Institute of Technology and studied environmental science at Cornell University. He currently works for the Connecticut State Museum of Natural History, where he has been exhibit planner for seven years.

Kenneth L. Feder

Ten Years After

Surveying Misconceptions About the Human Past



On one of those ubiquitous entertainment/news shows that have exploded onto our television sets in the last few years, a survey was conducted among watchers concerning their opinions on things paranormal. There certainly was no attempt to obtain a non-biased sample. In fact, polling watchers of such a show virtually guaranteed a non-representative slice of the American public. Nevertheless, the results were interesting. More than a quarter of the participants believed in the accuracy of dreams in foretelling the future, 12% believed in the utility of astrological forecasts, and 22% accepted the reality of clairvoyance in prognostication. In the same sample, 3% of those responding also expressed confidence in the accuracy of predictions contained in fortune cookies! None of these figures inspires great confidence in the rationality of at least the element of the American public that watches such shows.

Testing Student's Preconceptions

What about that sub-sample of the American public that attends college and enrolls in an introductory course in anthropology or archeology? In 1983, I conducted a survey among 186 undergraduate students, focusing on student perceptions about science and the scientific method with a particular emphasis on their understanding of the human past.[1, 2] In my original survey, students were presented with a series of 50 statements and were asked to rate them on a Likert-type scale (1=strongly believe, 2=mildly believe, 3=don't know, 4=mildly disbelieve, 5=strongly disbelieve). The statements students were presented with ranged widely from simple declarations like "Nothing can go faster than the speed of light," to the more exotic including "UFOs are actual spacecraft from other planets," and "Reincarnation is an established fact."

As mentioned, the survey contained a number of statements for the students to rate that specifically related to the human past. Again, these ranged from widely accepted assertions like "Human beings came about through evolution," to the decidedly less-well accepted like "There is good evidence for the Lost Continent of Atlantis," and even "Aliens from other worlds visited the earth in the prehistoric past." Also included in the 50 statements that students were to judge were those related to the human past informed by a literal interpretation of the Old Testament of the Bible. Included here were assertions like, "Adam and Eve were the first human beings," and "The flood of Noah as told in the Bible actually happened."

Survey results revealed relatively high levels of student belief in unsubstantiated claims about the human past, with percentages of those expressing either strong or mild belief ranging from 12% to about 50%. Perhaps most revealing, however, the survey showed that belief in such claims was mild. On most topics including those with relatively high overall levels of belief, strong or "true believers" were few. Equally significantly, the overwhelming majority of students were fence straddlers on many of these issues, more often than not responding that they simply did not know if there was a curse on King Tut's tomb that killed people or whether or not Bigfoot was a real animal.

Three years later, in 1986, the original survey was expanded and administered to a total of about 1,000 students at Central Connecticut State University, the University of Texas at Arlington, Texas Christian University, the University of Southern California, and Occidental College (also in California).[3, 4] Though there were a number of geographic differences in student responses, overall results were similar to those of the original survey restricted to my students in Connecticut.[5]

It occurred to me that it would be useful in the context of this publication to repeat the survey, now 10-plus years after its original application, focusing only on those statements in the original survey directly related to the human past (figure 1). I was extremely curious to see if a decade has made a difference in student credulity, skepticism, perceptions, or knowledge about the human past. I administered the survey to undergraduates early in the semester in an Introduction to Anthropology course taught by my colleague at CCSU, Professor Warren Perry. The course was a large section of approximately 200 students, the

vast majority of whom were taking the course to fulfill general education distribution requirements. The 139 correctly coded survey forms constitute the database of this survey. These results were directly compared with those derived from the 1984 sample. The comparisons are between two similar groups of essentially naive students. In both 1984 and 1994, most students in the samples had taken no anthropology or archeology courses previously, and in 1994 the survey was conducted early in the semester of this, their first anthropology course.

All of the statements students were asked to rate except two were repeated exactly as they had been presented in the 1983 survey. The statement that related to the pre-Columbian discovery of the New World by Europeans was clarified to measure belief in a pre-Viking as well as pre-Columbus European discovery of the Americas.

Figure 1: 1994 Survey Statements

1. Aliens from other worlds visited the Earth in the prehistoric past.
2. There is good evidence for the existence of the Lost Continent of Atlantis.
3. An ancient curse put on the tomb of the Egyptian pharaoh King Tut actually killed people.
4. America was discovered and settled by Europeans many before Columbus or the Vikings.
5. Human beings came about through evolution.
6. Human beings biologically just like us have been around for more than 100,000 years.
7. The Earth is about five billion years old.
8. The Bible is literally true.
9. Adam and Eve were the first human beings.
10. God created the universe in six actual, 24-hour days.
11. The flood of Noah, as told in the Bible, really happened.

The statement concerning the first appearance of anatomically modern human beings was modified as a result of new dating and interpretation of early *Homo Sapiens* that has occurred in the last 10 years (changing the date of initial appearance of anatomically modern human beings from "about 40,000" to more than 100,000" years ago).

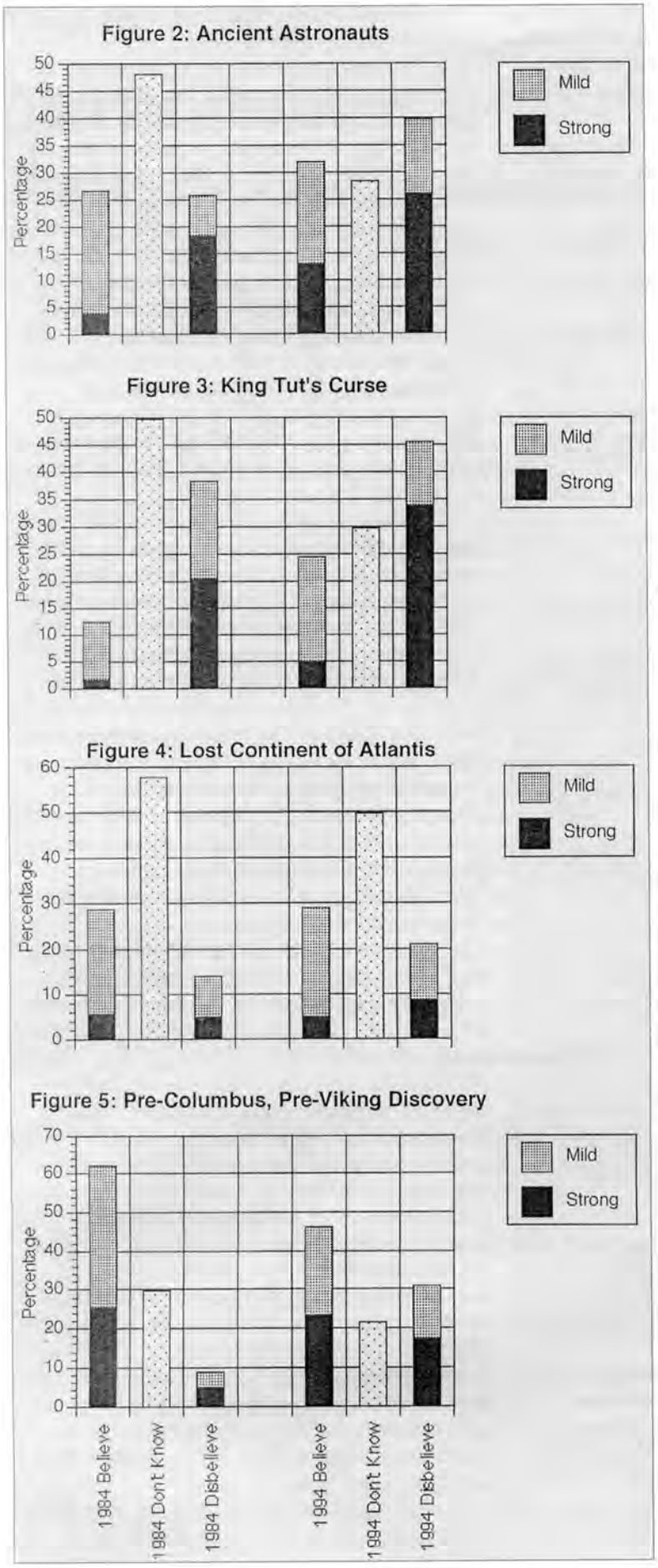
Does a Decade Make a Difference? Comparing 1984 to 1994

The results of the survey surely cannot be characterized as encouraging, but neither are they calamitous. For example, figure 2 presents the results of the 1994 sample's response to the statement, "Aliens from other worlds visited the Earth in the prehistoric past, " side by side with the results derived from the 1984 sample on the same statement. Combining the categories of strong and mild belief into a single, general category of "belief," and combining the categories of strong and mild disbelief into a general category of "disbelief," the results for this question are quite clear. The term that most succinctly defines and describes what we can see in the 1994 sample when compared to the group in 1984 on the issue of prehistoric extraterrestrial visitations is "polarization."

In the case of the "ancient astronaut" statement, the percentage of those expressing belief *and* the percentage of those expressing disbelief *both* have increased since 1984. Belief rose from 27% to 31% and disbelief rose from 32% to 40%. The middle position on the Likert scale—one reflecting ignorance and a willingness to admit "I don't know"—has been abandoned for the poles of belief and disbelief. The proportion of those admitting that they simply do not know whether or not extraterrestrial aliens visited the earth in the ancient past has declined dramatically (from 40% to about 28%). Though the lines are more strongly drawn in 1994, once again those expressing "strong" feelings are in the minority among both believers and disbelievers.

These results are surprising and distressing, considering how much further removed in time students are today from the heyday of Erich von Daniken[6] than were the students who participated in the 1984 survey. After all, von Daniken's biggest selling book, *Chariots of the Gods,* was first published in English in 1969. Nevertheless, though few of today's students are likely to know his name and even fewer may be reading his books, the hypothesis von Daniken popularized in the late 1960s and early 1970s maintains a fertile breeding ground among undergraduate students more than 20 years later.

The ostensibly effective, deadly curse on the tomb of Egyptian pharaoh Tutankhamun is a concept with even less currency among today's students that von Daniken's ancient astronauts, yet here too opinions in 1994 are more highly polarized than in 1984 (figure 3). Student belief levels jumped from about 12% to close to 24%, while levels of disbelief experienced a jump from 38% to over 45%. Again, those indicating that they didn't know dropped from about 50% to 30%.



On a relatively more positive note—if virtually no change in student opinion between 1984 and 1994 can be characterized as "positive"—the reality of the Lost Continent of Atlantis elicited a response in 1994 quite similar to the 1984 sample (figure 4). Virtually identical percentages of about 29% believed in the lost continent in 1984 and 1994, with a somewhat higher proportion expressing skepticism in 1994. Once again, those admitting ignorance dropped (from 58% to 50%).

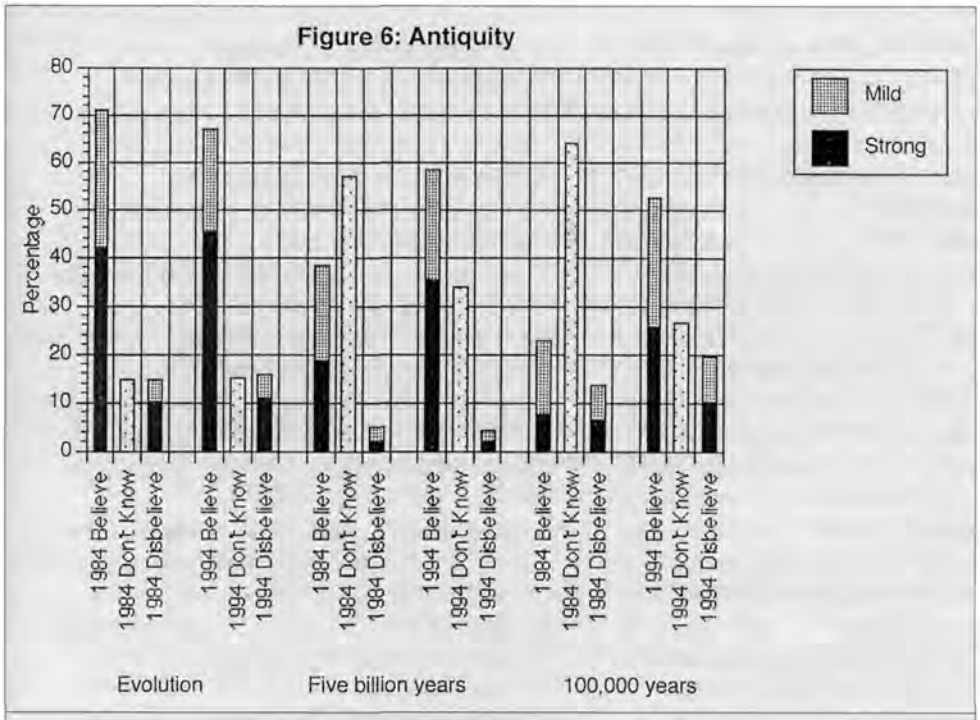
Because of my poor wording of the statement in 1984, and my subsequent rewording in 1994 on the issue of the discovery of the New World by Europeans before Columbus, the statistics from 1984 and 1994 are not directly comparable (figure 5). It should be pointed out, however, that even when the statement was clarified to include the Vikings and students were asked, essentially, whether they believe that the Americas were discovered by Europeans even before the Vikings got here, a substantial proportion—a plurality of about 46%—indicate that they do believe this. Only about 31% reject this claim, and 22% do not know.

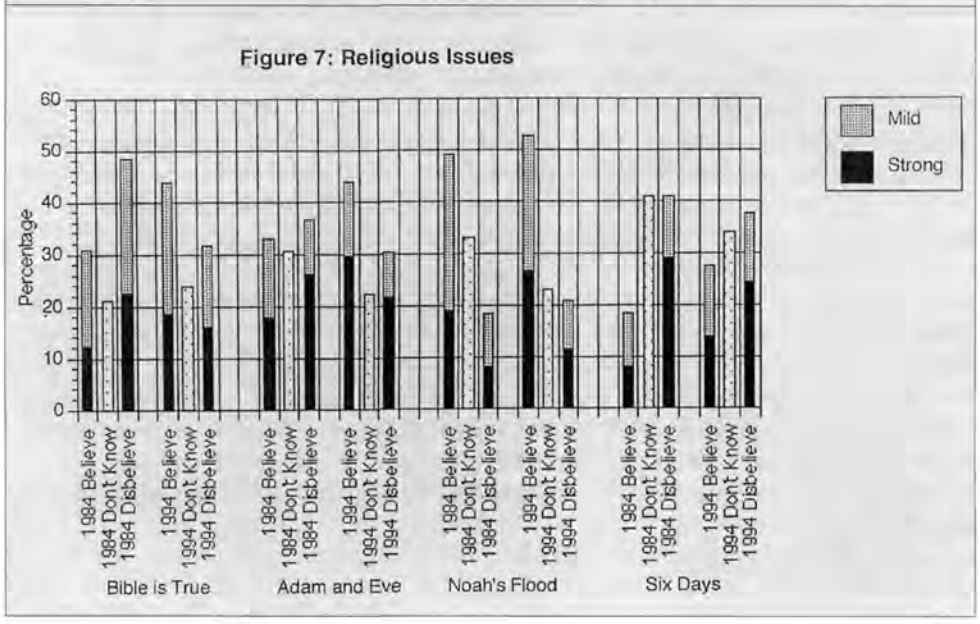
These statistics are not particularly encouraging to those of us who teach undergraduates about the human past. On a more positive note, statements in the survey focusing on student knowledge related to evolution, the age of the earth, and the age of anatomically modern human beings consistently showed a high level of acceptance of scientifically verified data (figure 6). Though the percentage of those who accepted evolution dropped somewhat in 1994 when compared to the 1984 survey results (from 71% to 67%), strong belief rose a bit. Beyond this, acceptance of a five billion-year-old earth jumped dramatically (from 38% to 58%), with a sharp decline in those confessing ignorance: 57% to 34%. Disbelief held fairly steady, dropping only from 5% to about 4%.

