



September 1996



"In open country, a high-power total station on an elevated point could potentially record points within a 50 km² circular area, with even the farthest points not exceeding an error of about 2 cm. Total stations can also work efficiently and accurately on a very local scale, such as profiling excavation features and recording three-dimensional artifact locations..."

TABLE OF CONTENTS

[2. Editor's Corner](#)

[3. Letters to the Editor](#)

[4. News from the Public Education Committee](#)

[5. Public Relations: It's More than "No Comment"](#)

[6. The Archaeology of Contemporary Mass Graves](#)

[7. Archaeopolitics](#)

[8. Briefings](#)

[9. Nashville and the 62nd Annual Meeting: A Sneak Preview](#)

[10. Systematic Regional Survey in Southeastern Shandong Province, China](#)

[11. COSWA Corner](#)

[12. Conference on "Renewing our National Archaeological Program"](#)

[13. Archaeology Projects at the National Endowment for the Humanities: Past, Present, and Future](#)

[14. Student Affairs Committee](#)

[15. Writing Symposium Abstracts](#)

[16. Interface--Total Stations in Archaeology](#)

[17. Working Together--The Integration of Scientific and Traditional Knowledge on Leech Lake Reservation, Cass Lake, Minnesota](#)

[18. Insights--Using National and State Databases to Demonstrate Value and Efficiency of Federal Archaeology Programs in the United States](#)

[19. CRM to be Highlighted at the 1997 Annual Meeting](#)

[20. News and Notes](#)

[21. Positions Open](#)

[22. Calendar](#)

The *SAA Bulletin* (ISSN 0741-5672) is published five times a year (January, March, June, September, and November) and is edited by [Mark Aldenderfer](#), with editorial assistance from Karen Doehner and Dirk Brandts. Please send all materials to the the editor as follows: December 1 (January), February 1 (March), April 1 (May), August 1 (September), and October 1 (November); sent to *SAA Bulletin*, Dept. of Anthropology, UC-Santa Barbara, Santa Barbara, CA 93106-3210. For further information, please call (805) 893-8604, (805) 893-8152, fax(805)893-8707, or email saanews@sscf.ucsb.edu. Contributors are strongly encouraged to submit manuscripts via email or by disk using any word processing software. Advertising and placement ads should be sent to SAA headquarters, 900 Second St. NE #12, Washington, D.C. 20002, (202) 789-8200. Associate Editor for the Insights column is [Kevin Pape](#), (513) 287-7700, and for the Working Together column, Kurt Dongoske, (602) 734-2441. Inquiries about these columns and submissions should be addressed directly to them. The *SAA Bulletin* is provided free to members and institutional subscribers to *American Antiquity* and *Latin American Antiquity* worldwide. *SAA Bulletin* can be found in [gopher at alishaw.ucsb.edu](#), and on WWW at <http://www.sscf.ucsb.edu/SAABulletin>. Items published reflect the views of the authors and publication does not imply SAA endorsement.

Editor's Corner

A few days ago, someone browsing the Web version of the *SAA Bulletin* (<http://www.sscf.ucsb.edu/SAABulletin/>) signed the electronic guestbook with the following comment: "My husband and I do a lot of searching for arrowheads and Indian artifacts. We have much success in an area he hunts in every year. We would like to find out if there is any other place to search. . . now I know you probably hate people like us but where would you be *without* us?"



Comments like this illustrate that, despite the successful efforts of organizations like SAA, public education should be one of our discipline's top priorities. On the bright side, many programs and organizations are employing new cost-effective ways to reach out to the public, such as the World Wide Web or similar electronic means of dissemination. However, even while the public is increasingly exposed to archaeology and the value of preserving our archaeological heritage, we are confronted with institutional, state, and federal budgetary concerns that jeopardize our efforts.

This issue of the *Bulletin* appropriately features several articles devoted to public education and preservation. For example, both the Public Education and the Public Relations Committees report on their recent activities, while Lipe and Redman's report on "Renewing Our National Archaeological Program" discusses a variety of issues related to public education and archaeological preservation.

As these articles point out, one of the most successful forms of public education is personal contact; the individual quoted above should now understand why collecting arrowheads endangers our collective heritage.

Letters to the Editor



Recently, the use of accelerator mass spectrometry (AMS) dating has created a minor revolution in archaeology, particularly for dating the human use and manipulation of plant foods. It is not my intention to dispute the concrete aspects of this methodology, but rather to call my colleagues' attention to something that seems very dangerous and that, if not clarified from the start, could give rise to serious problems in the future. I am referring to the practice of relying solely on absolute dates, whatever the specific method employed, to fix in time a historical event. In the case of the use of AMS dating, a revision of the previously established antiquity of a series of cultivated plants in the New World has been postulated based on new AMS dates (see J. F. Gayle, 1994, *Are the First American Farmers Getting Younger?* *Current Anthropology* 35:305-309), while similar changes to our understanding of the prehistory of plant use in the Old World have also occurred (see P. Rowley-Conwy, 1995, *Making First Farmers Younger: The West European Evidence.* *Current Anthropology* 36:346-353).

I absolutely support, as I believe every person of science must, not only the utility but also the necessity of applying new technologies that are continuously being developed. Without such technology science cannot advance. But archaeologists cannot forget the basic scientific norms of the discipline that should govern their conduct. An important aspect is that a new scientific method should be used when possible but only within the parameters of archaeology and not as an end in itself.

In the question of dating methods, such as AMS, results cannot be automatically accepted as valid, and if these results do not agree with those obtained by another methodology, it cannot be assumed *sic et simpliciter* that the previous work was mistaken without first completing a careful analysis of the facts. The apparent advantages of AMS dating have caused us to forget the framework within which that methodology should be considered. When this happens, it becomes possible to declare that "The single most important development in the study of early agriculture in recent years has been the advent of the radiocarbon accelerator. Individual bones and plant macrofossils may be dated, and *therefore stratigraphic associations need no longer be taken on trust.*" (P. Rowley-Conwy, 1995, my emphasis). If this were an isolated sentence it would hardly merit our attention. But I have heard the same said by several colleagues. This kind of statement is worrisome because it ignores all the fundamental principles of archaeology. The essential value of relative chronology, context, and within context, associations, which are so important to the archaeologist, cannot be ignored. As Wheeler (1961, *Arqueología de Campo*. Fondo de Cultura Económica: Mexico City, p. 51) asserted, "A chronologist is not an archaeologist." Archaeologists are much more than that; their responsibility is complete historical reconstruction.

Generalizations are always dangerous, and the advantages that the AMS method offers should not lead to the reevaluation of every relative temporal sequence that has been established with respect to the use and cultivation of plants. The problem, in my judgment, must be seen from another angle. Those sites that have been problematic in terms of establishing stratigraphy as well as those in which associations have not been clear enough must be distinguished from those in which the associations are strong and the data are reliable. The former should be submitted (if it is possible to do so) to careful examination. It is not enough to date a sample and, if the date does not agree with what was obtained earlier, to discount all previous work. There is no doubt that a discrepancy in dating, especially if it is very large, should send out an alarm, but one must also examine the whole context, comparing it with the assemblage of which it forms a part, if possible, extending the excavation, and if the discrepancy is confirmed, pointing out the errors and proposing a revision. But we must always be aware that if archaeological material has been well excavated, this material should be described by at least three variable dimensions: space, time, and form (J. Deetz, 1967, *Invitation to Archaeology*. Natural

History Press: New York, p. 9). Time is only one of the variables. And we must not forget what D. P. Dymond (1974, *Archeology and History: A Plea for Reconciliation*. Thames and Hudson: London, p. 31) saw with great clarity: that an object, in this case the remains of a plant, that is found in an archaeological context has at least three chronologies: a date of origin or creation; another date related to when the object was used; and, finally, a third date that records its deposition at the location where the archaeologist finds it. In order to understand this third date we must carefully verify if the object was deposited by accident or on purpose.