Belief in the significant antiquity of the modern human species is higher today than it was in 1984. Though I modified the wording of this question to reflect current paleoanthropological interpretation of the antiquity of anatomically modern *Homo sapiens*, the results in 1994 are still directly comparable to those of 1984. While scientific consensus has expanded the antiquity of anatomically modern humans by a factor of about 2.5, either 40,000 or 100,000 years is quite a bit higher than the 6,000 year antiquity claimed for the species, the earth and the universe by a number of influential creationists.[7, 8] Acceptance of the great antiquity of our species rose in 1994 rather precipitously from 23% to 52%. Disbelief increased somewhat from 14% to 19%, and those indicating that they did not know declined very substantially from 64% to 27%.

While it is indeed good news that these students seem better informed and more accepting in 1994 about the scientific interpretation of evolution and antiquity, these positive results must be tempered by the very high levels of acceptance of statements in the survey that reflect a literal interpretation of the book of Genesis in the Old Testament of the Bible. In every instance, belief levels in the reality of Biblical claims that are contradicted by science were *higher,* sometimes substantially so, in 1994 than levels in the 1984 sample. More students in 1994 expressed belief in the literal truth of the Bible, in the claim that Adam and Eve were the first human beings, in the historicity of Noah's Flood, and in the six-actual-day creation of the world by God (figure 7).

As distressing as these results may initially seem, the news actually gets worse. As indicated, for some of the previous, non-biblically related statements discussed here, student responses reflected greater polarization, with *both* belief and disbelief levels increasing from 1984 to 1994. But for three out of the four statements related to or reflecting a literal interpretation of the Bible, disbelief levels also *declined.* With the exception of the statement related to Noah's flood, where both belief *and* disbelief levels also increased between 1984 and 1994 (if only slightly), there is no mixed message here. A greater proportion of students in the sample expressed belief and a lower proportion expressed disbelief in statements that reflected a literal interpretation of the Old Testament. This greater level of belief in a literal interpretation of Biblical claims related to human antiquity is likely a reflection of a growth in religious fundamentalism in the U.S. in the past decade.





An Archeologically Informed Public?

Many of us have worked hard in the decade since the first administration of my survey to counteract popular misconceptions about the human past. Stephen Williams[9] and I[10] have written books with a student as well as a popular audience in mind, both debunking extreme claims about the human past and, at the same time, explicitly showing the differences between genuine archeological research and a pseudoscientific or non-scientific approach to the past. A public education committee whose goal is an archeologically-informed public has been established within the Society for American Archaeology. Sessions open to and oriented toward the public have been held at the last few SAA national meetings and attendance has been gratifying.

But as hard as many of us have worked toward the goal of an archeologically-literate public substantially less-susceptible to nonsense about the human past, if the results of my survey can be generalized, it is beginning to look like we need to

work harder and harder just to keep up with the pseudoscience that afflicts our discipline.

Archeologist William Turnbaugh has been polling his incoming archeology students since 1986.[11] Focusing to a greater degree on what they know about real archeology than extreme claims, Turnbaugh has found little change in his students since he began administering his survey. Students know a little about archeology when they enter the classroom: they recognize the Leakey name, for example, though few can associate it with a specific contribution—many assume Louis Leakey was the discoverer of Lucy. Most of what Turnbaugh's students know they have obtained from television or films and most of the films are fictional. Written sources are less often cited by students as sources of their archeological information.

All this shows how much work there is yet to do in attempting to create an archeologically informed public. It will not be easy considering the role of television in informing our students. Though there have been many valuable presentations concerning the human past on, for example, the Discovery Channel or PBS, a far broader audience has been exposed to archeological pseudo-documentaries on commercial television stations. Consider such stellar examples as *The Incredible Discovery of Noah's Ark* broadcast in 1993, and *Mysteries of the Ancient World* and *The Mystery of the Sphinx*, both broadcast in 1994. *Noah's Ark* and the *Sphinx* have generated some professional response aimed at a public audience. *Free Inquiry* published archeologist Richard A. Fox's response to the clearly fraudulent claims in the presentation on the ark.[12] *Archaeology* magazine published a group of articles on the Sphinx[13, 14] with one directly aimed at responding to the video's claim of a far greater than accepted antiquity for the monument.[15]

It seems that we will always be in a position of having to present a double-pronged approach in attempting to produce a public knowledgeable about archeology. Certainly, proactive strategies like many of those discussed in this publication serve a vital function, informing people about the results and methods of "real" archeology, and conveying the excitement of the scientific investigation of the past. Equally certainly, we have no choice but also to follow a reactive strategy, responding to the specific nonsense about our discipline promulgated by the popular media. The results of this brief comparison between student perceptions in 1984 and 1994 indicate quite clearly that we need to work even harder at producing a public that understands and appreciates the work done by people committed to a scientific study of the human past.

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Kevin A. McBride

CRM and Native Americans
An Example from the Mashantucket Pequot Reservation

Typical mid-19th century Mashantucket Pequot reservation house.

The relationship between archeologists and Native Americans has often been based on conflict. Native groups throughout the Northeast have become increasingly vocal about the way in which archeological research is conducted on sites they believe to be associated with their culture and history. Although the goals of both groups are often compatible, rarely have long-term working relationships developed between them. This situation has changed in recent years, particularly in southern New England, as Native groups have become federally recognized, settled land claims, and begun to pursue economic and social developments on their respective reservations. In addition, as newly recognized tribes begin to initiate economic development projects on trust lands, they are faced with a variety of issues related to the identification, assessment, protection, and management of archeological resources. Archeologists have found themselves in a position of assisting groups such as the Narragansetts, Mashantucket Pequot, Gay Head Wampanoag, and Mohegan in identifying and assessing cultural resources on their reservations in anticipation of development projects. This situation is made more complex because many of the federally recognized tribes in southern New England reside on reservations that have been continuously occupied throughout the prehistoric and historic periods, constituting some of the most complex and significant resources in the eastern United States.[1] Although forced together initially out of necessity, solid relationships have been established between archeologists and native groups in the region.

Since 1980, the Mashantucket Pequot Tribe has worked with federal, state, and local agencies including the Connecticut Historical Commission, Bureau of Indian Affairs, National Park Service, Department of Anthropology at the University of Connecticut, the Public Archaeology Survey Team, Inc., and the Planning Commission of the Town of Ledyard to develop a comprehensive research and cultural resource management plan to study and protect cultural resources associated with their cultural heritage. Collectively, this effort is known as the Mashantucket Pequot Ethnohistory Project, with a blend of archeological and historic research and cultural resource management objectives.

Tribal regulations developed in accordance with this plan require that cultural resource management surveys be conducted prior to all construction actions undertaken within reservation boundaries as well as fee lands. All surveys, undertaken by qualified archeologists under contract with the tribe, are reviewed by the Connecticut State Historic Preservation Office to assure conformance with historic preservation regulations. All cultural materials located during tribal undertakings are curated in facilities located on Reservation grounds or in the archeological laboratory of the University of Connecticut.

The Mashantucket Pequot Tribal Council vigorously implements historic preservation policies and regulations. The Tribal Council also continues to support ongoing research. A recently published book, *The Pequots in Southern New England,* contains scholarly papers presented at a symposium on Mashantucket Pequot culture and history in October 1987. A second conference was organized in October 1993, with presented papers on ethnohistory, archeology, history and the federal recognition process. The federal government recognized these and other efforts by the Mashantucket Pequot Tribe with a National Historic Preservation award in 1988.

Historic Context

The Mashantucket Pequot Reservation has been continuously used and occupied by the Pequots and their ancestors for the last 10,000 years. When the reservation was established in 1666, it was centered around a 500-acre wetland called the Great Cedar Swamp. Archeological surveys and excavations have documented sites dating from the Paleo-Period through the Late Woodland Period.[2] The nature of land use documented around the swamp is similar to prehistoric land use documented elsewhere in the region with a few significant differences.[3] The highest density of prehistoric archeological sites have been documented during the Middle and Terminal Archaic Periods (ca. 8,000-6,000 B.P.; 3,800-3,000 B.P.). The lowest frequency of archeological sites date to the Late Archaic Period

(6,000-4,000 B.P.). This pattern is in sharp contrast to other areas of southern New England, and probably reflects differences in the nature of the wetland over time. Paleo-environmental reconstructions of the swamp indicate a period of lowered water table and intermittent desiccation between 7,500-4,000 years ago. During the late prehistoric period and until the Pequot War (1637), the cedar swamp was used for hunting. This pattern is reflected in the archeological record by a number of small temporary or task specific sites.[4] Documents associated with the Pequot War (1636-1637) indicate that the swamp was also used as a place of refuge by the Pequots during periods of conflict.

When the reservation was established 30 years after the Pequot War, it became the focal point of Mashantucket land use and settlement throughout the historic period. In a region of the United States where the Native American archeological record is usually truncated by the middle of the 17th century, archeological sites at Mashantucket increase in density and complexity until the early-19th century. Archeological surveys and excavations have documented one of the richest historic period Native American archeological records in the region. The significance of this record resulted in the placement of the Mashantucket Pequot Reservation on the National Register of Historic Places in 1983, and the subsequent designation of the Mashantucket Pequot Reservation Archaeological District as a National Historic Landmark in 1993. Contributing resources include 17th-century cemeteries, camps and villages, 18th-century farmsteads and hunting camps, and an 18th-century village. Most recently, a late-17th-century Mashantucket fortified village (Monhantic Fort) was identified and is believed to have been constructed during King Philip's War (ca. 1675).

Following the abandonment of the reservation by one of the Mashantucket communities in the Brothertown Indian Movement at the end of the 18th century, subsequent reductions in land base and population resulted in a dramatic decline in the frequency of archeological sites through the third quarter of the 20th century. By the middle of the 19th century the population on the reservation had declined to approximately 10 individuals, dropping from a high of 500 in the 17th century, 300 in the 18th century, and 50 by the mid-19th century. In 1993, 10 years after federal recognition, the population on the reservation exceeded 250.

Federal recognition has brought the Mashantucket Pequot an opportunity to pursue economic development on an unprecedented scale. Through the proceeds of the most successful Native American gaming enterprise in the country, the Mashantucket Pequot Tribe has engaged in an ambitious program of social and economic development. To date, this has included the construction of over 65 housing units, and the purchase of 65 more, five miles of new roadways, a community center, health center, office complex, and safety complex. The Mashantucket Pequots are currently designing a 300,000-square-foot museum and research center to be completed in 1997.

Management Summary

Four major goals have been identified by the Mashantucket Pequot Tribal Council for the Mashantucket Pequot Ethnohistory Project: (1) reconstruct Mashantucket Pequot tribal history; (2) use the archeological and ethnohistoric data to plan and construct exhibits for the planned museum on tribal history; (3) develop a cultural resources management program for the reservation; and, (4) train tribal members in archeological field techniques and ethnohistoric methods.

The first objective, reconstruction of Mashantucket Pequot history, is an ongoing process. This effort consists of archeological surveys and excavations, document research, and compilation of oral histories. Archeological surveys have identified over 200 Native American and Euro-American components on the current 1,400 acre reservation (trust lands) and an adjacent 1,500 acres (fee lands). A number of prehistoric and historic period archeological sites have been or are in the process of being studied. These studies are complemented by an ambitious program of paleo-environmental studies conducted by botanists and geologists from the University of Connecticut, Yale University, Connecticut College, and Brown University. A number of graduate students from the University of Connecticut's Department of Anthropology and Yale University's Forestry Department have also initiated dissertation research projects, including studies of a late Paleo-Indian camp, historic period agricultural practices and land use, and reconstruction of the paleo-environmental history of the Great Cedar Swamp.

Document research has been an integral part of the Ethnohistory project from the beginning. Over 7,000 documents, photographs, and other materials related to Pequot history and culture have been obtained. These records have been secured from repositories in the United States, Bermuda, New Zealand, England, and the Netherlands. All of this information will eventually be available in the Mashantucket's planned research center.

The second goal of the ethnohistory project is to provide the information necessary to construct exhibits on the tribe's history and culture for their museum and research center. Approximately 85,000 square feet of exhibits are planned for the Mashantucket Pequot Museum and Research Center. The information used in the content and design of the exhibits are based on data generated

from the ethnohistory project. Tribal members, archeologists, and exhibit designers are all involved in the design process, incorporating a wide range of data and perspectives in the design effort. Planned exhibits will span the Paleo-Indian through late historic periods including a diorama of a caribou kill, reconstruction of a 16th-century village, a film on the Pequot War, and outdoor interpretive exhibits on an 18th-century farmstead. One of the more ambitious exhibits will be the reconstruction and interpretation of a 17th-century fortified village. This exhibit will not only interpret the lifeways of the period, but will be used to inform the public on archeological and ethnohistoric methods and techniques.

The third objective of the ethnohistory project, development of a cultural resource management plan, is ongoing and the tribe is in the process of reviewing and adopting regulations regarding the protection and management of its cultural resources. The commitment of the tribe to its history and culture is directly reflected in a high degree of interest and concern over the archeological resources on the reservation. These resources are viewed not only from the perspective of being associated with their immediate or distant ancestors, but as the most important means by which the tribe can reconstruct elements of their history. No construction project takes place on trust or fee lands unless an archeological survey has been completed and the significance of all resources is assessed. This process is initiated whenever additional properties are purchased by the Tribe. This is an active ongoing process as over 3,000 acres have been acquired by the Tribe over the last 10 years.

Tribal planners are furnished with locations of all inventoried sites in accordance with tribal regulations requiring consideration of project impacts on cultural resources. To date, tribal development actions have not adversely affected significant archeological resources located within the Mashantucket Pequot Archaeological District. Construction plans associated with several projects have been explicitly altered to avoid negative impacts on potentially significant cultural resources.

The Tribe's cultural resource management plan currently includes the following elements: (1) statement of the theoretical approach and research goals in the study of the reservation and tribal history; (2) summary of existing prehistoric and historic period cultural resources (both Native American and Euro-American) and a discussion of their significance and relationship to research goals; (3) determination of individual site boundaries, assessment of integrity, and statement of significance for each identified site on the reservation; (4) discussion of factors that may affect the long-term protection and management of identified resources such as development, erosion, gravel mining, etc.; (5) recommendations for additional surveys as well as ongoing evaluation and protection priorities for identified sites; and, (6) development of a framework for using the plan to make management decisions concerning the preservation and or data recovery of sites threatened by development on the reservation or on properties owned by the Tribe.

The final goal is to train tribal members in archeological and ethnohistoric methods and techniques. One element of this training has been participation by tribal members in the University of Connecticut's Field School in Archaeology. The Tribe has recently received a grant from the Department of the Interior to aid in the excavation and interpretation of the Monhantic Fort. Tribal members have also been integral participants in the research and design of exhibits for the museum. The long-term goal is to train tribal members in key positions so that they can assume administrative and field positions in the museum and ethnohistory project.

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William R. Haase

Archeology, Land Use, and Development

Educating Communities Through Comprehensive Planning

One of those self-evident truths is that "all politics are local." Domestic policy initiatives, whether emanating from Washington, DC, or a state capital, are truly successful only if embraced by the merchant on Main Street, local elected officials, homeowners, and taxpayers. As with politics, the success of cultural resource management and archeological protection initiatives will be measured at the local level. If cultural resources are destroyed, it is because builders, developers, property owners, and local government officials are unaware of their presence and importance, or simply do not care.

In Ledyard, Connecticut, one of the goals of the Planning Department is to sensitize town residents and officials as to the need for locally-derived archeological protection initiatives, and to incorporate these concerns into land use planning regulations. This effort had its unfortunate impetus in 1989 as a result of the abrupt discovery of a late-17th-century Mashantucket Pequot tribal burial ground after a subdivision had been approved by the local Planning Board and after excavation of a house foundation had already begun.

Cool heads prevailed and after the professional recovery of human remains and associated funerary objects was initiated, Ledyard's planning staff, along with Mashantucket Pequot Tribal representatives and their in-house archeologist, the State Archaeologist, and staff archeologist from the Connecticut Historical Commission, joined together with a common goal of preventing this type of incident from ever happening again.

The result of these meetings has been threefold:

1) Ledyard's comprehensive land use plan was amended to include a detailed chapter on historic and archeological protection;
2) The town became a "Certified Local Government" pursuant to criteria of the National Park Service and the Connecticut State Historic Preservation Office, in order to become eligible for matching federal grants for local preservation activities;
3) Ledyard's subdivision regulations were amended to include a new chapter on cultural resource preservation and management.

The Comprehensive Land Use Plan

The general statutes of nearly 20 states contain enabling language either requiring or encouraging written comprehensive plans by local government. These plans serve as a guide not only for planning and zoning boards when adopting land use regulations, but they can also assist the judicial system in determining the constitutionality of a local regulation should it be challenged in court. For example, the Connecticut Supreme Court has established that planning and zoning boards may consider historic preservation issues in their local land use regulations and decisions, provided that preservation has first been adequately addressed in the town's comprehensive plan (*Smith v. Greenwich Zoning Board of Appeals*, 227 Conn. 71, 1993).

The clear message of the Connecticut Supreme Court, however, is that communities must be proactive and have an adopted comprehensive plan that specifically addresses local concerns. Ledyard's most recent townwide plan was adopted in June 1993, after conducting three public hearings designed to elicit community input. Formal comments on the historic preservation chapter were obtained from the State Archeologist, staff archaeologist at the Connecticut Historical Commission, and from the local historical society.

Ledyard's adopted comprehensive plan contains maps and a list of all properties on the National Register of Historic Places, including the Mashantucket Pequot Tribe's 213-acre archeological district which became a National Historic Landmark in 1992. This local land use plan outlines four basic objectives:

- Identify and avoid historic and archeological sites prior to construction. This is accomplished either proactively through broad, townwide cultural resource surveys, or by detailed archeological investigations of individual properties that are proposed for

A local planning and zoning public hearing on the merits of a proposed residential subdivision, Ledyard, CT.

private development or municipal capital projects.

- Preserve archeological sites *in situ* rather than excavate or salvage identified remains. Developers are encouraged to realign or relocate proposed roads, buried utilities and buildings, or to dedicate identified archeological sites to parks and open space.
- List additional properties on the National Register. Although most in Ledyard will be standing 18th- and 19th-century homes and farmsteads, this creates greater public awareness and broader respect for local preservation initiatives.
- Obtain Certified Local Government designation from the Connecticut Historical Commission and National Park Service, thus becoming eligible for matching federal grants for local preservation activities such as surveys and preparation of National Register nominations.

Ledyard's Subdivision Regulations—Enforcing the Local Comprehensive Plan

Eighteen towns in Connecticut have revised local subdivision regulations and/or local site plan review procedures in order to specifically identify and protect significant archeological and historic sites. Ledyard's regulations are noteworthy for their clarity and direction to developers and their advocacy of *in situ* preservation wherever possible.

Adoption of Ledyard's regulations, however, came only after a contentious public hearing at which several local developers claimed that archeological surveys would be used by their opponents to slow down an already lengthy review process. To satisfy these concerns, the Planning Board's final regulations specify that a referral of plans to the State Archaeologist or State Historic Preservation Office must be made within two working days after a subdivision's preliminary review. The determination of need for an archeological survey is then made by professional archeologists, rather than by members of a land use board subjected to local political pressures. An outside professional opinion reduces the chance that opponents of a development can misuse words such as "archeology" to throttle or delay an unpopular project.

In order to prevent a court challenge based on vagueness, another key element of Ledyard's regulations is a precise definition of "cultural resources:"

> CULTURAL RESOURCES: consists of historic and prehistoric archeological sites and standing structures; cemeteries, human burials, human skeletal remains, and associated funerary objects; and distributions of cultural remains and artifacts.

If the State Archeologist or State Historic Preservation Office determines that a professional archeological survey is warranted, standards to be followed are contained in the Connecticut Historical Commission's *Environmental Review Primer for Connecticut's Archaeological Resources*. It is the developer's responsibility to pay for this professional assessment, just as he would pay for a project's architect, civil engineer, or surveyor.

The final section of Ledyard's subdivision regulations outline the contents of a management plan to be prepared by a professional archeological consultant. In addition to a standard investigative report that contains research methodology and a description of discovered sites and features, the management plan calls for:

> A description of measures to be undertaken to mitigate adverse impacts of construction activities on identified cultural resources. This may include an estimate of mitigation costs and time required for more extensive investigations. Measures may include open space dedication; conservation easements; redesign or relocation of roads, drainage features or buildings so as to minimize

Mashantucket Pequot Indian Reservation site.

adverse impacts; or excavation and removal of cultural remains supervised by a professional archeologist.

Given the emphasis on *in situ* preservation, excavation is intentionally placed last on the list. By emphasizing early detection of cultural resources during a project's design phase, archeological sites and human burials can be more readily incorporated into a subdivision layout, with avoidance of these features during construction.

Getting Started with Your Own Local Plan

The introduction of archeological protection into local comprehensive plans and land use regulations is so new that little has been published on the subject. However, a surge of local interest in protecting the historic built-environment has been accompanied by a new wave of planning and local laws. The American Planning Association has published several reports that examine elements of good historic preservation plans, and that offer advice on the drafting, implementation, and legal defense of a historic preservation ordinance.

Although these publications focus on standing historic properties, only a little bit of imagination and creativity is needed to translate their focus to that of archeology and cultural resource management. But the archeological community—both professional and amateur—must take the lead and carry the banner of archeological protection to city hall, and to the local boards and commissions who must in turn adopt comprehensive plans and enforce the regulations.

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Ronald D. Anzalone

Provide for the Common Defense, Promote the General Welfare

The Department of Defense and its predecessor War Department have long played a key role in preserving and protecting America's cultural heritage, and of course, in making and documenting American history. Military histories as well as scientific exploration, description, and documentation of the public lands under military control are a long-standing tradition. In addition, the military's preservation of sites associated with major American conflicts and other aspects of its own history has been at the forefront of historic preservation in the United States.

The challenge is staggering. Many important historic structures and sites remain in active military use; still others are on lands controlled by the military but not actively used at the current time. Cultural resources under the care or control of the Defense Department include many highly significant properties and represent a broad range of sites, buildings, structures, districts, and objects significant in American history, architecture, archeology, engineering, and culture. Some of these are rare or unique. Many battle sites and examples of military technology—showing the evolution of small unit tactics or changes in artillery technology and practice, for example—have been featured in war college programs or military museums and have been used quite deliberately to educate and inspire the officer cadre or technical specialists in the rank and file. A prime example of the former is Gettysburg National Military Park, originally controlled by the War Department before becoming a national park unit, that even today is used for combat teaching purposes. The latter would include the museum at the U.S. Army Ordnance Center and School at Aberdeen Proving Ground, Maryland, which maintains a large collection of artillery and small arms that is used for military instruction and engineering research and development, as well as public interpretation.

More broadly, the Defense Department has had to deal with its stewardship responsibilities for public resource management on the lands under its jurisdiction or control. Key ingredients to this effort have been education, training, and awareness, which have always been at the core of military preparedness and management. Educational programs in a broader sense have been focused on the military leadership. Training, more specific and focused, has zeroed in on the acquisition and refinement of skills necessary to do the job at all levels of involvement. Somewhere in between, or perhaps serving as an outgrowth or adjunct of either or both of these, has been awareness—the inculcation of the officer corps as well as the military rank and file with attitudes that will help the Department of Defense accomplish its mission. Over

Pendejo Cave, a remote archeological site at Fort Bliss containing deeply stratified deposits that may represent one of the earliest known human habitation sites in North America. Courtesy U.S. Army.

the last decade or so, that mission has increasingly come to embrace environmental resource management. These programs have largely been under the care of civilian specialists, working under the oversight and direction of uniformed military commanders.

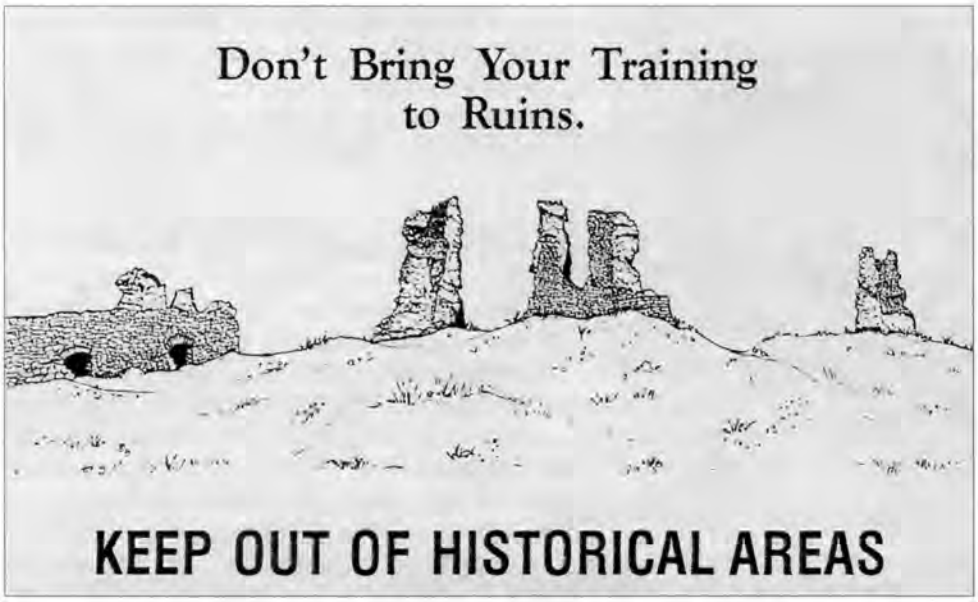
One program that has received a great deal of publicity in historic preservation circles, the Legacy Resource Management Program, has put a concentration of money, time, and effort into improving both the underpinnings and results of effective natural and cultural resource management. Legacy has helped to identify critical needs, and to focus funding on both overall policy and program improvement, as well as to support critical projects that can be used as models to emulate elsewhere. However, given the limited size and scope of Legacy funding, and the fact that such funding is not available to meet basic legal compliance and resource management needs, "Legacy" projects provide only a small part of the overall picture. Most installations have important historic, archeological, and other resources to manage, and a diverse set of historic preservation and other resource management needs to meet. Civilian military employees engaged directly in natural and cultural resource management at installations are increasingly stretching their small staff capabilities to meet these needs through integration with and enlistment of allies among the uniformed services.

This reflects both Defense Department policy and common sense. A recent edition of the *Army Commander's Guide to Environmental Management* (U.S. Army Corps of Engineers, 1991) states in part:

> While your command extends across all individual aspects of the mission, there is one area of responsibility that impacts virtually every action and operation: the environment.... [E]nvironmental responsibilities are integral to your command.... Proper environmental management and coordination at the installation is not only necessary to comply with Federal, state, local and host nation regulations, it also benefits your overall mission by preventing time delays or operational shutdowns and improving public relations.... Work together with your staff to promote the concept that the environment is everyone's responsibility; [however], as commander, you are ultimately responsible for compliance with all applicable environmental laws and regulations within your command....
>
> Accomplishing the mission always has been and always will be the top priority. However, successfully blending the military mission with the environmental challenge is now equally important. Conserving, protecting, and restoring our natural and cultural resources is the first line of defense for the heritage of future generations.

The Fort Bliss Museum is a partial reconstruction of the original 1857 adobe fort, and is used for a wide variety of public programs. Courtesy U.S. Army.

For example, through the auspices of environmental staff at Fort Benning, Georgia, the Federal Preservation Officer for the Army, Constance Ramirez, was invited to participate in training being offered to non-commissioned officers who serve as their line units' environmental management officers. Out of a two-week training period, she had four hours available to speak directly with 30-40 enlisted "green suit" personnel who serve in the field and keep their commanding officers and troops apprised of environmental protection matters that may arise during field maneuvers and other training exercises. The understanding and support of these members of the military public are criti-



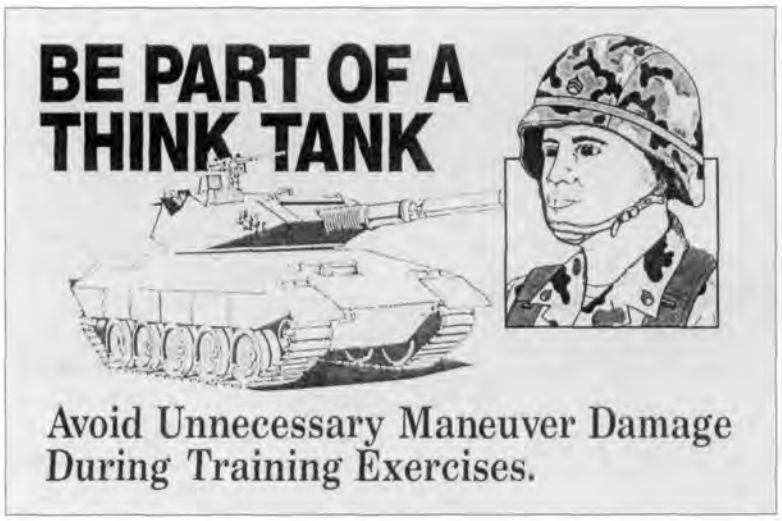
cal to the success or failure of archeological resource protection at a place like Fort Benning. The best efforts of the archeologists or environmental management staff at an installation can be overturned in a single afternoon by a platoon participating in an infantry assault exercise that chooses the high, soft ground of a prehistoric mound in which to place their foxholes.

Signage to promote responsible environmental and resource protection and management.

Efforts such as these have been further accelerated and strengthened throughout the military services as a result of one or two high profile cases where senior officers have had their careers adversely affected because of failure to meet their installation or unit environmental compliance responsibilities. Stories about what happened in these cases have circulated throughout the military, and have further convinced many senior commanders who might have been resistant to the "environmental" part of their mission that it must be treated as a priority.

Unlike many installations, Fort Bliss, located outside El Paso, Texas, has a long history of support for and involvement with active cultural resource management. There, the two-star commanding general has formed (and chairs) an Environmental Quality Control Committee that meets regularly and includes command staff, representatives of tenant units and organizations, and key civilian resource management employees to go over issues that arise. Under the Directorate of Installation Support, the Fort's Environmental Management Office is headed by Keith Landreth, an archeologist formerly employed by the Corps of Engineers' Construction Engineering Research Laboratory at Champaign-Urbana, Illinois. Landreth oversees a mixed staff of full- and part-time employees and interns of approximately 40. The Office includes both an architect and a second archeologist on staff. Duties include the conduct of planning, resource management, and environmental review of Army activities within an area of Texas and New Mexico of more than 1 million acres, an area larger than Rhode Island and about 1/25th of all Defense Department holdings nationwide. Recently the home of the 3rd Armored Cavalry and the Army's Air Defense Artillery School, and currently used for Combined Arms Support training—which means combined air, artillery, and ground forces—Fort Bliss was founded in 1857 in a nearby location. The current installation site dates to 1893 and contains over 400 historic buildings and structures in the main post area, 23 eligible archeological districts, and some 14,300 unevaluated archeological and cultural sites. Four installation museums, which operate through a Museums Division director under the Directorate of Planning, Training, Mobilization, and Security, house historic collections and support various public interpretive programs. These include the Fort Bliss Museum, the U.S. Army Air Defense Artillery Museum, the 3rd Cavalry Museum, and the Museum of the Noncommissioned Officer. The museums are featured in local Convention and Visitors Bureau publications and play an active role in heritage education in the greater community of El Paso. A self-guiding map and brochure for a "Driving-Walking-Jogging Tour of Historic Fort Bliss" is available for visitors.