If a site has been well studied and all its data are in agreement, and there are no discrepancies with contemporary data from other sites, then a reevaluation is unnecessary. Neither does it matter what type of sample was used to date a specific context, as long as it has been done correctly. That date is valid for the whole assemblage.

The other facet of this issue, which for me is at least as important, is the way in which many archaeologists have employed the ^{14}C method (and, clearly, the problem is the same for all dating techniques). A critical problem is that some archaeologists have removed samples without the necessary control, including the use of assemblages that were not excavated (e.g., F. Engel, 1966, *Geo-grafia Humana Prehistorica y Agricultura Precolombina de la Quebrada de Chilca*. Universidad Agraria: Lima; H. Trimborn, 1979, *El Reino de Lambayeque en el Antiguo Peru*. Anthropos Institut: St. Agustin, Peru). In these cases, the resulting dates have been regarded as sufficient to define a "cultural affiliation" or a "cultural state." A deterministic value attributed to the date of a sample was automatically used to define an alleged cultural context without first investigating whether all of the components were in agreement.

I am in no position to judge the AMS method and establish up to what point it provides dates that correspond with those provided by ^{14}C . So, as the specialists have indicated to us, in order to see the comparative effects with other methods that give us dates based on an absolute calendar, we must submit the results of ^{14}C testing to certain "calibrations," which will tell us what protocol to use with dates obtained by AMS.

J. H. Rowe, referring to radiocarbon dates, wrote a great truth that should not be forgotten and is valid for using dating methods: "...consistency among...measurements can only be determined with reference to archaeological associations and the system of relative chronology which has been set up for the area." He also notes that "to compare measurements made on samples from different associations it is necessary to refer them to a system of relative chronology" (J. H. Rowe, 1966, *An Interpretation of Radiocarbon Measurements on Archaeological Samples from Peru*. In *Proceedings of the Sixth International Conference, Radiocarbon and Tritium Dating*, pp.187-198. U.S. Atomic Energy Commission: Oak Ridge).

At this moment there are several questionable assemblages in the Americas, and their botanical components have undergone or are at present undergoing dating using the AMS method. I want to make it very clear that it has not been my intention here to refer to any one of them in particular. Neither is the spirit of this paper a polemic one. Nothing could be further from my intentions. I only wish to put forth this concern in order to remind us that archaeology is a science that has very clear rules and methodologies that are sometimes forgotten in our enthusiasm for new and exciting scientific advances. We must not forget that if we want to practice a scientific archaeology we must understand that methods of dating are in the service of our science and not the other way around. In the final analysis, only the archaeologist must judge whether the results are valid. Woolley always reminded us that the value of an exact chronology consists in its ability to put the objects we excavate--objects that a human community has left to us--in their proper relation to the world of which they are a part in such a way that isolated evidence may find its place in the ordered history of humanity (L. Woolley, 1957. *Il Mestiere Dell'archeologo*. Giulio Einaudi Editore: Torino, Italy, p. 167).

Duccio Bonavia
Laboratorio de Prehistoria
Departamento de Biologia
Universidad Peruana Cayetano Heredia
Apartado 4314
Lima 100, Peru

News from the Public Education Committee

Teresa Hoffman

Public Education Manager Hired by SAA -- Because of the increasing interest on the part of the education community and the general public in archaeology, as well as SAA members' concern that these constituencies get the best information available about the field, last March SAA hired Dorothy Schlotthauer Krass to manage the society's public education program at the Washington, D.C., office. The position is supported by short-term grants from the Bureau of Reclamation, Bureau of Land Management, National Park Service, and the National Geographic Society. Krass has begun working closely with many constituents across the country, providing information on the resources and publications available through SAA. This spring, faced with an avalanche of requests for the booklet *Archaeology and You*, the education program managed to send out more than 10,000 copies to groups and individuals, ranging from school teachers and college professors who have selected them for introductory anthropology and archaeology courses, to park rangers who use them in education programs and for training summer employees, to state historic preservation office personnel who find them instrumental in explaining why archaeologists do not want to dig every site! The publication is a joint effort of SAA, in large part through the Public Education Committee; the U.S. Department of the Interior, particularly the Bureau of Reclamation and the National Park Service; and the National Geographic Society. Each SAA member also received a copy last spring, and additional copies are available for the cost of shipping and handling by emailing public_edu@saa.org.

State Network Pilot Project Underway in Pennsylvania -- In late 1995 SAA requested proposals for developing a pilot project to help define the role of a state coordinator for archaeology education. The Bureau for Historic Preservation of the Pennsylvania Historical and Museum Commission, the successful candidate, has completed the first phase: organizing and implementing a facilitators' training workshop, which launched "Project Archaeology" (the core component of the Bureau of Land Management's "Intrigue of the Past" program) in Pennsylvania. A group of 30 teachers, archaeologists, and museum educators spent two intense days at the workshop in preparation for presenting at least nine regional teacher workshops across the state in the coming year. A long-distance interactive television project, which will be based on the "Project Archaeology" curriculum, is also being developed in partnership with the Pennsylvania State Museum. For more information on the network pilot project, contact Beverly Mitchum Chiarulli at (412) 527-5585 or email bev@chert.pgh.pa.us.

Archaeology and Public Education Newsletter -- Among the popular publications SAA offers as a benefit to members on request is *Archaeology and Public Education*. Published three times a year, this newsletter features articles and lesson plans; the latest on training opportunities, museums, archaeological parks, and educational resources; and news and commentary about classroom and public archaeology issues that are primarily oriented to precollegiate audiences. The newsletter reflects the conviction that archaeology can serve a wide range of public purposes: promoting cultural awareness and sensitivity; encouraging stewardship for archaeological resources; and promoting critical thinking, cooperative learning, problem solving, and citizenship skills. To request a free subscription to A&PE, members should contact the SAA office or email public_edu@saa.org. Nonmembers can subscribe for \$10 per year.

Breckenridge Report Available -- The 1994 SAA-sponsored conference, "Save the Past for the Future II," brought together people from many backgrounds to provide a national agenda for protecting the archaeological record. The education workshop focused on ways to increase and improve the public's awareness of archaeological issues. Workshop results were recently compiled by Public Education Committee member George Smith and published as *Save the Past for the Future II: Education Workshop Action Items and*

Recommendations. Among the topics included in this final report are how to expand and improve systems for exchanging ideas and information in archaeology education; how to expand, evaluate, display, and catalog current archaeology education materials exhibited at professional meetings; finding ways to strengthen the quality and quantity of precollegiate archaeology education resources by evaluating materials and encouraging closer communication and collaboration among educators and archaeologists; and how to increase education, training, and involvement of professional archaeologists in a wide range of archaeology education activities. The report, which recommends priorities and procedures, including details on time frames, estimated costs, funding sources, participation, and coordination, is supplemental to the committee's Strategic Plan (see below) and is available for a shipping and handling fee of \$5 from SAA's headquarters (public_edu@saa.org).