Fort Bliss' natural and cultural resource management is active on a number of fronts. Many of the staff are involved with the El Paso Archaeological Society, which maintains an interest in installation resources and activities, and students from the University of Texas-El Paso are actively engaged in research projects on base



resources. A building in the main post area is being rehabilitated for archeological curation, with funding through the responsible major Army command, the Training and Indoctrination Command. An assessment of human remains and cultural items from the base, mandated by the Native American Graves Protection and Repatriation Act, is ongoing, as is consultation on this and related issues with local Native American communities.

In a joint arrangement with the Directorate of Planning, Training, Mobilization, and Security, the Environmental Management Office is working to provide Archaeological Resource Protection Act (ARPA) training for Military Police, and to work with Range Monitors to check on training and troop unit activities that could harm historic and archeological resources in Combined Arms Support training areas. Early results of these efforts appear promising.

A Historic Preservation Plan, originally developed in 1982, is currently being updated and is explicitly linked to a Programmatic Agreement currently under review among the Army, the Texas State Historic Preservation Officer, and the Advisory Council on Historic Preservation. Together, these documents spell out how Fort Bliss will meet its responsibilities under the National Historic Preservation Act and related legal requirements, and should serve both Army staff and the important historic and archeological resources of Fort Bliss well into the 21st century.

Achieving success in stewardship as well as public appreciation for its importance is not easy. It is demonstrably difficult and complicated, and requires considerable personal effort and commitment. The key lessons that might be gleaned from attempts to promote both awareness of and support for historic preservation (and for archeology in particular) at installations nationwide can be summarized succinctly: Understand the overall mission of national defense and military readiness, and how a given installation fits into that picture. Understand how the organization works, and who are the key individuals to making it work. Then be prepared to demonstrate to and sell those individuals on the idea that successful and cost-effective accomplishment of that mission includes, and is not adversarial to, responsible resource management. Finally, wherever possible, be prepared to interest those individuals and the surrounding military and civilian community in important examples of the nation's heritage that is being defended by the Defense Department, and "enlist" them in efforts to protect it.

Ron Anzalone, an archeologist, is the Director, Office of Education and Preservation Assistance, Advisory Council on Historic Preservation. He directed a recent examination of Defense compliance with the National Historic Preservation Act in cooperation with DoD's Legacy program.

Sign illustrations courtesy U.S. Army Corps of Engineers, Construction Engineering Research Laboratory.

KC Smith

SAA Public Education Committee
Seeking Public Involvement On Many Fronts

At the first "Save the Past for the Future" conference held in Taos, New Mexico, in 1989, conferees looked from several different perspectives at the problems of archeological site vandalism and looting, and the prospects for site preservation. In the wake of a challenging and intense exchange of ideas produced by the conference, the Society for American Archaeology (SAA) considered a variety of strategies to address these issues. One proposal that was enacted, the establishment of a standing committee dedicated to increasing public awareness of and involvement in archeological resource protection, has proved to be more successful than anyone ever imagined.

In five years, the growth of the SAA Public Education Committee, measured in support and products, has been fueled equally by the volunteer efforts of educators, teachers, archeologists, and others and by the needs and interests of a popular audience. Formalized in April 1990, the Committee now includes nearly 50 members from the United States and Canada, who are organized into eight subcommittees and two working groups. Its mission statement is simple: "to promote awareness about and concern for the study of past cultures, and to engage people in the preservation and protection of heritage resources." Guided by Chair Dr. Edward Friedman and Vice Chair Phyllis Messenger, the Committee is supported by the SAA Executive Board and grants from federal agencies.

From a basic, idealistic set of objectives established at the initial meeting in 1990, the Public Education Committee has expanded its projects and products as new needs and areas of interest have emerged. A long-range strategic plan adopted in 1992 specified the action items that now command committee members' attention, including precollegiate educational philosophies and strategies; educational materials and resources; involvement in public archeology by professional archeologists, Native Americans, museums, and special interest

Photo courtesy Museum of Florida History, Florida Department of State

groups; programming and workshops for teachers, archeologists, and the general public; state archeology or preservation week programs; awards for outstanding public education activities; and a state and provincial archeology education network.

One of the premier efforts of the group is its free, quarterly publication, *Archaeology and Public Education*, which was introduced and mailed to about 400 people shortly after the Committee was convened. Today, the readership exceeds 7,500, including classroom teachers, educators, archeologists, interpreters, site managers, and others interested or involved in public archeology. The newsletter provides commentary about current issues, innovative projects, conferences, resource materials, educational opportunities, and also includes regular columns about archeology-related activities for the public at museums, sites, and parks. In addition, a four-page, pull-out section called the "Education Station" targets information specifically to precollegiate teachers through lesson plans, program ideas, and other useful material.

Photo courtesy Archaeological Resource Centre, Toronto Board of Education

Another early Committee initiative was the Education Resource Forum, a traveling exhibit of precollegiate archeology education materials, which debuted in 1991 and which includes books, resource guides, teaching manuals, games, and newsletters and magazines, accompanied by a free, bibliographic listing. Like many of the Committee's projects, the Forum has undergone an evolutionary process in format, although its objectives have remained the same. By making existing resources available for examination at archeological and educational conferences, it is hoped that researchers and teachers will realize not only the extent to which archeology has been incorporated into teaching strategies, but also that efforts to initiate youth-oriented programs do not have to start from scratch; abundant precedents and models exist. Since its inception, the Resource Forum has been displayed at nearly 20 venues and viewed by an estimated 15,000 people.

When the Forum collection was first exhibited, it included a significant portion of the existing precollegiate educational materials relating to prehistoric and historical archeology in the Americas. Today, the extent of these resources literally has outgrown the exhibit's capacity, and greater reliance for sharing information is being placed on the Forum bibliographic guide. To make this compendium truly useful, efforts to annotate it are underway through a cooperative venture with the Society for Historical Archaeology's Education Committee and other professional organizations. While almost any educational item encountered or contributed previously was added to the collection, Forum subcommittee members have developed criteria for evaluating materials to ensure that their content is congruent with archeological stewardship, ethical research, or the goals of the SAA.

The need to evaluate educational resources actually was recognized in 1991 during a special meeting of the Formal Education Subcommittee, which is concerned with the messages, methods, and materials about archeology and culture history that classroom teachers share with their students. At the time, the body of products on the market was not extensive, although meeting participants knew of several in the offing and rightly anticipated a proliferation of items in the next few years. With this in mind, they proposed a set of standards for the development and evaluation of educational materials, suggesting minimum content in three areas: editorial elements, conceptual ideas, and methodological information. After revisions and amendments, a final draft of the guidelines was completed in 1994, with plans to test their effectiveness in the coming year.

The Formal Education Subcommittee has also developed materials for precollegiate instructors. Queries from teachers wishing to use archeology in their classrooms but uncertain about how to proceed prompted the preparation of *Teaching Archaeology. A Sampler for Grades 3 to 12*. This

24-page booklet not only describes the benefits of teaching archeology for educators and students, but it also offers four lesson plans adapted from well-respected teaching manuals. Since its completion in early 1994, nearly 5,000 copies of the free publication have been distributed, and a second printing is underway.

In addition to its publications and Resource Forum, the Committee's proactive efforts to reach the public have emerged in the form of a lecture series and workshops for teachers and archeologists. Since 1991, each annual SAA conference has offered a Saturday symposium for lay people in surrounding communities, featuring lectures on popular topics by noted archeologists. Through advance publicity, which regional newspapers usually accompany with general articles about archeology, these free, public sessions often draw several hundred guests. The local programs also have included essay contests for middle school youths, providing opportunities for teachers to introduce archeology to their students, and for students to reflect on the meaning of cultural resource preservation.

Each annual SAA meeting also features an archeology education workshop, usually about 15 hours long, designed primarily for local teachers, but open as well to anyone whose role requires interaction with the public. By working with teachers, workshop presenters establish a core of local instructors who have been trained in classroom applications of archeology and who can share their knowledge with colleagues. Similarly, because the presentation team usually includes an archeologist or archeology educator based in the area, the teachers acquire a contact to whom they can turn for advice and assistance in the future. Non-teachers who participate in the workshops benefit by learning basic educational methods that enable them to share archeology effectively with public audiences, especially youths.

The concept of having contacts who are knowledgeable about local resources, sites, and individuals involved in archeology education forms the basis for the Committee's Education Network. A network coordinator has been identified in virtually every state and province; these individuals are responsible for remaining apprised of public archeology efforts in their area. Thus, when a request for information or advice is received by the SAA Executive Office in Washington, DC, or by a Public Education Committee member, the inquiry can be referred to the appropriate network representative. This support system has been particularly effective in linking precollegiate teachers who wish to incorporate archeology into their classrooms to other nearby educators who are already doing so, thereby facilitating the sharing of teaching resources, strategies, and materials. The network coordinators also supply information to news media, archeologists, and others who have questions about public archeology in their area. Moreover, the coordinators receive frequent communiqués from the Network subcommittee chair, and many have developed regional alliances, enhancing their familiarity with education issues and activities across the continent.

Photo courtesy Archaeological Resource Centre, Toronto Board of Education

The Committee also strives to share information about archeology with less obvious potential audiences through its Special Interest Groups Subcommittee. Many national and local organizations pursue pastimes that place them in contact with archeological resources. By working with nature groups, hunting clubs, and outdoor sport and recreation enthusiasts, subcommittee members hope to teach a broader segment of the general public how to recognize archeological sites and what to do, or not do, when they are encountered. The first formal effort in this regard occurred last fall, when subcommittee members presented a workshop at the annual meeting of America Outdoors, whose members represent outfitters and trail guides from across the continent.

Yet another target audience of Committee interest is the professional community of archeolo-

gists, many of whom remain on the sidelines of public education. The Academic Affairs Subcommittee seeks not only to increase the number of researchers who engage in or assist educational programs, but also to enhance the status of educational activities within academic circles. Subcommittee members would like to see graduate students receive credit for involvement in public archeology, and would like academic departments to add educational projects to teaching, research, and publication commitments when professors are reviewed for tenure and other professional recognition. To help to promote these positions, the SAA Executive Board has written to the chairs of anthropology and archeology departments across the nation, seeking their support for public archeology initiatives by university staff and students.

The activities and projects described in this article include only a part of the manifold efforts of the Public Education Committee in the past five years. Moreover, they represent only one front on which the Society for American Archaeology has been working to ensure the protection of cultural resources. As a reprise to the SAA-sponsored conference in Taos, a second "Save the Past for the Future" conclave was held in Breckenridge, Colorado, last September to evaluate the success of ongoing strategies and to map a course for the future. Drawing together more than 150 archeologists, educators, resource managers, and law enforcement personnel, the four-day conference focused on three critical areas—public education, law enforcement, and resource management. Within the three workshops, working groups wrestled with specific issues and ultimately developed nearly 70 recommendations for action by the SAA. Participants in the Public Education Workshop addressed concerns relating professional involvement, the Education Network, formal education, and the Education Resource Forum. The latter working group also discussed the feasibility of establishing one or more regionally-based resource centers that would serve as sites for training, research, and public education activities.

The SAA Public Education Committee is not the only national venture dedicated to increasing public awareness of and involvement in archeological resource protection. Other professional societies, federal and state agencies, and private organizations also are partners in this enterprise through their own education committees and programs. However, the SAA Committee is unique in the extent of its activities, the number of participants, and the *esprit* and sense of purpose shared by its members. Committee volunteers are deeply committed to the idea of sharing the concepts and methods of archeology with lay people, knowing that popular support and understanding not only enhance the well-being of the resource base but also the well-being of the public.

KC Smith is the statewide services supervisor for the Museum of Florida History in Tallahassee. As a member of the SAA Public Education Committee, she serves as co-editor of Archaeology and Public Education *and chair of the Education Resource Forum Subcommittee.*

SAA Education Committee Resources

The SAA Public Education Committee welcomes requests for information, advice, and materials.

Please contact the following resources.

For information about committee activities:

Dr. Edward Friedman
Bureau of Reclamation
P.O. Box 25007, D-5300, Denver, CO
80225-0007
303-236-1061

To receive committee publications or be added to its mailing list:

Society for American Archaeology
900 Second St., NE, Ste 12,
Washington, DC 20002-3557
202-789-8200

To submit material to Archaeology and Public Education:

Phyllis Messenger
Institute for Minnesota Archaeology
3300 University Av., SE, Ste 202,
Minneapolis, MN 55414
612-623-0299

For information about the Education Network:

Beverly Mitchum
Bushy Run Battlefield
P.O. Box 468, Harrison, City, PA 15636-0468
412-527-5585

For information about the Education Resource Forum:

KC Smith
Museum of Florida History
500 S. Bronough, St., Tallahassee, FL
32399-0250
904-487-1902

Nicholas Bellantoni and David A. Poirier

Family, Friends, and Cemeteries

Upon the accidental discovery of human skeletal remains, archeologists are often confronted with a harsh and critical public. Reaction to the archeological treatment of exposed osteological remains often ranges from emotional distress to vocal hostility. Rarely do archeologists encounter a disinterested public in these unfortunate and sensitive situations.

The discovery in 1990 of the unmarked late-18th-century Walton Family Cemetery in rural Griswold, Connecticut, by a sand and gravel operation represents a positive case study in this regard. The Connecticut State Archaeologist and the State Historic Preservation Office initially focused upon the archeological removal and analysis of the endangered burials. However, face-to-face interaction with several interested "publics" quickly revealed the various perspectives and emotional concerns which must be accommodated to successfully resolve burial-related discoveries.

For most burial discovery situations, interested parties include the property owner, concerned neighbors, family members of the deceased, state and local government officials, Native American tribal governments, and the religious community. Diplomacy, sincerity, and sensitivity are required to understand their variant viewpoints and to address their diverse personal and professional concerns.

For the Walton Family Cemetery, the property owner's primary worries were the appearance of his culpability for disturbing, albeit accidentally, these historic burials and a fear of economic consequences. Subsequent research indicated that the cemetery had been marked with a single crude gravestone dating to 1754; had lacked enclosing fieldstone walls or wood fencing; had been obscured by years of extensive overgrowth; and had not been noted as a result of the town's planning and zoning requirement to title search only the past 40 years of the property. Clearly, the disturbance and discovery were accidental, rather than a deliberate "oversight" for economic gain (sand and gravel). Resolved of the perception of grievous fault and reassured that Connecticut law absolved private citizens of monetary responsibilities, the property owner generously donated cash, construction equipment, erected a temporary protective structure, and most importantly, voluntarily ceased his gravel operations for a longer period than required by Connecticut statute. This provided suffi-

Office of State Archaeology staff undertaking rescue archeology of the Walton family burial ground exposed by sand and gravel mining. The vertical face cut of the quarrying operations precluded in situ preservation of this late-18th-century cemetery.