Public Education on the Web -- The Public Education Committee is now on-line at the SAA Web site (<http://www.saa.org>). The education page provides access to the *Archaeology and Public Education* newsletter, the committee's Strategic Plan, and a brief introduction to the committee's activities. Coming soon to the education page will be *Guidelines for the Evaluation of Archaeology Education Materials*, *Teaching Archaeology: A Sampler for Grades 3 to 12*, and *Classroom Sources for Archaeology Education: A Resource Guide*.

For more information on SAA Public Education Committee activities, contact Edward Friedman, Bureau of Reclamation, PO Box 25007, D-5300, Denver, CO 80225, (303) 236-1061 ext. 239, email efriedman@do.usbr.gov. Or ask the SAA office for a copy of our new brochure about education resources, *Teaching Kids through Archaeology* (email public_edu@saa.org).

Compiled by Teresa L. Hoffman, Archaeological Consulting Services, Tempe, Ariz., with contributions from Beverly Mitchum Chiarulli, Pennsylvania Historical and Museum Commission, and Dorothy Krass, SAA public education manager.

LAST PAGE

TABLE OF CONTENTS

NEXT PAGE

Public Relations: It's More than "No Comment"

Elin Danien

Almost everyone has a pet horror story about the press and its heavy-handed treatment of a sensitive archaeological topic. After all, the results of a field season cannot be reduced to terms of dollars and cents, and unknowledgeable reporters often misconstrue complex concepts. In the past, to avoid being mangled by the press, many archaeologists adopted an attitude analogous to building walls, digging a moat, and hauling up the drawbridge at the first hint of a reporter's approach.

Yesterday, we could do that. And many of us did. The public and the press were not important considerations when doing archaeology. Today, however, bringing a project from the planning stage to completion requires passage through an obstacle course rife with political, bureaucratic, and financial barriers. Strong research proposals are not enough. A positive public and political view of archaeology can help make the difference between being able to test a theory or just talk about it.

The press is the vehicle through which the majority of people get their information and form their opinions about archaeology. Newspapers, popular magazines, radio, and television are the media that reach (and teach) millions. For many, archaeology is completely outside their spheres of interest, but what legislators and their constituents hear, read, and believe directly influences the writing of local ordinances and national laws. Through the practice of good public relations, we can develop a public that sees archaeology as relevant, and that is more understanding of the goals of archaeology and willing to support them. Public relations is an important element in an overall strategy that can help build a ground swell against looting and in support of preserving and protecting archaeological sites.

The SAA Public Relations Committee has been actively engaged in efforts to improve the relationship between archaeologists and the press. For the past six years, the Press Office has been a standard part of the SAA annual meetings, and Press Officer Toni Moore has successfully arranged for positive press coverage and a more visible press presence. The committee workshops on how to deal with the press have been well attended and receive consistently favorable comments. The Gene S. Stuart Award, now three years old, annually honors reporters who present archaeology to the public in an intelligent and interesting manner.

Our next venture is to establish a broad network of archaeologists on whom we can call when reporters need information. By establishing such a network, reachable through a single phone call to the SAA Washington office, we will make life a lot easier for reporters, associate the SAA more securely in their minds as the organization that represents Americanist archaeology, and, more importantly, help ensure that accurate information is relayed to the public. In our next column, Renata Woly nec will explain how we hope to implement this network, and how you can participate.

Public relations involves more than a press release or answering a phone call from a reporter. It can include having coffee with a university trustee or speaking to the local Chamber of Commerce. It may mean taking the time to write a letter to the editor. It definitely includes changing your vocabulary when you speak to nonprofessionals. It can take time and effort that you may feel would be better spent elsewhere. Through this column, we hope to convince you otherwise, and encourage you to pursue public relations more advantageously in your daily professional lives. Members of the committee, professionals in different aspects of the field, will offer pointers, suggest techniques, and discuss potential problems and how to defuse them. We hope you will send us your questions; we will try to answer them in the column in ways that are helpful to you and to others who may have similar problems.

We want to hear from you, and the electronic world makes that easy. Email me at edanien@sas.upenn.edu or fax (215) 321-7413.

Elin Danien is the chair of the Public Relations Committee.

LAST PAGE

TABLE OF CONTENTS

NEXT PAGE

The Archaeology of Contemporary Mass Graves

Melissa Conner

- [Introduction](#)
- [Phase 1: Initial Mapping and Documentation](#)
- [Phase 2: Recovery of Surface Skeletons](#)
- [Phase 3: Excavation of Mass Grave 1](#)

Introduction

Archaeologists and forensic investigators overlap in their need to reconstruct past events from the material culture and physical remains at a site, or "scene." The Physicians for Human Rights (PHR), a Boston-based nonprofit group, conducts forensic investigations for the United Nations and occasionally requests the assistance of professional archaeologists in its investigations. The National Park Service's Midwest Archeological Center has been privileged to assist PHR in its investigations for the United Nations in Croatia, El Salvador, and most recently Rwanda.

The violence in Rwanda began when President Juvenal Habyarimana of Rwanda was killed in an airplane crash on April 6, 1994. Within four months, an estimated half a million people were dead. By September 1994 the United Nations established the International Tribunal for Rwanda (ITR) to investigate the claims that these killings were genocide, rather than the result of civil war as maintained by the former government. The UN's ITR is actively investigating these accusations at the Kibuye Catholic Church and the Home St. Jean, located in central eastern Rwanda. The Home St. Jean is a complex adjacent to the church that includes a priest's house, a small hostel, workshops, and classrooms. It is estimated that 4,000-6,000 people were killed at the church and the Home St. Jean in April 1994.

The Midwest Archeological Center sent a team of three archaeologists, Douglas Scott, Ralph Hartley, and Melissa Connor, to assist in investigations at the massacre site, joining a larger team put together by PHR and ITR. The team was headed by William Hagland (ITR), a forensic anthropologist, and Robert Kirshner (PHR), a forensic pathologist. Hagland had divided the mission into three phases, all of which incorporated archaeological techniques to varying degrees: (1) mapping and initial documentation of the site, (2) recovery and analysis of the skeletal remains on the surface of the site, and (3) excavation and testing of the mass graves at the site.



Phase 1: Initial Mapping and Documentation

The archaeologists from the Midwest Archeological Center arrived in Rwanda in mid-December 1995 to begin mapping and initial site documentation. At this point, they were the only team members on site. The area of the Kibuye Catholic Church and the Home St. Jean was mapped using a coordinate system based on the 1,000-m Universal Transverse Mercator (UTM) grid, World Geodetic System 1984 Ellipsoid (WGS84). The UTM points for the initial datum were derived from the Belgium GS3 GEO 1:50,000 topographic map of Kibuye. This was checked using a Magellan Trailblazer GPS. The site was mapped using a Sokkia Set 4B total station. Mapping data were collected in an SDR33 data collector that electronically captured the horizontal angle, vertical angle, slope distance, and elevation for each reading. It also converted the raw data into coordinate data, which would be the approximate UTM of the point. These data were downloaded into a computerized mapping program (Sokkia Map and Design V.6). Initial plotting, feature code processing, and contour computation were completed in this program, and the data were then transferred to AutoCAD Light for final editing and processing.

Ralph Hartley acted as team photographer and photographed the exteriors of all 23 buildings on the site area. In addition, he photographed any potential evidence remaining in the interiors of the buildings.

Phase 2: Recovery of Surface Skeletons

In early January 1996 six forensic physical anthropologists arrived. In an earlier trip to the site, William Haglund had identified the location of a number of surface skeletons and conducted an initial analysis of the material. The archaeologists had also walked transects around the site to determine site boundaries. In the course of this and the mapping of the site, they had flagged all skeletons encountered on the surface of the site. With the arrival of the forensic anthropologists, the skeletons were assigned a number, mapped, photographed in place, and carefully removed. The physical anthropologists set up a field laboratory and analyzed the skeletal remains for gender, age, race, and trauma.

Phase 3: Excavation of Mass Grave 1

The site area contained a minimum of six potential mass graves. The largest had been tested in October 1995 by Haglund and the ITR's senior scientific consultant, Andrew Thomsen. They had used local labor to hand-excavate two perpendicular trenches across the grave area and were able to estimate the size of the grave and the depth of the bodies. In mid-January 1996 the team began to open the grave. A mechanical excavator with a backhoe attachment was used to remove as much of the overburden as possible. When remains were encountered, shovels and entrenching tools were used to remove further overburden. Final delineation of the remains were accomplished using trowels and whisk brooms, and using hands to separate the interface between adjacent remains.

When a body was ready for removal, it was assigned a case number from a master list, which included a brief description of the remains, associated evidence, and possible commingling. Remains were frequently too commingled to be easily separated in the field. When this occurred, the remains were bagged together, case number(s) assigned, and a notation to this effect made in the master log. Photographs were taken according to the condition of the remains, and notes made on how much of the body was in its original position when it was possible to remove it. Crania were mapped as often as possible. Initially, all body outlines were mapped; as time became constrained, however, this was done for a lower percentage of the bodies to show generally how they lay in a specific area.

Four forensic pathologists and two autopsy technicians arrived in late January. All remains removed from the grave received a postmortem examination conducted by a team consisting of a forensic pathologist and a physical anthropologist. Remains were examined to determine sex, age, patterns of trauma, and cause of death.

The results of the examinations were entered into a database that is still under analysis. The conclusions of the excavations and examinations cannot be shared due to the ongoing medicolegal investigation. However, several hundred individuals were removed from the grave, making this one of the largest exhumations ever conducted for human rights investigations.

In December 1995 the International Tribunal for Rwanda issued indictments for eight people accused of genocide at four sites, including the Kibuye Catholic Church and Home St. Jean. Further indictments are pending. In late January relatives and friends of potential victims were allowed to view select personal items from the excavations, in the hope they might recognize something that could lead to the identification of a body. DNA testing is planned to match the victims with potential relatives. The Catholic Church is no longer used as a church and the prefecture of Kibuye is planning a memorial there to recognize those who died at the Kibuye Catholic Church and the Home St. Jean.

Meanwhile, teams of lawyers and investigators from the Tribunal continue working throughout Rwanda. Additional excavations are planned, and again, a professional archaeologist will be part of the team. The use of archaeological techniques and technology to meticulously document the collection of forensic data is an important addition to forensic investigations. The tendency of mainstream archaeology to interpret the findings in terms of cultural behavior is set aside in these cases in favor of the more circumspect medicolegal statement required for legal actions. Sound archaeological documentation adds materially in making a strong case both in the court of the ITR and the court of public opinion.

Melissa Connor is at the Midwest Archeological Center, National Park Service.

[To Top of Page](#)

[LAST PAGE](#)

[TABLE OF CONTENTS](#)

[NEXT PAGE](#)

Archaeopolitics

Donald Forsyth Craib



Contents:

- [Public Service Award presented to congressman in Capitol Hill ceremony](#)
- [Lobbying Congress](#)
- [SAA represented at BLM celebration](#)

Public Service Award presented to congressman in Capitol Hill ceremony. SAA President William Lipe, Executive Board member Donna Seifert, and Government Affairs Committee chair Judy Bense awarded Rep. Bill Richardson (D-N.M.) SAA's 1996 Public Service award during a ceremony in Richardson's Capitol Hill office on April 30, 1996. Richardson is the ranking minority member on the House Resources Committee Subcommittee on National Parks, Forests, and Lands.

In presenting the award Lipe stated that "the SAA is pleased to present its 1996 Public Service Award to you in recognition of your efforts in the sponsorship and passage of the Chacoan Outliers Protection Act of 1995. Without your commitment and perseverance over three Congresses, this important piece of legislation would not have been enacted into law." Lipe commented further that "the archaeological record of Chaco Canyon is part of the cultural heritage of all Americans, and as a result of your dedication these sites will now receive the protection and preservation that they deserve."

The Chacoan Outliers Act added an additional 5,519 acres to the Chaco Culture Archeological Protection Site System, preserving these lands for future generations and ensuring that these significant archaeological sites are protected from further looting and degradation.



Left to right: Donna Seifert, Bill Lipe, Rep. Bill Richardson, Judy Bense.

[To Top of Page](#)

Lobbying Congress. Bill Lipe, Donna Seifert, Judy Bense, along with Archaeological Institute of America President Steve Dyson and Society of Historical Archaeology Government Affairs Committee chair Bonnie McEwan spent a week in Washington, D.C., in late April lobbying members of Congress and their staffs and meeting with federal officials to discuss issues of concern to the archaeological community.

The National Humanities Alliance arranged a meeting for Lipe and Seifert to meet with the chair of the National Endowment of the Humanities, Sheldon Hackney, to discuss concern about the agency's reduction in grant opportunities for archaeological research. John Yellen (archaeology program director--National Science Foundation) briefed the group on the current status of funding for archaeology within his program.

Lipe, Seifert, and Bense also met with Rep. George Nethercutt (R-Wash.), who sits on the House Appropriations Committee Subcommittee on the Interior, to discuss funding levels for various archaeological programs within the subcommittee's jurisdiction, including funding levels for the Forest Service, National Park Service, Bureau of Land Management, Fish and Wildlife Service, Historic Preservation Fund, and the Advisory Council on Historic Preservation.

Following up on SAA and SHA's joint testimony presented before the House Resources Committee Subcommittee on National Parks, Forests, and Lands on oversight of Section 106 of the National Historic Preservation Act and reauthorization of the Advisory Council on Historic Preservation, Lipe and Seifert met with Steve Hodapp (majority subcommittee staff) to discuss issues raised during the hearing.

SAA and SHA were invited by the Federal Preservation Forum, meeting in Washington, D.C., during the week, to address its meeting and talk about potential areas of cooperation between the organizations.

Plans are already under way for next year's lobbying week on Capitol Hill. We hope to expand the number of meetings with public policy makers and also increase participation by SAA members.

SAA represented at BLM celebration. Bill Lipe was invited to attend a special event in celebration of BLM's 50th-year anniversary. The event provided him with the opportunity to meet and talk with Secretary of the Interior Bruce Babbitt, Deputy Secretary John Garamendi, and BLM Director Mike Dombeck.

If you have any questions about SAA's government affairs program or would like to learn how to become involved, please contact me at SAA headquarters, 900 Second Street, NE. #12, Washington, D.C. 20002-3557, (202) 789-8200, fax (202) 789-0284, email donald_craib@saa.org.

Donald Forsyth Craib is manager of government affairs and counsel of SAA.