The use of brass tacks, which note the deceased's initials and age at death, was a common decorative treatment in late-18th-century Connecticut. Brass-related mineralization enhanced the preservation of the coffin lid.

cient opportunity for the State Archaeologist to professionally rescue all of the burials in this small rural farm-family cemetery.

After confirmation by the State Archaeologist that the disturbed burials were in fact in a historic cemetery, the Office of the State Medical Examiner and the Connecticut State Police willingly relinquished their statutory involvement. Similarly, the Town of Griswold's Office of Selectmen appreciated the State Historic Preservation Office's periodic updates as to the rescue archeology, allowing local officials to more effectively respond to concerned community members. The town's health officer also welcomed the professional coordination and shared osteological knowledge about his community. Keeping community officials properly informed was imperative for establishing a professional working relationship which minimized bureaucratic entanglements. For instance, the town's health officer concurred with the Office of State Archaeologist's evaluation that the cemetery's age obviated modern reinterment requirements for coffins and concrete vaults, the cost of which would have posed significant difficulties for reburial.

Adjoining neighbors and local residents were sympathetic to the professional archeological removal of the burials upon reassurance from the archeological community that all osteological remains would be reburied.

The archeological rescue commenced immediately after the initial site inspection revealed both exposed skeletal and coffin remains and the extensive instability of the half-excavated sand and gravel knoll. While the property owner attempted to forestall further erosion by stabilizing the vertical bank with additional sand and gravel, the Public Archaeology Survey Team Inc, under the direction of Dr. Kevin McBride, established a grid system across the site. Volunteer field assistance was generously provided by students from the University of Connecticut and avocational archeologists from the Archaeological Society of Connecticut and the Albert Morgan Archaeological Society. Paul Seldzik and Allison Webb Wilcox of the National Museum of Health and Medicine, Armed Forces Institute of Pathology (Washington, DC) offered their technical assistance and laboratory facilities for osteological analysis.

Skeletal analysis has yielded a bimodal pattern of age distribution consisting of young children and old adults. Of the 27 burials, 14 were subadults, including 6 infants under the age of 2 years. The 13 adult individuals include 6 individuals over 50 years of age. This mortuary pattern suggests a historic population which reflects a relatively normal life table distribution.

As rescue archeological studies were proceeding, concurrent research was undertaken of local archival sources including the town land records in order to identify this rural family burying ground. A 1757 property transfer associated the cemetery with the Nathaniel Walton family. The State Archaeologist, who in Connecticut bears the responsibility for notifying possible descendants, coordinated with the Griswold Historical Society and the Connecticut Genealogical Society to identify surviving relatives of this old New England farming family.

Walton family members were eventually contacted in Massachusetts, New York, Maryland, Nevada, Arkansas, and California. At first, family members were distressed that their historic family burying ground had been exposed and was further threatened by sand and gravel mining. However, as discussion ensued, family members came to understand and appreciate that the intent of the responsible archeologists was to handle the osteological and cultural remains in a respectful and professional manner, that their input was both

A Congregational Church reburial service was conducted by Rev. Michael Beynon with numerous Walton family members in attendance. The Town of Griswold provided reburial space in the Hopeville Cemetery, which was contemporaneous with the historic Walton burial ground.

encouraged and vital, and that the situation offered a rare opportunity to gain insights about their early New England ancestors. Family members volunteered genealogical information, photographs, and even hair samples so that the contemporary genetic record could be compared with on-going DNA analysis of the skeletal remains.

In the fall of 1992, a reburial ceremony was conducted for the 18th-century Walton family members who had been archeologically rescued from their historic resting place. Since archival evidence demonstrated that the Walton family had belonged to the First Congregational Church in the Town of Griswold, current church members graciously hosted a reception for Walton relatives who attended from as far away as Nevada. At the invitation of the First Congregational Church, the State Archaeologist shared his preliminary analysis of the historic and archeological data with family, friends, and church members. The Rev. Michael Beynon performed a traditional Puritan ceremony of reinterment at the nearby town-owned Hopeville Cemetery. The reburial in this historic cemetery, which was contemporaneous with the Walton cemetery, was arranged by the town's First Selectman. Skeletal remains were arranged according to the archeological excavation records such that the integrity of rows, body orientation, and relative positions were re-established.

The Walton Cemetery project triggered a number of very sensitive and emotional concerns from a diverse constituency. Property owners, town and state officials, archeologists, community residents, family members, and religious representatives participated and shared in the decision-making process regarding the respectful removal and subsequent reburial of the Walton family remains. Connecticut statutes provided the administrative guidelines while the archeological community offered the sensitivity, diplomacy, and professionalism required for dealing with both the endangered osteological population and their surviving descendants and other interested parties. Or in the words of Rev. Michael Beynon, "the respect and sensitivity shown by the archeologists during the reburial made my work dealing with family and congregational members a lot easier."

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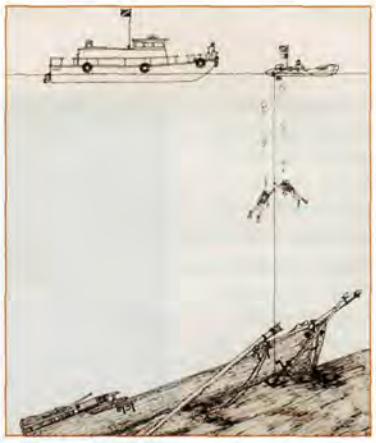
Giovanna Peebles

Cold Water Volunteers

Their Role in Lake Champlain's Submerged Heritage Programs



The wreck of the Water Witch, *lost in Lake Champlain in 1866. Drawing by Kevin Crisman, courtesy of Texas A&M University, the Lake Champlain Maritime Museum, and Vermont Division for Historic Preservation.*

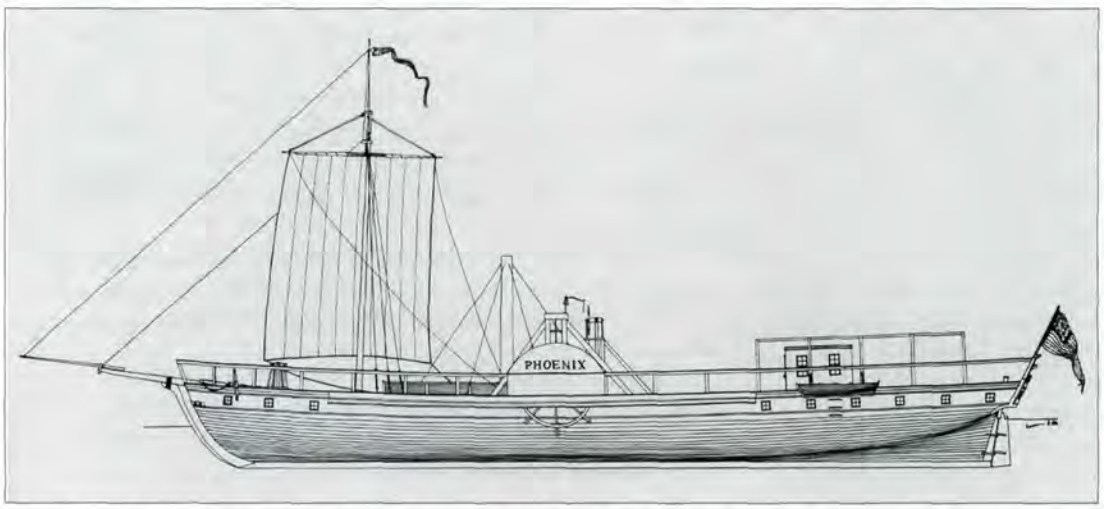
The dictionary definition of "volunteer" as "one who offers himself for any service of his own free will" isn't satisfying. "A person who works long and hard on an activity and doesn't get paid for it" better describes the many volunteers who are the backbone of Lake Champlain's underwater archeology programs. From the beginning steps in 1979 to record and learn about the Lake's submerged heritage, volunteer sportdivers have provided leadership and labor for surveys and documentation studies. Volunteer sportdivers continue to play key roles in fund raising, advocacy, and education and outreach programs about Lake Champlain's submerged historic heritage. The Vermont model of volunteer sportdivers as vital components of an underwater archeology program is mirrored in all states that have successful underwater heritage programs.

More so than for land-based archeological sites, volunteers are a vital, integral part of any state's underwater program. While a state can arguably identify and manage its land archeological sites without volunteers (after all, in many states most sites are privately owned, with individual property owners being stewards of their own sites, if they so choose to be), it would be tough, and expensive, to identify and manage underwater archeological sites without volunteers. A state program of underwater archeology without volunteers will locate few sites and manage them poorly, if at all.

There are key differences between land-based archeological sites and underwater archeological sites that alter the role of, and necessity for, volunteers. First, land sites are easier to find. It doesn't take a lot of special skills and equipment to locate prehistoric campsites in cornfields or historic cellar holes and mill ruins in pastures and woodlots. It's a lot harder to find shipwrecks: it takes special equipment, special training, and special effort.

Second, sportdivers have a unique relationship with submerged sites since they can visit and marvel at these resources first hand; most people cannot. There is an unparalleled sense of resource "ownership" among the diving community that bonds divers to each other and to the underwater sites. Sportdivers have the ability—and, if they'll accept it, the responsibility—to protect and monitor these fragile sites every day, on every dive.

Third, underwater archeological sites are publicly owned; they are not "someone else's problem." States are responsible for all the sites that may lie submerged in the public bodies of water and it's the state's responsibility to manage those resources wisely. It's certainly possible to ignore those resources (and ignore the accompanying problems); but the resources don't go away. Instead, unmanaged underwater archeological sites simply get abused, and oftentimes destroyed. Unfortunately, there aren't a lot of public dollars to go around.



Lake Champlain Transportation Company steamer Phoenix *which played the lake for four years until destroyed by fire in 1819. The drawing is based upon archeological measurements of the hull and contemporary plans of similar steamers. Drawing by Kevin Crisman, courtesy of the Vermont Division for Historic Preservation.*

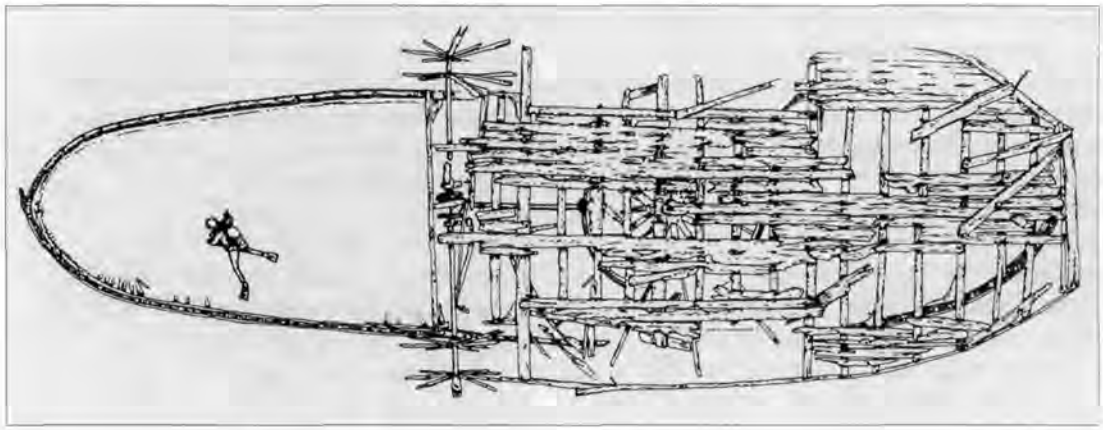
In Vermont, as in most states, the underwater archeological programs are run on the proverbial shoestring. Volunteers allow a state to have a successful program and to do projects with a lot less money than it would otherwise. To pay for all the services that volunteer sportdivers contribute to the State of Vermont would be prohibitively expensive—and impossible to do.

Volunteers play many roles in Lake Champlain's underwater archeology programs. They discover sites, help to survey and record sites, get the word out about the importance and specialness of the sites (education and outreach), monitor sites, help manage sites, fund raise, and advocate for the sites.

Although discovering a shipwreck doesn't turn a diver into a volunteer, reporting that discovery is often a diver's first volunteer action. Sportdivers have played a unique role in locating many of Lake Champlain's most important discoveries. Lorenzo Hagglund found (and later raised) *Philadelphia* in 1935; more recently, divers discovered and reported *General Butler* (the first sailing canal boat discovered in Lake Champlain), *Phoenix* (one of America's earliest steamboats), and *Horseferry* (the only known horse-powered shipwreck in America), among a few examples. As is the case with land-based sites, the discovery of a site often fuels volunteerism in underwater archeology. Sometimes what begins as a random search for neat things to look at becomes a burning interest to learn more about a site. However it happens, that first contact with a piece of history positively motivates many of Lake Champlain's sportdiver volunteers.

While accidental site discovery can be a "low cost" activity (except for the diver's time and equipment), there is nothing low cost about underwater archeological surveys and documentation studies. Rental or purchase of side-scan sonar and other remote sensing equipment, a dive boat and gas, diving equipment, compressed air, recording supplies and equipment, and a big enough support team is a costly operation. In Lake Champlain, numerous surveys and historic shipwreck recording projects have been successfully completed with the support of many divers who generously donated time, expertise, and equipment. Fred Fayette often generously donated his large boat and captain's services for survey projects. In 1980, long before the Abandoned Shipwreck Act of 1987 and its subsequent 1990 Guidelines promoted volunteerism, a team of volunteers under the auspices of the Champlain Maritime Society recorded *Phoenix*, one of America's earliest steamboats built in 1815.[1] In 1981 and 1982, volunteers also with the Champlain Maritime Society documented *General Butler*, a remarkably intact sailing canal boat that sank in 1876 during a wild winter gale.[2, 3] Additional recording projects were undertaken by Champlain Maritime Society volunteers on the War of 1812 wrecks in the Poultney River, on the Isle La Motte marble schooner, and *Horseferry* between 1982 and 1986.[4] While the State of Vermont, with National Park Service funding, was able to pay for parts of these studies, most of the field efforts were accomplished by volunteers.[5] More recently, federal and state funded documentation and data recovery projects off Mount Independence/Fort Ticonderoga, on *Champlain*, *Waterwitch*, and at other sites benefited from a core group of support volunteers with super diving capabilities and ever-improving underwater archeological skills.

Volunteers are now playing an indispensable role in helping the State of Vermont manage its Underwater Historic Preserve program, soon to celebrate its 10th anniversary.[6] Since January 1993, a citizen group of activist sportdivers, representing dive clubs, dive shops, dive charters, the Lake Champlain Maritime Museum, and the Burlington, Vermont Harbormaster, meet monthly on their own time and dollar to set goals and direction for the five Preserve sites. The Vermont Underwater Historic Preserve Advisory Committee provides the state a focused vision about the future of the Preserves, technical advice about site maintenance and management, brainstorming for a broad range of problems, educational and outreach support, fund raising, and a network of volunteers. This volunteer group is an invaluable asset offering ideas, energy, and support to a poorly funded, unstaffed state program that was



The wreck of the Horseferry. *This drawing was traced from a photomosaic prepared from dozens of overlapping photographs. The forward end of the boat (left) has lost its deck. The large, horizontal wheel that propelled the sidewheels is visible beneath the fragmented deck. Photomosaic by Scott Hill, Milton Shares and Dennis Floss. Drawing by Kevin Crisman, courtesy of the Vermont Division for Historic Preservation.*

floundering until the Advisory Committee stepped in.