[LAST PAGE](#)

[TABLE OF CONTENTS](#)

[NEXT PAGE](#)

Briefings

Tobi Brimsek

Greetings! I would like to thank everyone for the warm welcome I've received over the past few months as I have become more immersed in SAA and its programs. Having been on staff for several months, I can only look to the future with an appreciation of the challenges and opportunities facing SAA. I am delighted to have become a part of such a dynamic organization. Below, I offer some highlights of recent activities, events, and accomplishments.

We are growing. As of the close of the 1996 fiscal year (June 30, 1996), the SAA membership rolls topped 6,000. The growth rate for the past fiscal year alone reached almost eight percent. Attendance at the 61st Annual Meeting in New Orleans reached just below 3,000 (2,962), a 28 percent increase in attendance over the Minneapolis meeting!

Speaking of meetings. . . We hope to see you in Nashville, Tennessee, at the Opryland Hotel, April 26, 1997, for SAA's 62nd Annual Meeting. For a preview of this exciting meeting, please see the article from David Anderson, our Nashville program chair, and Kevin Smith, our local advisory chair, located below.

Look for the SAA--in the exhibit hall at the Geological Society of America's 108th Annual Meeting in Denver, October 28-31, 1996. If you are attending the GSA meeting, stop by the SAA display in the exhibit hall and be sure to bring your friends and colleagues.

Have you visited the SAA? Electronically, that is. More than 6,200 visitors have explored the SAA website. It is growing and changing weekly. Point your browser to <http://www.saa.org> and discover a world of information. Send us your comments and ideas as well!

A golden partnership. . . SAA has recently entered into a partnership with the Bureau of Land Management to celebrate BLM's Golden Anniversary. In a memorandum of understanding signed by President Bill Lipe, SAA has agreed to "publicize the role that BLM plays in administering the federal government's largest, most culturally diverse, and scientifically most varied and important body of prehistoric resources. SAA will also recognize. . .some of the most outstanding prehistoric properties managed by the BLM that the public can experience and enjoy."

Archaeology and You. . . has been mailed to more than 22,000 people! Written by two SAA members, George Stuart and Frank McManamon, this publication is a joint effort of the United States Department of the Interior, in particular the National Park Service and the Bureau of Reclamation; the National Geographic Society; and the Society for American Archaeology. Since the initial mailing, SAA has continued to distribute *Archaeology and You*, with more than 10,000 copies sent from the headquarters office in the first three months following publication.

Staff changes -- We welcome Rick Peterson as our new administrative coordinator, replacing Carol Hawk who has been promoted to SAA's manager of membership and marketing. Please do not hesitate to contact any SAA staff if we may be of assistance to you.

Tobi Brimsek is executive director of SAA.

Nashville and the 62nd Annual Meeting: A Sneak Preview

David G. Anderson and Kevin E. Smith

The Opryland Hotel in Nashville, Tennessee, offers participants in the Society for American Archaeology 62nd Annual Meeting a refreshing change. Gone is the traditional conference venue of a skyscraping tower of glass and steel. In its place is a spectacular low-lying homage to past and present southern architecture: the Opryland Hotel Convention Center. The world's largest convention center in a hotel--with 2,870 guest rooms and more than 600,000 square feet of meeting and exhibit space--is clearly designed for gathering. Everywhere you'll find informal and comfortable space meant for sitting, chatting, talking, and meeting.

The hotel and center, only seven minutes from the airport, include 15-story glass domes. Features of the Delta, Conservatory, and Cascades sections, the domes enclose more than 10 acres of spectacular indoor gardens, hundreds of trees, a river (with boat rides), many waterfalls (the largest 110-feet wide), and an 85-foot fountain. You may be inside but you'll always feel as if you are outdoors in these areas, which include meandering pathways, nature walks, and more. Next to and within these gardens, SAA meeting attendees will find many restaurants (ranging from an upscale food court to Beaugard's, a 20,000-square-foot antebellum style mansion with seating for 400), numerous lounges (including the Jack Daniel's Saloon for sampling a famous local product), 31 retail shops, a full exercise facility, three pools, and top-notch entertainment for all ages.

In addition, the hotel is adjacent to the Opryland musical themepark (featuring live shows, performances, and exciting rides on the weekend we'll be there), the General Jackson Showboat, the 18-hole championship Springhouse Golf Club (home of the Bellsouth Senior Classic), and seven-mile river taxi rides linking Opryland with downtown Nashville. Participants will be able to take advantage of discounted tickets for the themepark.

Of course, the Grand Ole Opry itself is also nearby and offers performances on Friday and Saturday evenings.

This world-class hotel setting, 600 miles from 50 percent of the U.S. population, offers us a chance to make the SAA 62nd Annual Meeting one of our most enjoyable in recent years--both in and outside the conference sessions.

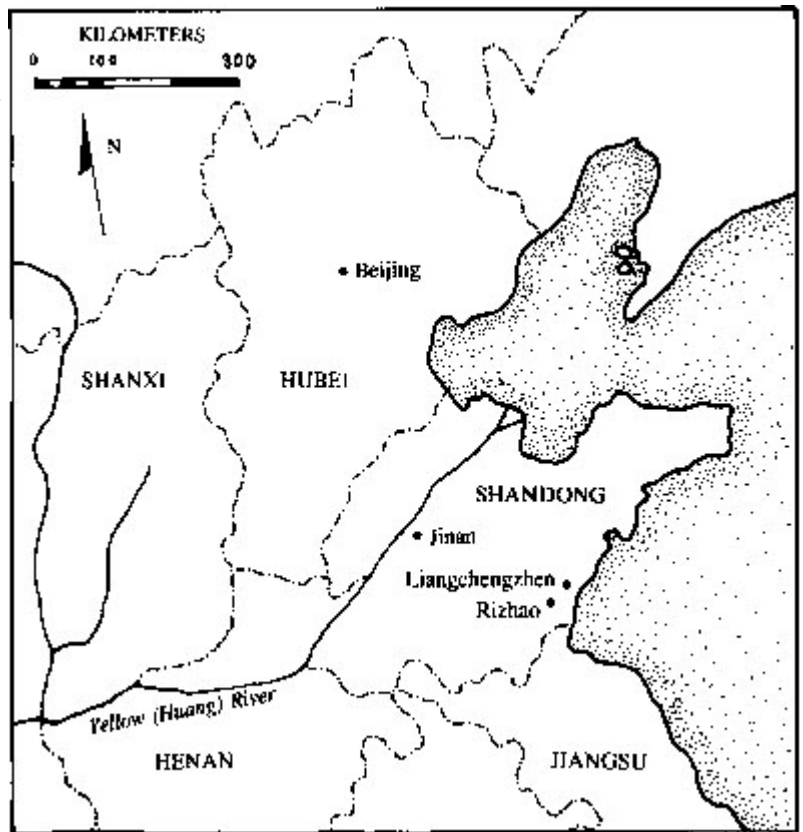
David G. Anderson of the National Park Service is chairman of the 62nd Annual Meeting and Kevin E. Smith of Middle Tennessee State University is head of the local advisory committee for the meeting.

Systematic Regional Survey in Southeastern Shandong Province, China

Anne P. Underhill, Gary M. Feinman, Linda Nicholas, and Gwen Bennett

Shandong province, located in the eastern portion of the Yellow River valley, has yielded some of the most important remains from the late Neolithic period, including large, walled sites that probably were centers of settlement hierarchies, cemeteries indicating social differentiation, and finely made craft goods such as jade objects and highly polished, thin-walled pottery. Research priorities for investigating the late Neolithic period have been to establish sequences of cultures and to document the emergence of key features of early Chinese civilization such as urbanism and bronze metallurgy. However, until recently, the unit of analysis for investigating the development of complex societies had been the individual site rather than the region.

From December 19, 1995, to January 20, 1996, we conducted the first systematic regional survey in the Yellow River valley with four colleagues from the Department of History (Archaeology Specialty) at Shandong University in Jinan city: Professors Cai Fengshu, Yu Haiguang, Luan Fengshi, and Fang Hui. Our colleagues are well known for their excavations at significant late Neolithic sites in Shandong province such as Dinggong and Yinjiacheng. We surveyed an area of approximately 35 km² in southeastern Shandong near the city of Rizhao, including an important archaeological site called Liangchengzhen (Figure 1). Here we briefly describe the goals of our pilot project, methods, and results. Underhill and Bennett plan to continue doing fieldwork in the Liangchengzhen area with the archaeologists from Shandong University. Feinman and Nicholas generously agreed to offer their expertise in systematic regional survey and hope to continue to assist on this aspect of the work. Currently, all of us are preparing a report for publication in China and in the United States.



The major goal of our pilot project was to introduce the method of systematic regional survey to Shandong province. Regional survey has been a critical component of research programs on the development of complex societies in several areas of the world, yielding data on change in social, political, and economic relationships between settlements as well as environmental factors affecting site location. Research on the development of complex societies in Shandong requires data on topics such as change in regional settlement hierarchies, craft production, distribution and consumption, and change in regional demographic patterns. Southeastern Shandong has long been recognized as containing important late prehistoric sites. Liang-chengzhen was one of the first Longshan-period (ca. 2600-1900 B.C.) sites excavated in China (1936) as well as one of the richest, yielding diverse ceramic vessels (including extremely thin-walled, polished black pottery) and jade objects. Unfortunately, factors such as the Japanese invasion prevented further work at the site and extensive publication

of the results. One of our major goals was to understand the regional context of this key site. Another goal was to understand the size of the site and the nature of the deposits. Previous fieldwork had indicated that the site may be ca. 90 ha in size. We also hoped that our survey would reveal evidence of earlier, poorly understood Neolithic cultures in southeastern Shandong, such as Dawenkou (ca. 4500-2600 B.C.) and Beixin (ca. 5500-4300 B.C.), as well as the post-Longshan Yueshi culture (ca. 1900-1100 B.C.?).

We believe that our collaborative regional survey was successful for several reasons: the extent of alluviation in the area was not severe, allowing sites to be recognized from surface artifacts on plowed or fallow fields; we achieved an initial understanding of the social and environmental context of the Liangchengzhen site; we found dozens of sites that had not been previously recognized; we examined the nature of the deposits at Liangchengzhen and met some people who had done surface collections there; team members shared their methodological expertise; and there was open debate about methodological issues. Feinman and Nicholas taught the team the full coverage survey methods they have used successfully in Oaxaca, Mexico. Our Chinese colleagues explained methods they have used for recognizing sites and for relative dating with pottery and stone tools. Three of us translated during discussions about method (Underhill, Bennett, Fang Hui). We planned the project for the winter, expecting that the limited vegetation would enhance survey conditions and that snow would be rare in this part of Shandong. Fortunately, it only snowed the day we left the survey area.

Our most common methodological debates were how to identify an archaeological site when surface artifacts are limited and how to recognize postdepositional processes affecting sites in the study area. Most of us agreed that postdepositional factors in the Liangchengzhen area should be investigated further, including natural factors such as river flooding and cultural factors such as removal of rich soil from archaeological sites by farmers. Also, the chronology for each site needs to be clarified, including the area of occupation for each phase. Some types of ceramics that we found are not common in other parts of Shandong, so relative dating from sherds will have to be refined in the future. However, we identified several sites of varying sizes that likely indicate differences in function (Liangchengzhen being the largest). Most sites are from the Longshan period, and other well-represented periods are the Zhou (ca. 1100-256 B.C.) and Han dynasties (ca. 206 B.C.-A.D. 220). More work needs to be done to identify sherds from the Beixin, Dawenkou, and Yueshi cultures in southeastern Shandong. Other goals for future research include determining whether Shang Dynasty (ca. 1700-1100 B.C.) settlements are present in the area and examining variability among sites in terms of lithics.

A grant from the High Risk Exploratory Research program of National Science Foundation, awarded to Underhill and Feinman, made this research possible. We are also grateful to several organizations in China that gave us permission to carry out our survey: the National Bureau of Cultural Relics in Beijing (Guojia Wenwu Ju), the Cultural Relics Bureau of Shandong Province (Shandong Sheng Wenwu Ju), the Rizhao City Bureau of Cultural Affairs (Rizhao Shi Wenhua Ju), and the Rizhao City Museum (Rizhao Shi Bowuguan).

Anne P. Underhill is in the Department of Anthropology at Yale University, New Haven, Conn. Gary Feinman is in the Department of Anthropology at University of Wisconsin, Madison. Linda Nicholas is an honorary fellow in the Department of Anthropology at the University of Wisconsin, Madison. Gwen Bennett is a doctoral graduate student in the Anthropology Department at the University of California, Los Angeles.

[To Top of Page](#)

[LAST PAGE](#)

[TABLE OF CONTENTS](#)

[NEXT PAGE](#)



COSWA Corner

Katherine A. Spielmann

COSWA Symposium on Women and Publishing in Archaeology. COSWA sponsored its first SAA symposium this past spring. The symposium was co-organized and co-chaired by Paula Bienenfeld and Katherine Spielmann. Papers were given by Spielmann and Bienenfeld (Introductory Remarks), Kathryn Ward and Linda Grant (Gender Equity in Academic Publishing), Michael Graves and Mary Gunn (Publishing in *American Antiquity* by Women: Recent Trends, Continuing Concerns), Christine Szuter (Gender, Decisions, and Book Publishing), Barbara Stark, Brenda Shears, and Katherine Spielmann (Gender Composition on Editorial Boards in Archaeology), and Linda Cordell (Accidental Publishing Can Work, But Not Well). Dena Dincauze and Lynne Goldstein provided insightful and helpful discussion at the end. The formal session was followed by a period of open discussion during which audience members raised questions, particularly those focused on publication strategies, for the symposium participants.

COSWA members are considering making the submission of symposia an annual part of our activities. If you have suggestions for topics you would like to see addressed in this kind of forum, please forward them to Katherine Spielmann at the address listed in the last portion of this column.

Women as Professionals Roundtable Luncheon. Ninety participants and 12 table hosts came together to discuss career issues over lunch at the SAA annual meeting in New Orleans. Topics included government and academic jobs, museums, publication, public education, and gender issues in the work place. The event was co-organized and co-chaired by COSWA members Elizabeth Chilton and Hillary Chester. The SAA provided room space and handled reservations as part of the annual meeting. The co-organizers received positive feedback on the roundtables from both hosts and participants. COSWA members Elizabeth Chilton and Johnna Thackston will organize another series of roundtables at the 1997 SAA meetings.

Women's Network Reception. During the SAA meetings in New Orleans, women gathered in an informal reception to share information about women and their careers in archaeology. The format of the reception was altered this year to encourage the networking that was the original purpose of this event. Former COSWA member Brenda Shears organized a series of discussion facilitators knowledgeable in various areas such as CRM, field projects, museums, publishing, and the SAA Board. These women were distributed around the room, making introductions, encouraging conversation, and helping create a very successful reception.