Many volunteers help on an independent, ad hoc basis and participate when they can. One such individual has spent over 40 years doing exhaustive archival research in his spare time in Lake Champlain Basin newspapers and other regional archives in North America and abroad to record all ships that once traveled, and may have been lost, in the lake. Several sportdivers are devoted to small, interior upland lakes where they have discovered and recorded rare Native American dugout canoes. Some volunteers organize other volunteers. And usually, a great program of volunteers requires great volunteer leaders. In 1979, Arthur Cohn helped organize the Champlain Maritime Society, a non-profit organization that sponsored many successful volunteer projects between 1980 and 1986. In 1984, he and Robert Beach Jr. organized the Lake Champlain Maritime Museum. Founded by volunteers and continuing to thrive on volunteers, the Museum operates as a tremendously successful non-profit organization that each summer leverages hundreds of volunteer hours into one of the most productive educational and outreach programs in northern New England. The Museum's newsletter is the best I've ever seen.

On the New York side of Lake Champlain, Joseph Zarzynski's enthusiasm for history and diving coalesced into Bateaux Below, Inc., a non-profit organization dedicated to preserving and interpreting the history and nautical archeology of Lake George. [7, 8] With little governmental support, Bateaux Below, Inc. discovered a remarkable assortment of Revolutionary War wrecks in this small northern lake, including *Land Tortoise*, North America's oldest intact warship. This initial work was followed by documentation projects and National Register nominations. Bateaux Below Inc. successfully advocated for the creation of Submerged Historic Preserve sites in Lake George, modeled after Vermont's program. The rich submerged history of Lake George would have remained unknown and untold without this band of persistent and devoted volunteers.

Dive clubs play an important role in protecting and managing submerged resources. They educate club members as well as the general public, provide a pool of knowledgeable volunteers, and advocate to legislators and government administrators for more money and more attention to the sites. The Lake Champlain Reef Runners hold a yearly fund-raising and outreach day for Vermont's Underwater Historic Preserves. Club members provide monitoring support for the Preserve sites on hectic summer weekends. Club officers and members devotedly and enthusiastically participate in the monthly meeting of the Preserve Advisory Committee.

The huge support provided by volunteers in Lake Champlain's— and Lake George's—underwater heritage programs can't be easily measured. Suffice to say that it's worth a great deal. Far beyond the dollar value of their contributions, Lake Champlain's sportdiving volunteers accomplish something that can't ever be bought or paid for: they protect our fragile and extraordinary underwater sites by deeply caring about them. This State Archeologist is deeply indebted to these volunteers.

Notes

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4 Champlain Maritime Society. *A Report on the Nautical Archaeology of Lake Champlain: Results of the 1982 Field Season of the Champlain Maritime Society.* Edited by Arthur B. Cohn. Burlington, Vermont: Champlain Maritime Society, 1984.

5 Peebles, Giovanna. "The Management of Vermont's Underwater Resources: A Model of Shared Responsibility." *Proceedings of the Sixteenth Conference on Underwater Archaeology.* Edited by Paul Forsythe Johnston. Special Publication Series, No. 4. Society for Historical Archaeology, 1985.

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7 Zarzynski, Joseph W. "Empire State Shipwrecks and Hulks with National Register of Historic Places Status." *The Lake George Nautical Newsletter.* Wilton, NY: Bateaux Below, Vol. 1, No. 4, December 1992.

8 Zarzynski, Joseph W. "Preserving Eighteenth Century Shipwrecks at Lake George, New York, USA, Through Underwater Archaeology, Shipwreck Preserves, and Museum Exhibits." *Bermuda Journal of Archaeology and Maritime History,* Vol. 5, 1993.

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Brona G. Simon

Archeological Site Conservation on Private Property

Archeological site protection on private lands is one of the most challenging problems facing archeologists today. Archeologists nevertheless can have success in protecting privately owned sites when landowners are informed about archeological site conservation and when incentives are offered for their preservation. Site conservation on private land can occur when real estate and environmental protection issues are clearly identified and addressed, and competing interests for site use are pragmatically resolved. This article highlights a few of the strategies for site protection on private land which emphasize outreach, education, and "carrots" or incentives, rather than regulatory control, penalties, or other "sticks."

At the Massachusetts Historical Commission, we have found that taking a heavy-handed or "big stick" approach with private landowners has a very low expectation for success. Rather, successful site conservation on private property has occurred as a result of persuasion, negotiation, public education, and the "marketing" of archeological site preservation. Archeologists may feel that they have a strong, supportable interest in privately-owned archeological resources, but, in reality, they have no **legal** right to this interest. The archeologist's interest in protecting privately held archeological sites can be realized, however, when the value of the land from the owner's perspective is blended with the public and scientific value of the archeological resource, and incentives are offered to the owner in return for site protection.

The Massachusetts Historical Commission employs a variety of strategies and approaches to preserve archeological resources. These include: preservation restrictions, coordination with conservation organizations, site acquisition, conservation restrictions, outreach to owners, press relations, site designations, management through constituency support, and data recovery. We have found that no one of these strategies can be applied universally; rather, strategies are evaluated to find the "best" fit for each case. In this regard, "best" may not necessarily mean the most protective. For instance, a preservation restriction is not as protective as the acquisition of a site; but acquisition may not be possible without adequate funding for the purchase. A preservation restriction which is overseen and actively monitored by a local governing board, state agency, or nonprofit organization can provide for preservation in the long-term, irrespective of ownership of the site.

There are a number of incentives which can be offered to a private landowner to gain his or her support in protecting the significant archeological resources he or she owns. For example, preservation and conservation restrictions or donation of land, described below, can provide tax benefits to the owner. Other less directly measurable "carrots" for site preservation by developers include better marketing potential and opportunities for good publicity for the development, which could result in financial benefits for the owner.

To all types of private landowners, the financial value of the property is important. While developers and owners of income-producing property may be grappling with profit margins and local approvals, other property owners may be struggling with estate planning for their heirs, establishing a retirement fund, or building a vacation home.

Governmental laws and regulations that include archeological resources are applicable in certain cases of new development or construction on private land. In such cases, archeologists are placed in an essentially reactive position and are constrained by many aspects of project planning. In order to persuade developers to design their projects to avoid and preserve sites, the Massachusetts Historical Commission has found that if we educate the developers in the various incentives which could apply, the developers are more likely to consider the option for site preservation more seriously than data recovery. The incentives are principally financial, such as taking a charitable deduction for the placement of a preservation or conservation restriction on the site.

A preservation or conservation restriction is a restriction or easement which an owner gives freely to another party to insure long-term preservation of a historic or archeological property. The Massachusetts Historical Commission is authorized to accept preservation restrictions on properties in the Commonwealth. Preservation restrictions contain specific prohibitions against activities which would damage cultural resources and are recorded with the deed to the property, and thus "run with the land." The site must be listed in or eligible for listing in the National Register of Historic Places to qualify for income tax deductions should the owner donate the land or an easement to a charitable organization.

The Massachusetts Historical Commission has found that the value of archeological site conservation within a project area can be translated to even the most profit-motivated developer. In order to gain local approvals, developers can use the donation of conservation land or an easement containing an important archeological site as a incentive of their own. For instance, in the town of Sharon, Massachusetts, a planned residential complex contained the site of Stoughtonham Furnace. The Stoughtonham Furnace Site is listed in the National Register of Historic Places and contains the remains of an iron foundry where cannons were cast for use by Massachusetts regiments in the Revolutionary War. The developer presented two alternative subdivision proposals to the town planning board, one of which he preferred because of its profitability. In order to sell his preference to the town for its approval, the developer included the preservation of the historic furnace site in a conservation area of his preferred project design. The alternative plan, which was less desirable for the project's profit margin, would have resulted in the destruction of the archeological site. The town approved the preferred plan and the site was placed under a preservation restriction.

Land conservation organizations and trusts can hold conservation restrictions on private property or own conservation lands outright. Archeological site preservation is best achieved when the natural setting of the site is protected. Archeologists should seek allies among members of private, nonprofit land trusts, and conservation organizations. Forming these alliances, however, requires considerable outreach, networking, and education on the part of archeologists.

Rock House Reservation, a 75-acre parcel which includes a Native American rockshelter, was protected for future generations to appreciate through its owner's donation to the Trustees of Reservations. Photo by Edwin C. Esleeck.

The Massachusetts Historical Commission has recently supported an archeological conservancy feasibility study by The Trustees of Reservations through a survey and planning grant from the Historic Preservation Fund. One of the goals of the Trustees of Reservations' study was to begin collaboration and networking among archeologists and land trusts. An initial workshop on Martha's Vineyard was attended by professional and avocational archeologists, members of the Wampanoag Tribe of Gay Head, and representatives from the 12 land conservation organizations involved in land preservation on the Vineyard. The Massachusetts Historical

Commission displayed a map of known archeological sites that highlighted the most important site areas targeted for preservation. Several land trusts indicated that they were already in the process of negotiating with owners of some of the significant sites, and the knowledge that these particular tracts hold archeological as well as natural value would enhance their negotiations. The workshop was an important first step in developing a proactive program for site conservation on private lands.

State and federal programs for compliance archeology have established set regulations and procedures for site preservation, but little attention is paid to the acquisition of a threatened site as a viable protection strategy. Subsequently, archeologists rarely think of acquisition as an option. However, sites are not as expensive to own or maintain as, for instance, historic buildings, since sites are generally located on unimproved land and are best preserved in a natural environment. Acquisition of sites by a conservation organization should be considered and promoted in efforts to protect sites on private property.

Outreach to owners of significant sites is labor intensive but worthwhile. By informing owners about the importance of the archeological sites they own and encouraging them to protect the resources, owners can become good stewards of the past. Too often archeologists are fearful about disclosing the locations and contents of sites, for fear of looting or exploitation. But if an owner is not informed, we have little hope that the site will be protected.

Outreach to owners is best accomplished through partnerships among State Historic Preservation Offices and state archeologists, professional and avocational archeologists, conservation organizations, land trusts, and local, state, and regional governmental agencies, such as local historical and conservation commissions, regional planning commissions, and land managing agencies. We have found that while some landowners welcome advice from the State Archeologist, others may resent any intrusion into their private property matters by any representative of the government. Many of these owners, however, have been receptive

Caring for Archeological Sites: Some Dos and Don'ts. Side panel from Saving the Past for the Future *informational leaflet distributed by The Trustees of Reservations Land Conservation Center.*

Saving the Past for the Future

An introduction to saving archaeological lands

Ward Reservation, *Andover & North Andover*

The Trustees of Reservations
Land Conservation Center
Conserving the Massachusetts Landscape

CARING FOR ARCHAEOLOGICAL SITES: SOME DOs AND DON'Ts

Do report the site to the Massachusetts Historical Commission. Your report will not trigger any land use restrictions, but will aid in scientific research and preservation planning.

Do maintain the site in its natural condition and protect it from inadvertent destruction.

Do keep permanent records on any finds, including noting as exact a horizontal and vertical location as is possible.

Do deposit archaeological artifacts and collections with an appropriate museum or curatorial facility.

Do learn more about your site, and other nearby sites. Encourage scholarly research and interpret the prehistoric and historic assets of your property.

Do protect your site and ensure its survival for future generations by placing a preservation or conservation restriction on the site.

Do post the property against trespass and against destruction of natural and cultural resources.

Don't allow unqualified persons to "dig" the site. Report any unauthorized excavation — "looting" — to the State Archaeologist.

Don't construct buildings; place trails, picnic areas, or recreational areas; or conduct any earth moving or construction in the immediate vicinity of the site.

Don't mark the exact site location with signs. This invites vandalism and looting.

to advice from private non-profit conservation organizations or avocational archeologists concerning the nature and management of their archeological resources.

Recently, a 75-acre lot containing the Rock House Site, a prehistoric Native American rockshelter, was given to the Trustees of Reservations by its owner, Walter F. Fullam. The owner's lifelong dream was to protect the site and its surrounding environment. As a volunteer for many years in the archeology program at Old Sturbridge Village, Mr. Fullam had a strong appreciation for site conservation. The Trustees of Reservations scheduled the dedication of the Rock House Reservation as a special event during Archeology Week, and has promoted public education and appreciation of the site.

Guidance to owners for site preservation should be as simple and straightforward as possible. The Trustees of Reservations has published an informative brochure targeted to owners of archeological properties. Entitled *Saving the Past for the Future, an Introduction to Saving Archeological Lands,* the brochure explains the importance of preserving sites and various options available to landowners. It also includes a short list of the "dos and don'ts" of site preservation, care and maintenance, and makes owners aware of the damaging effects of looting or unauthorized digging.

Many owners of large estates are now seeking advice on planning the future of their holdings in order to insure that their property will be kept within a family. Through estate planning, tax burdens can be reduced so that heirs will not be forced to sell or subdivide family lands. Frequently these families will be assisted by professional estate planners or attorneys who are likely to explore conservation options with a number of private land trusts. While it is unlikely that archeologists could become directly involved in the intricacies of estate planning, archeological considerations, nevertheless, can be added to the mix by networking with conservation organizations.

In an unusual case which involved project review by a regional planning commission, the Massachusetts Historical Commission and the Trustees of Reservations recently had an experience with the planning of a family estate where a significant proto-historic Native American corn field site was discovered. Through early coordination between the Massachusetts Historical Commission with the Cape Cod Commission, the limited development portion of the parcel was subjected to an archeological survey, which discovered the site. Negotiations among the owners, their attorney, Massachusetts Historical Commission, The Trustees of Reservations, and the Cape Cod Commission resulted in an agreement that the site would be scientifically excavated prior to construction and that a large tract of land (presently unsurveyed, but likely to contain sites) would be placed under a conservation restriction held by the Trustees of Reservations.

Archeological sites share the landscape with many members of the public, including, but not limited to, private landowners, developers, real estate appraisers, tax attorneys, and environmental conservation organizations. These many "publics" are key players in achieving site conservation on private lands. Outreach and education of these "publics" can result in successful cases of site protection. Information on protection strategies and incentive programs should be shared among all advocates for archeological site preservation so that the best possible advice is given to owners of important sites.

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Profile of an Archeological Preservationist

The Rock House site, located in West Brookfield, Massachusetts, contains a large rockshelter which was used by Native Americans in prehistoric times. Preservation of the Rock House and its surrounding 75 acres of woodland, small pond, and glacial erratics was a lifetime goal of its owner, Walter F. Fullam, who recently donated the property to the Trustees of Reservations.

Mr. Fullam's interest in protecting the Rock House site came not only from his strong appreciation for the environment, but also his avocational interest in archeology. He often volunteered at Old Sturbridge Village's archeological research projects, showed artifacts to the visiting public, and explained the results of the archeological investigations. Old Sturbridge Village has named Mr. Fullam an Honorary Trustee in its appreciation. In 1994, the Massachusetts Historical Commission presented him with a Preservation Award in recognition of his efforts to protect the Rock House property and to educate the public about archeology.

"I have always loved going to the Rock House," Mr. Fullam said in accepting the Preservation Award. "It is a beautiful site, a great gift of nature and humanity. Since I enjoyed my visits to the site so much, I felt it was important to let other people get the same pleasure. The Trustees of Reservations run a superb public program at the Rock House Reservation. I have been told that during its first open season, an average of 75 people visited the Rock House Reservation in a day, making it one of the most heavily visited archeological sites in the state of Massachusetts. It truly is a special place."