Regional Meetings. COSWA will underwrite up to \$50 of the expenses of hosting a reception or luncheon for women at a regional meeting. Our budget only allows us to do this once for each regional organization. The intent of these receptions is to encourage networking between women students and professional women since many students cannot afford to attend the SAA meetings where COSWA sponsors other networking events. If you would like to organize a women's reception or luncheon at a regional meeting you attend, please get in touch with Katherine Spielmann at the address listed below, or call (602) 965-6213.

COSWA Call for Members. COSWA members are appointed for three-year terms beginning in the spring at the SAA meetings. COSWA meets annually at the SAA meetings, with a less formal meeting in the fall at the AAA meetings. During the year committee members are active on subcommittees that focus on the collection and dissemination of information on the status of women in various aspects of the archaeological profession. Current subcommittees include applied archaeology, hiring, and the SAA census.

There are 10 committee members including one student member; four members are rotating off the committee this coming spring (1997). If you are interested in becoming a COSWA, member please write to: Katherine Spielmann, Department of Anthropology, Box 872402, Arizona State University, Tempe, Arizona 85287-2402, email atkxs@asuvm.inre.asu.edu. In your letter or message please discuss the interests that you have in COSWA. We recognize that far more than 10 women are interested in COSWA-related activities, and we would like to involve as many women as we can in the activities of the subcommittees within COSWA.



Katherine A. Spielmann is at Arizona State University and chairs the SAA Committee on the Status of Women in Archaeology.

LAST PAGE

TABLE OF CONTENTS

NEXT PAGE



Conference on "Renewing Our National Archaeological Program"

Bill Lipe and Chuck Redman

Table of Contents

- [Preface](#)
- [Introduction](#)
- [Conference Goals](#)
- [Issues and Preliminary Recommendations](#)
 - [Improving Implementation of the National Historic Preservation Act](#)
 - [Increasing Professional Knowledge and Expertise at all Levels of Archaeological Resource Management](#)
 - [Making Better Use of Existing Information in Decision Making about Archaeological Resources](#)
 - [Improving the Dissemination of Information from Publicly Mandated Archaeology](#)
 - [Recognizing Multiple Interests in Archaeology and Archaeological Resources](#)
- [Translating Recommendations into Action](#)
- [Summary of Comments on the Draft Preliminary Report](#)
 - [General Comments](#)
 - [Improving Implementation of the National Historic Preservation Act](#)
 - [Increasing Professional Knowledge and Expertise at all Levels of Archaeological Resource Management](#)
 - [Making Better Use of Existing Information in Decision Making about Archaeological Resources](#)
 - [Improving the Dissemination of Information from Publicly Mandated Archaeology](#)
 - [Recognizing Multiple Interests in Archaeology and Archaeological Resources](#)

Preface to the Preliminary Report

This preliminary report of the Tempe Conference on "Renewing Our National Archaeological Program" is a slightly revised version of the draft report that was produced in March 1995 following the conference. This draft was circulated fairly widely by electronic means and in paper form at an open forum at the SAA Annual Meeting in New Orleans.

In response to circulation of the draft preliminary report, a number of letters, email messages, and verbal comments have been received by members of the "renewing" task force. A summary of those comments is presented below, following the preliminary report.

The next steps for the "renewing" task force will be to take these comments into account, to prioritize the issues and recommendations, and to develop a final report. The task force is also expected to propose specific actions that the SAA, SOPA, and other archaeological organizations might take to see that the report's primary recommendations are implemented.

Introduction

Publicly mandated archaeology in the U.S. has achieved enormous success over the past 25 years, working within a legal and regulatory framework largely provided by sections 106 and 110 of the National Historic Preservation Act (NHPA), the Archaeological Resources Protection Act (ARPA), state and local laws, and most recently, the Native American Graves Protection and Repatriation Act (NAGPRA). This framework forms the core of what we are calling a "national archaeological program." This is not a program in the formal sense, and the archaeology done under it articulates in various ways with historic preservation, environmental protection, and academic training and research. The various aspects of publicly mandated archaeology are interrelated, however, and the human and financial resources currently being devoted to public archaeology in the U.S. represent a significant national commitment to preserving, managing, and interpreting the archaeological record.

As it has developed over the past 25 years, this program has changed the face and practice of archaeology in the U.S. It has resulted in a great increase in substantive knowledge, new research methods and management techniques, new career paths, and new organizations that provide research and preservation expertise. Those of us who were in the field before 1970 will remember how few tools were available when economic development or other federal agency actions posed threats to archaeological sites. From that perspective, today's treatment of similar problems is a marvel of comprehensive attention to archaeological values. Despite these successes, however, today is not a time to rest on our laurels and remain unreflectively satisfied with "business as usual."

During the past year and a half, criticisms of aspects of the national archaeological program have multiplied, and in some quarters, have grown more strident. Currently, many new ideas for productive change are being discussed by archaeologists themselves. Anyone who attended the May 1995 forum on "Restructuring American Archaeology" at the SAA annual meeting in Minneapolis or who has logged on recently to archaeologically oriented electronic mailing lists is keenly aware of the extent and intensity of the debates going on within the field of archaeology. And from outside our field, there have been criticisms of the federal role in archaeology and historic preservation from certain members of Congress, as well as from scattered voices in the private sector, state and federal agencies, Indian tribes, and the larger historic preservation community. During the past year and a half, an attempt to cut funding for the Advisory Council on Historic Preservation nearly succeeded, the archaeology grants program of the National Endowment for the Humanities was suspended due to budget cuts, the Historic Preservation Fund was reduced, the federal contribution to the National Trust for Historic Preservation was halved, and most federal agencies saw declines in their allocations for cultural resource programs.

It was in this context of internal and external calls for change that a small conference on "Renewing Our National Archaeological Program" was organized by the Society for American Archaeology (SAA) and the Society of Professional Archeologists (SOPA) with support from the National Park Service. The conference, which was held February 11-13, 1996, was hosted by the Department of Anthropology at Arizona State University and co-chaired by Chuck Redman and Bill Lipe.

The participants were experienced in the major work environments present in American archaeology today: Roger Anyon (Zuni Archaeological Program), Catherine Cameron (University of Colorado--and formerly, the Advisory Council), Don Fowler (University of Nevada-Reno, and past president, SAA), Edward Friedman (Bureau of Reclamation), Tom Green (Arkansas Archeological Survey), Bill Lees (Oklahoma Historical Society and president-elect, SOPA), Steve Lekson (University of Colorado Museum), Bill Lipe (Washington State University and president, SAA), Frank McManamon (National Park Service), Mike Moratto (Applied EarthWorks), Charles Niquette (Cultural Resource Analysts, and president, American Cultural Resources Association [ACRA]), Charles Redman (Arizona State University), Lynne Sebastian (New Mexico Historic Preservation Division), Donna Seifert (John Milner Associates, and past president, Society for Historical Archaeology [SHA]), and Gary Stumpf (Bureau of Land Management). This group continued after the conference as a task force, charged with receiving input from archaeologists and other interested parties and preparing a final report on the topics considered at the conference.