S. Alan Skinner

Scouting for Archeology

Indian lore is interwoven through many of the programs and activities of the Boy Scouts of America (BSA). Interest in Native American culture was one of the basic tenets of the BSA founders, and remains an important facet of the Scouting program as reflected in traditional dancing, outdoor programs, and the Order of the Arrow, a national camping honorary society that was founded around Native American (specifically, Lenni-Lenape tribe) lifeways and ceremonies.[1] In looking at local council or troop programs throughout the United States, it is apparent that Native American archeology is a part of the Scouting program, even though archeology is not a conservation topic at the national level, nor is there an archeology merit badge. The purpose of this article is to explore the history of archeology in Scouting, what is happening today, and what the future holds for Scouting in archeology and for archeology in Scouting. It is my belief that with a vision, a plan, and support archeology can become an important conservation issue within the BSA. In this way, it will be possible for Scouting to make a significant impact upon the preservation of historic resources in America and throughout the world.

Primarily because of a widespread interest in archeology and the availability of recognizable prehistoric archeological ruins at the Philmont Scout Ranch in northeastern New Mexico, hands-on archeological education in the BSA began at the national level in 1941. At that time, Sam Bogan and a group of scouts partially excavated a dry rockshelter known as Box Canyon Cave in the North Ponil Canyon at Philmont.

In 1956, Eugene Lutes started a regular summer program in archeology at Philmont with excavation of the Pueblo II age Slab House site at a camp known as Indian Writings. The isolated location, the presence of pueblo-style pithouses, rockshelters with dry deposits, petroglyphs, prehistoric pottery painted with black on white designs, and the proximity to Taos and other Rio Grande pueblos, all lent an aura of excitement to the program.[2] Thousands of Scouts and Scout leaders have experienced archeology at Indian Writings since the program's inception. The program has shifted over the years from one of digging the seemingly inexhaustible ruins, to today's perspective in which conservation and the need to preserve irreplaceable archeological resources have become important guiding factors. In the late 1960s and early 1970s, archeology was so popular at Philmont that the *"Ponil Men"* program was established by Mike Glassow, who now teaches archeology at the University of California at Santa Barbara. Scouts came for a 12-day program of archeology. Although this would have been a logical time for the development of national awareness, it did not happen. Not only would it have been a logical development from the standpoint of nationwide conservation concerns, it was also at this same point that conservation archeology began to take off in the United States, and there was a significant increase in the number of archeologists and archeological projects throughout the country. While a less intensive program at Philmont continues today, an opportunity was missed to incorporate archeology into the National Scouting program and provide a formal mechanism to reinforce the cultural resource conservation experience at Philmont.

Throughout the '50s and '60s, there was a general attitude on the part of professional archeologists that we could not trust the general public with information about archeological sites and

Excavation at a rock foundation site at the Boy Scouts of America's Indian Writings Camp, Philmont. Photo courtesy of Steve Zimmer, Philmont Museum and Seton Memorial Library.

finds. Thus, this was a time when it would have been difficult, or impossible, to have rallied support for archeology in Scouting, because Scouts, along with the public in general, were viewed primarily as potential looters or pothunters who had little respect for the remains of the past.

The Texas Archeology Preservation Award Boy Scout patch. Photo by Jim Whorton, Troop 70, Dallas.

As early as 1966, Jim Word, an active Scouter and an involved avocational archeologist from the Texas Panhandle, approached the National Council with a plan for a merit badge in archeology. He was told that there was no national interest in archeology, but that he could develop a local program. He did so and an archeological program was established in the South Plains Council, BSA in Lubbock, Texas. However, the program was primarily guided and stimulated by Mr. Word, and as his life changed, he did not have the time needed to devote to the local program, and it was discontinued. Starting in 1967 and continuing until 1973, another Scouter from near Philadelphia sought to have a merit badge developed, but he, too, was told that there was no interest in the subject.

In the 1980s, several professional archeologists had approached their local councils and the BSA National Council about developing an archeology merit badge. Each believed that Scouting and archeology were a good match if put together through the merit badge program. Their involvement in Scouting had occurred because they were volunteer leaders. They were also unaware that archeology had previously been rejected by the National Council. As before, these Scouters were told that there was no nationwide interest in archeology but that if they wished, they could develop a local program.

At the same time, major changes had occurred in archeology throughout the United States. First, nearly every land-controlling federal and state agency had hired archeologists and had become aware of the general public's interest in historic and prehistoric archeology.[3] Many of these agencies, particularly the Forest Service, Bureau of Land Management, Corps of Engineers, and National Park Service, had developed programs to incorporate volunteers into field programs.[4] In each of these cases, there was overriding support from the agency that was put into play with local initiative. Moreover, archeology awareness week programs developed by state historical preservation offices and amateur archeological groups had intensified public outreach. In addition, more of the general public had leisure time for avocational activities, and for many that meant the development of increased public interest in archeology, increased tourism to national and state parks, and the development of educational programs such as Crow Canyon in Colorado and Campsville in Illinois.[5] There also was increased emphasis on the preservation of archeological sites through such organizations as the Archaeological Conservancy.

In an attempt to bridge the national gap, Bonnie McKee of Dallas, Texas, developed a statewide archeology program for Scouting. The program, known as the Texas Archeology Preservation Award, is administered through the Texas Archeological Society with the support of the State Archeologist and the Texas Historical Commission. The program is generally completed by a group of Scouts from a troop that has a leader with an interest in archeology. Only rarely is it done by an individual Scout. As an optional patch program, it competes with other national and regional programs, and has not been effectively marketed to all councils throughout the state.

Through my involvement in the development of the Texas Archeology Preservation Award program, I came to realize that our local initiative and grass roots support was important, but that if archeology was going to be embraced by Scouting at the national level, it had to be from the top down. It came as a surprise that a merit badge had been rejected so many times in the past, and that Merianne Nelson of American Fork, Utah, and the Mid-Atlantic Regional office of the National Park Service had recently submitted proposals and had each been rejected. It was also interesting to learn that archeology merit badges were offered in Scouting both in Europe and in Africa.

With the previous proposals and rejection letters in hand, a set of preliminary merit badge requirements were developed and sent out for review to several amateur archeologists, Scouters, and professional archeologists. These requirements were then modified so that the badge could be earned by Scouts in both rural and urban settings. The requirements were designed so that they would essentially cover the subject of archeology while at the same time be achievable and stimulating enough so that a Scout would want to pursue the badge.

Finally, in February 1992, a complete proposal was submitted to the BSA National Council office. The proposal addressed the concerns expressed in responses to previous proposals. The proposal included more than 400 letters of support from Scouts, Scouters, amateur and professional archeologists, and museum personnel from throughout the country. As before, the initial response from the BSA National Council was not

positive, but staffing changes, as well as a second push,[6] led to further discussion and ultimately to the BSA National Council's evaluation of possible new merit badge topics. Out of more than 240 topics, archeology came in with a rank of 20th, and the subject is clearly being given further evaluation by the Boy Scouts.

Archeology continues to be a part of Scouting. We can expect that it will as long as it is practiced at Philmont and as long as the public has the time to express their interest in archeology by participating in such training programs as the U.S. Forest Service's *Passport in Time*, the Bureau of Land Management's *Adventures in the Past and Heritage Education* programs, as well as in educational programs such as at Crow Canyon and in public school curricula.[7]

This experience in the awakening of cultural resources management, or conservation archeology, by the Boy Scouts of America has served to highlight several areas of concern. The foremost is that it is apparent that the conservation of irreplaceable cultural resources had not been adequately understood by the national staff and their advisors even though they were supporting an important archeological program at Philmont. Furthermore, they were also implicitly supporting the involvement of many Scouts in archeological activities, including Eagle service projects, archeological excavations, and Explorer posts (BSA young adult program) specializing in archeology. This lack of overall comprehension is probably best emphasized when one considers the small number of publications produced in relation to the mass of information and artifacts generated by the over 35 years of the summer program at Philmont. Most of this material remains unstudied and in need of improved curation. Archeologists have a continuing responsibility to emphasize the need for the preservation and conservation of cultural resources to all organizations that participate in archeological investigations.

The other insight learned is that in an organization such as the Boy Scouts of America, it is necessary for the leadership to embrace the concept of archeology as a concern in the conservation and historical sense if the resources are going to receive the attention they deserve. This is not to downplay the importance of local grass roots support, but if archeology is to be accepted in large organizations such as the BSA, it is essential that it is adopted as a focus area from the top down. At the local level, archeology might be the focus of an individual, but the locally-stimulated interest and concern must be spread more widely in order to ensure consistent treatment of irreplaceable archeological resources by members of an entire organization. This fact is particularly important, when it is realized that archeology consumes the history that it seeks to understand.

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Continued thanks go to each of the people mentioned in the text for their foresight in beginning the process of exploring an archeology merit badge with the Boy Scouts of America. Special thanks go to the many Texas Archeological Society members and other volunteer advisors who have been a constant source of encouragement during this seemingly long process. Lastly, I want to thank Rees Falkner and Parvin Bishop of the Boy Scouts America national staff for their support and interest in archeology.

A Magnificent Obsession

How One Volunteer Unraveled the Story of Vermont's Rich Industrial Heritage

In 1978, Massachusetts resident Victor R. Rolando told me he'd like to inventory the archeological remains of Vermont's iron industry—as a volunteer. With great enthusiasm, I said, "Great, do it!" I didn't think there was very much to inventory, so I presumed it wouldn't take him very long. Also, I figured that living outside of Vermont would dampen his ardor for the task.

Twelve years, a graduate degree in History, and thousands of miles later, Vic Rolando had inventoried 99 ironwork sites. By then, the research had expanded way beyond the iron industry. One can't make iron without charcoal and without burning lime. So Vic proceeded to document 71 charcoal-making sites and 73 lime kiln sites. Each year, he provided the State of Vermont with a completed site survey form, topographic map location, detailed sketch map, and "additional information" for **each** site. At the end of every year, he prepared a detailed summary of the past year's activities and proposed tasks for the coming year. During each year, he gave at least four to eight talks to local historical societies, Rotary Clubs, libraries, and professional organizations. Instead of just recording sites and leaving it at that, Vic exhaustively researched the broad historic context of each industry in and outside of Vermont and the history of the people and families who made those industries and sites happen.

Victor R. Rolando at the New Hampshire Iron Company blast furnace site in Franconia, New Hampshire. Rolando served as the project leader for the Society for Industrial Archeology Northern New England Chapter's all-volunteer, three-day recording session at this industrial site during November 1994.

While his story focused on Vermont, Vic illuminated and described the regional and national picture of these different industries. The Vermont Division for Historic Preservation conservatively estimates the dollar value of Vic's donated services at over $100,000 since 1979; the historic value is beyond measure.

By 1989, Vic began assembling all this information into a book. The title kept changing and the contents kept expanding but by 1991, the manuscript was ready for publication. If nobody else wanted to publish it, he would publish it himself. And he did. *200 Years of Soot and Sweat: The History and Archaeology of Vermont's Iron, Charcoal, and Lime Industries*[1] was published in 1992. A few of us celebrated the fruit of so much driving, walking, and plain old hard work and research. You can't ever say "thank you" for a monumental, amazing, volunteer labor of love such as this one. I tried to in the "Foreword" of the book and failed. By personally giving a copy of the book to the Governor, I attempted to show Vic how important his effort was to the history of our state—and that, again, was only a small token. But recently, Rolla Queen's review of *200 Years of Soot and Sweat in Historical Archaeology* concludes with "the author should be applauded for the masterful way he has approached the study of these sites. This is the sort of publication toward which all archeologists working with survey and inventory reports should strive, and of which any of us would be proud."[2] And some say volunteers aren't worth our time.

—*Giovanna Peebles*

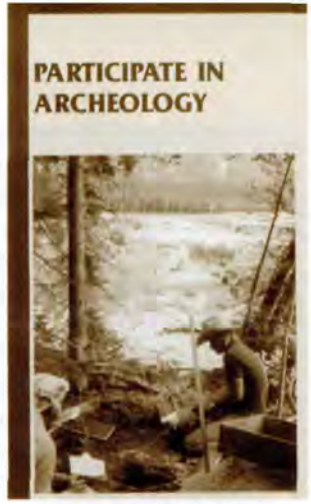
Notes

1 Information about ordering *200 Years of Soot and Sweat* can be obtained from: Victor Rolando, RR. 1, Box 1521-3, Manchester Ctr., VT 05255.

2 Queen, Rolla. Review of *200 Years of Soot and Sweat: The History and Archaeology of Vermont's Iron, Charcoal, and Lime Industries* by Victor R. Rolando. *Historical Archeology*, Vol. 28, No. 3, 1994, pp. 128-130.

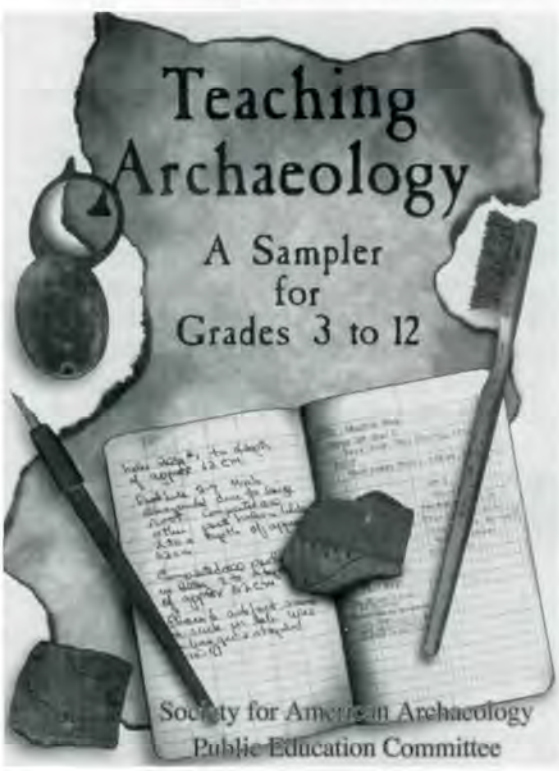
Daniel Haas

Education and Public Outreach in Federal Programs



A broad array of archeological experiences is available to the general public within the federal archeology program. Volunteers can select from many opportunities ranging from researching family histories to archeological field work. Beyond this, archeological information is reaching a wide audience through brochures, videos, exhibits, and on-site interpretive trails. Also, teachers are finding more curricular materials for classroom use. Federal agencies are contributing significant time and effort in these and other education and public outreach programs.*

Federal agencies are expanding their programs into education in large part because of anti-looting efforts generated in the 1980s. Site protection efforts spawned many of the educational successes evident today. Clearly, public participation is integral to the future of conservation archeology. Congress recognized this need by passing an amendment to the 1979 Archeological Resources Protection Act which requires federal land managers to establish programs to increase public awareness of the significance of archeological resources.



The Save the Past for the Future project sponsored by the Society of American Archaeology (SAA) laid the groundwork for a national partnership involving federal agencies, national and state organizations, and private foundations to develop strategies to further preservation of our archeological heritage (Reinberg 1991:271-276). The Taos Working Conference held in 1989 produced a series of recommendations and actions to promote site protection efforts. The resulting publication *Action for the 90s* outlined several recommendations focused on education that are guiding efforts today (SAA 1990: 9-17):

1) Information must reach the public about archeology, its benefits and the affect of looting on these benefits;
2) Education and training must be improved to inform and sensitize the public and target groups; and
3) The public should be provided with alternative ways to participate in archeology ethically and legally, including avocational societies and volunteer projects.

National Partnerships

As educational programs spring up in many agencies and places, there is strong concern for developing a national archeological education strategy (Rogge 1991). Coordinated efforts are essential to producing a coherent strategy and to assure that quality education materials are distributed to teachers. What are the core archeological principles that we want to teach? Who are the publics, what do they know, what do they need, and how do we effectively communicate the message? (McManamon 1991). These are not new questions, but are basic to developing any educational program.

The SAA Public Education Committee promotes awareness about and concern for the study of past cultures and encourages people in the preservation of heritage resources. This energetic and productive group of about 50 volunteers, who are members of the SAA and represent all sectors of public archeology, have collectively developed numerous products. (See KC Smith, this issue.)

The Public Awareness Working Group (PAWG), an interagency organization coordinated by the Archeological Assistance Division of the National Park Service, was active in public education and outreach activities during the second half of the 1980s. The group produced *Take Pride in*

TAKE PRIDE IN AMERICA

Help Protect Our Fragile Historic and Archaeological Sites

America archeological theme bookmarks of which 2.9 million have been distributed since 1988. Through their efforts the brochure *Participate in Archaeology* was produced, showing how people can learn more about and participate in archeology and resource protection. Over 150,000 copies have been printed and distributed.

The Intersociety Working Group (IWG) includes the Society for American Archaeology, Society for Historical Archaeology, American Anthropological Association, Archeological Institute of America, National Trust for Historic Preservation, Forest Service, Bureau of Land Management, and National Park Service. Several issues of shared interest have been identified, including the evaluation of precollegiate education materials, establishing a nationwide network to gather and distribute materials, and developing an annotated guide to archeological resource materials. The group, although in its infancy, has the potential for producing nationally coordinated guidance and direction.

Agency Initiatives

One achievement clearly evident in all agency heritage programs over the last decade is the development of outreach initiatives in local programs. These programs often pool the resources of many agencies working together. The public wants archeological information in a readable format. Some of our publics are not satisfied with their role as passive recipients of information but want to participate in heritage management. It is imperative that agency archeologists respond to these needs through active outreach.

The Listing of Education in Archeological Programs Clearinghouse (LEAP) arose from the need to collect and share information about education efforts in agency programs (Knoll 1991). The Clearinghouse is a centralized computer database containing information from federal agencies and numerous public and private organizations who are conducting archeological educational activities.

LEAP contains information on (1) projects and programs to protect archeological resources and to educate the public about these resources; (2) projects or programs with avocational organizations and volunteers involving archeological survey, testing, excavation, curation, or interpretation; (3) projects or programs with museums, academic institutions, historical societies, etc., for exhibits or displays about archeological resources; and (4) brochures, posters, videos, radio and television coverage, and other results of these efforts.

Two catalogues have been produced summarizing this information (Knoll 1990, 1992). The current format of LEAP is undergoing evaluation. There are problems with maintaining a current listing with the exponential growth in education programs and with the method of information distribution. LEAP is being considered as a working model for developing a comprehensive national clearinghouse.

Teaching with Historic Places

Teaching with Historic Places is an educational project developed by the NPS and the National Trust for Historic Preservation in 1990 (Boland 1992). Historic properties listed in the National Register of Historic Places are used by elementary and secondary school teachers to enhance class instruction of history and social studies. The program consists of educational materials including lesson plans, educational kits, and instructional materials related to specific historic themes. Teachers are introduced to the plans at workshops, which are also used to create new ones. Students are exposed to significant places located in their own community. The plans are useful for both classroom and on-site visits.

NPS Public Interpretation Initiative

The NPS Public Interpretation Initiative was introduced by the Interagency Archeological Services Division of the NPS Southeast Region (Jameson 1991, 1993). The program developed from the growing need for archeologists to communicate information effectively to the general public. In particular, the interpretation of archeological materials suffers from poor communication between archeologists, professional interpreters, and educators. Interpreters and educators are tongue-tied by the highly technical nature of archeological information, while archeologists are not well trained to relate their knowledge to members of these professions or to the general public.

The training course, "Issues in the Public Interpretation of Archaeological Sites and Materials," was developed to bring archeologists and interpreters together to learn about their roles in designing effective presentations. The strength of the course is its use of a multi-disciplinary team approach to effectively apply interpretive methods to archeological programs.

Several workshops and symposia have resulted from the initiative. "Toward Sensitive Interpretation of Cultural Resources in a Multi-cultural Society" was held at the 1993 SAA meetings and a workshop titled "Conveying the Past to the Future: Interpreting Cultural History for Young Audiences" was held at the 1993 annual conference of the National Association of Interpretation. Finally, a publications program is being developed which will summarize and rewrite technical reports

for the general public. The first in the series titled, *Beneath These Waters. Archeological and Historical Studies of 11,500 Years Along the Savannah River,* chronicles 15 years of archeological and historical research in the Richard B. Russell Multiple Resource Area. The publication received an Achievement Award in the International Technical Publications Competition by the Atlanta Chapter of the Society for Technical Communication.

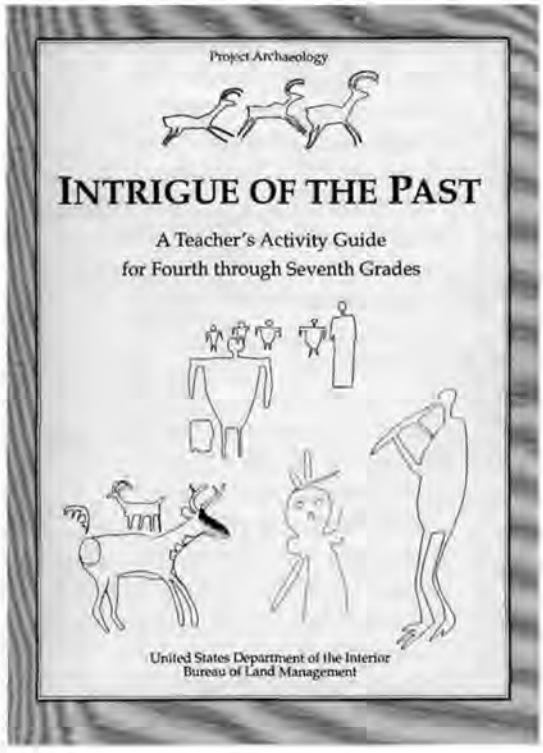
Adventures in the Past

The Bureau of Land Management (BLM) created the Adventures in the Past program in 1989. As its goals, the program increases the public's enjoyment of cultural resources and encourages wise stewardship of cultural resources.

The Heritage Education Program (HEP) resulted from the Adventure's initiative in 1991 under the coordination of the Imagination Team, an interdisciplinary team of educators and archeologists centered at the Anasazi Heritage Center in Dolores, Colorado. The long-term strategy of HEP is to strengthen children's sense of personal responsibility for the stewardship of America's cultural heritage. Educational experiences and teaching resources are offered for the school setting as well as for "outdoor classrooms," museums and other informal learning environments. "The projects work to capture the attention of young people at an early age, sustain their attention through hands-on activities, and enhance their skills through hands-on learning experiences." (Heath 1994:16).

HEP involves two major initiatives, Project Archaeology and state partnership projects. Project Archaeology is a program for teachers and youth group leaders providing hands-on activities to teach children about the science of archeology and about stewardship of cultural resources and which supports the existing elementary and secondary school curriculum. The program includes three components: educational materials, a delivery system of teacher training workshops, and on-going teacher support.

Intrigue of the Past: A Teacher's Activity Guide for Fourth through Seventh Grades is the national text. The text won the 1992 Environmental Education Award at the Utah Society for Environmental Education's conference. Under this program archeology resource guides tied to local curriculum and local cultural resources are provided to teachers through a series of workshops. The initiative piloted by the Utah State Office and now being developed by other states, reaches 10,000 -12,000 students annually in Utah alone (Smith, et.al. 1993).



BLM sponsors a teacher institute with the Utah Museum of Natural History. The workshop includes teachers and social studies curriculum directors from Utah's 40 school districts. Rural school districts are targeted because there is where most of the threatened cultural resources are located. The archeology teacher institute is a means to establish a network of trained teachers statewide and to form a base for continued teacher involvement (Smith 1991).

The state partnership program allows local field offices to compete for national funds to produce educational projects. A good example is the Spain'92 Foundation celebrations. This project involved partnerships with the Government of Spain, the Universities of Arizona and New Mexico, the Arizona Humanities Council, the Art Students League of Denver, and the FWS, NPS and many others.

Windows On the Past

The Forest Service Windows On the Past national initiative was originally defined in a servicewide National Recreation Strategy to improve visitor services. The strategy was based on the growing public demand for cultural resource interpretation and the need to provide recreational and educational experiences for visitors. A vital component of this strategy is to provide opportunities for the public to participate in the heritage resource program. These opportunities include volunteerism, partnerships, and cost-share programs. A variety of projects ensued including brochures, exhibits, interpretive trails, site tours, and field schools. The most exciting outgrowth was the Passport in Time program.

Passport In Time has grown from a pilot project in 1988 to an established, national program that has offered over 350 projects to over 3,000 volunteers. It is devoted

to research and heritage preservation, while providing volunteers with a "sense of ownership and a vested interest in the care of heritage resources (Osborne 1994:16). In 1994 volunteers were provided opportunities on some 85 projects (Schamel and Schaefer 1994). The projects included test excavations, wilderness inventories, restoration of lookout towers, architectural documentation, and recording rock art.

Legacy

In 1991 the Department of Defense (DoD) launched the Legacy Resource Management Program, a program that called for the improvement of natural and cultural resource management activities with the department (DoD 1993). Many of the Legacy cultural resource projects include public education and outreach activities and products. Over 500 demonstration projects were funded during FY91-93 and produced resource inventories, management-restoration-rehabilitation projects, brochures, reports, videotapes, and public participation and awareness programs. Through 1993, about $90 million had been used for the identification, evaluation, protection, use, and enhancement of natural and cultural resources on military lands or lands affected by military activities.

Noteworthy Outreach Programs

Classroom education is the fastest growing activity in federal agency programs. The BLM heritage education program is notable for its leadership in this area. Other agencies are also working in this direction. NPS holds workshops for Alaska teachers, and the Forest Service sponsors the Ketchikan Teachers' Institute, which provides teachers with an overview of local native cultures and ways to bring multicultural education to their classrooms. The Department of Energy (DOE) sponsors a teacher fellowship program in Nevada providing local high school science teachers with the opportunity to work with professional archeologists.

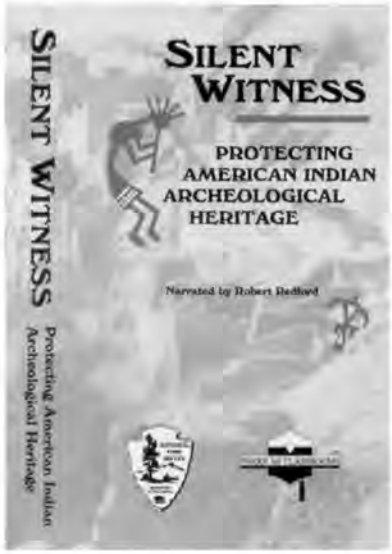
Native American education is receiving some attention as well. The DOE-Hanford facility actively works with students on nearby reservations. BLM works closely with the Santa Fe Indian School on developing interactive computer programs on the prehistory of the Tewa Pueblo and Hupobi Pueblo. A multi-agency partnership from states in the Four Corners area with endorsement from the Arizona Inter-Tribal Council, Hopi, Indian Pueblo Council in New Mexico, and the Gila River Indian Community are producing a video series designed to improve public perception of the value of prehistoric and historic cultural resources, archeology, and the accomplishments of ancient Native Americans which will be aired on PBS.

Volunteerism is both popular and contributes significant labor to heritage programs. The BLM cultural heritage program received 13% of all volunteer time donated to the agency. Between 1991 and 1993 the effort equaled approximately 450,000 hours equivalent to roughly $6 million in contributed time. NPS volunteers in archeological services between 1991 and 1993 equaled roughly 9,000 hours totalling about $1 million in contributed time. The Arizona Site Steward program is frequently used by agencies for site monitoring and land management activities (Hoffman 1991). Avocational archeology groups are participating in agency programs, but there is little data on the nature and success of these activities. There is enormous potential to improve site protection efforts by seeking the assistance of statewide avocational archeology groups (Davis 1990,1991).

Video presentations have enormous potential for presenting sophisticated messages to a variety of target audiences and have become popular interpretive media. The BLM in Montana assisted New Dominion Pictures with filming *Ice Age Crossings*, a Learning Channel archeology series presentation. NPS helped produce a video for television in the Washington metro area about 19th-century African American sites discovered at Manassas National Battlefield Park. The DOE-Hanford facility participated in development of videos emphasizing the importance of respecting Native American cultural interests and protecting archeological sites for public television viewing in public schools.

Another fascinating media development is the *ZiNj* children's magazine in partnership with the BLM, FS, NPS, National Park Foundation, and the State of Utah. Stories feature archeological topics and federal agency programs encouraging youngsters to visit public lands and to volunteer on scientific projects. ZiNj will be syndicated on television soon in Seattle and Salt Lake City with plans for national programming.

Public outreach is becoming a standard requirement in cultural resource management projects. The General Services Administration produces brochures and other materials as a routine component of data recovery programs. The Federal Energy Regulatory Commission often requires licensees to prepare public programs about archeological sites in the project area by publishing arti-



cles in popular and technical journals for distribution to Native Americans and the general public. The Bureau of Reclamation requires contractors to sponsor "open-houses" and other programming as part of site evaluation contracts.

Statewide archeology events are found in over 30 states across the country. Between 1983 and 1992, 22 states held archeology weeks; 5 had activities for either a day or a weekend (Greengrass 1993: 6-7). Attendance figures reported from 14 states in 1991 ranged from over 300 to 122,000 people (Greengrass 1993: 9). Federal agencies with other partners have a prominent role in organizing and sponsoring these events. Federal contributions include funds, in-kind time, and technical services. More importantly, federal agency support and involvement is critical in rural areas that are difficult to reach during a state's activities.

Conclusion

As pointed out by Smith and Ehrenhard (1991: 104):

> While there are a number of excellent programs being used to disseminate archeological information through public school systems, they have evolved with little coordination and direction.

Fortunately, a national program is not far off in the horizon. At the most recent "Save the Past for the Future" Working Conference, participants in the education workshop recognized a need in this direction and recommended the following: (1) develop a national clearinghouse for the collection and dissemination of information on archeological resource materials and programs, (2) develop minimum standards for education programs, (3) conduct studies to determine the effectiveness of programs and target groups, particularly private landowners, and (4) strengthen coordination with national leaders in education agencies. The IWG, or a group similar to it, can bring these items to the forefront of their agenda and begin making progress with securing funding.

Our most supportive and informed partners, Native Americans and avocationals, need to be actively engaged in agency programs. Tribes are actively developing programs to better manage heritage resources on tribal and ancestral lands. They have a genuine interest in how Native Americans are portrayed to the general public. We need to join them as participating partners in our educational efforts. Avocational archeology organizations also provide an immediate and energetic source of support and assistance for heritage programs. In turn, avocational societies need certification and training programs to fully participate in archeological activities. Communication must be expanded between avocationals and professionals to create a better understanding of each others' expectations.

The success and variety of education and public outreach in the federal archeology program demonstrates the vigor and personal commitment of agency archeologists to promote archeological stewardship. These efforts frequently are performed under funding constraints and constant challenges to maintain a functional heritage management program. The future is no less challenging, with reorganization and restructuring in the federal government and the redefinition of program functions. Strong and long-term partnerships between agencies and with other organizations, Native Americans, and the public must be maintained to sustain the current level of educational and outreach programming.

Note

* Federal agency information was obtained from the 1991-1993 questionnaire for the Secretary's Report to Congress (SRC). The SRC is required by the 1974 Archeological and Historic Preservation Act (Moss-Bennett Act) and the 1979 Archeological Resources Protection Act, as amended. The National Park Service, Archeological Assistance Division is responsible for reporting this information on behalf of the Secretary of the Interior. Information presented in this article was contributed by many agency archeologists, but the author takes full responsibility for its content.

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