Conference Goals

The goals of the conference were (1) to identify problems that hinder the effectiveness of the national archaeological program and to suggest some ways in which these problems could be remedied, (2) to promote further discussion of problems and solutions within archaeology and related fields, and (3) to encourage professional societies and other interest groups to press for changes needed in the national archaeological program to make it better serve the public interest. The conference was not intended to create a detailed blueprint, but to recommend general directions for change. One useful model was the work of the SAA Committee on Ethics in Archaeology, which has raised archaeologists' consciousness about ethical problems by publishing background papers and by developing a statement of general ethical principles that has been adopted by SAA.

The "renewing" conference was intended to be an initial step in focusing debate and discussion on current problems and their solutions. The next step was the electronic circulation of a draft of the conference's preliminary report in a number of venues. The task force also hosted an open forum at the SAA Annual Meeting in New Orleans, where copies of the draft preliminary report were circulated and the floor opened to discussion. The report was subsequently published in the *SOPA Newsletter*; and the statement of issues and the preliminary recommendations published below is little changed from this version. Rather than attempt substantial revisions at this point, it seems more reasonable to let the draft statement of issues and recommendations stand as part of the preliminary report. The comments that have been received as a result of circulating the draft preliminary report are summarized below, and plans are being made to bring the task force together again to revisit the issues and recommendations in light of the public discussion the report has provoked.

[To Top of Page](#)

Issues and Preliminary Recommendations

While recognizing that the national archaeological program is embedded in the larger area of cultural resource management and overlaps with the related field of historic preservation, the conferees came together as archaeologists and focused primarily on issues that affect the field of archaeology and the archaeological record. The conference organizers felt that at this stage it would be too difficult to try to organize a meeting of all the interest groups that influence publicly mandated archaeology.

There was general agreement that the primary social contribution of archaeology is the information about past human history that can be provided by the systematic study of the material remains of that history using appropriate archaeological methods. Understanding the full range of past cultures also contributes to understanding the diverse cultures of the present. From this standpoint, the conservation and management of the archaeological record is important in order to ensure that archaeological studies can continue to provide society with new information about the human past. The conferees also recognized, of course, that in addition to being sources of information, archaeological sites and artifacts have a variety of meanings and values to numerous groups in society, and they often evoke in visitors a direct sense of connection with the past. Future archaeological study, therefore, is not the sole basis for the conservation, management, and enjoyment of the archaeological record.

After an initial review of issues that might be considered, the group decided to focus on five issues where there appeared to be problems or obstacles to achieving a more efficient and effective national archaeological program. These did not exhaust the list of issues concerning the participants, but it was recognized that the scope of discussions had to be limited if anything was to be achieved. Below is a condensed and preliminary summary of the issue areas and the conference's recommendations.

Improving Implementation of the National Historic Preservation Act

The conferees felt that the concepts underlying Section 106 and its implementing regulations are sound. The process established by Section 106 is not intended to "stop the world" but allows historical values to be considered in federal undertakings while projects proceed with minimal risk of litigation. Although federal agencies have the primary responsibility for taking into account the effects of their actions on historic properties,

they do so under rules promulgated by the Advisory Council for Historic Preservation and they must consult with the state historic preservation officers (SHPOs). This involvement of three parties provides necessary checks and balances.

Section 110 of the NHPA calls for the development by federal agencies of comprehensive programs for the identification, evaluation, consideration during project planning, protection, and management of significant historic properties, including archaeological resources. Few agencies have been able to develop such programs under Section 110, yet this kind of approach offers flexibility and a broader view that is not afforded by the project-by-project method usually applied in the Section 106 procedures.

Given this context, the conferees felt that Section 106 needs to be applied more flexibly and with more focus on successful and timely outcomes, rather than on formal process. To this end, they proposed the following recommendations:

- To the extent possible, implementation of Section 106 should move away from a case-by-case basis to more dependence on programmatic agreements crafted to retain flexibility and public participation. The Advisory Council should periodically review the implementation of such programmatic agreements.
- Because certain types of properties (e.g., extensive, low-density lithic scatters) are not well addressed by the "standard" Section 106 process, consideration should be given to creating different approaches where warranted.
- Federal agencies should assume the responsibilities and prerogatives mandated by law and not delegate these to the SHPOs. The SHPOs and the Advisory Council should allow agencies more flexibility to make decisions, but hold agencies responsible for the outcomes of those decisions.
- Peer review should be employed more frequently, particularly with regard to data-recovery plans for large undertakings, large-scale programmatic agreements, and in certain cases where disputes have arisen.

Increasing Professional Knowledge and Expertise at all Levels of Archaeological Resource Management

The conferees recognized that many of the problems experienced in the national archaeological program were not failures of system or process, but of judgment exercised by practitioners, whether they be resource managers, regulators, or researchers. It was felt that increasing the professionalism of personnel throughout the system would increase its effectiveness and accountability. To this end, it was recommended that:

- Training should be improved for archaeologists entering the CRM field, whether as consultants, regulators, or resource managers. The knowledge, skills, and abilities (KSA) required for these positions should be assessed, and both academic and on-the-job training should be modified to ensure that these KSA are effectively taught.
- Archaeologists need to achieve and be held accountable to appropriate standards and qualifications. The secretary of the interior's professional qualifications standards should apply to all personnel employed as professional archaeologists by SHPOs and public agencies, the SOPA standards of research performance and code of ethics should be endorsed by federal and state agencies and professional societies, and both state and national archaeological organizations should press for state-level certification of archaeologists.

[To Top of Page](#)

Making Better Use of Existing Information in Decision Making about Archaeological Resources.

It was recognized that information generated by the national archaeological program often remains obscure and difficult to access. As a result, costly decisions regarding survey, assessment, and impact mitigation are often made without adequate consideration of the results of previous work. The conferees proposed the following recommendations:

- Syntheses should be prepared at the state or regional level, and should focus on the characteristics of the archaeological record and substantive results useful in making decisions about National Register of Historic Places eligibility and archaeological value. Such syntheses would also help communicate the knowledge gained from public archaeology to archaeologists and the broader public.
- Much greater attention needs to be paid to developing and integrating state-of-the-art electronic databases.
- Syntheses and databases should be given a higher priority by federal agencies, tribes, SHPOs, and the archaeological community. Representatives of these groups should work together to produce and periodically revise these products, and they should forcefully pursue additional funds for these efforts.
- Advisory panels of experienced archaeologists should regularly be employed by resource managers at various levels to offer advice on project research designs and strategies and otherwise assist in developing flexible, creative management solutions. If funds are not available for the preparation of syntheses, advisory panels can serve as sources of information about the results of previous work.

Improving the Dissemination of Information from Publicly Mandated Archaeology

The conferees recognized that the national archaeological program has produced an enormous amount of new information about the past, but that the mechanisms for disseminating this information are only weakly developed. This is a serious problem, because information about the past is a primary source of archaeological value and hence underlies much of archaeological resource management. As noted above, providing such information to the public is the primary social justification for the practice of archaeology. It was recommended that:

- A significantly greater share of funds going into the national archaeological program should be devoted to providing direct public benefits, such as site visits, museum displays, school education programs, and quality treatment of synthesized archaeological results in print and visual media. Federal agencies, the ACHP, tribes, SHPOs, consulting firms, and individual archaeologists must modify existing practices--and regulations, if necessary--to provide greater and more rapid public access to the results of public archaeology, and these efforts should be coordinated at a state level.
- Technical "descriptive" reports should be reinvented so their results are more accessible. Major reports must have concise introductory and summary chapters separable from technical data presentations that can serve as readable project summaries. Electronic means of disseminating technical data should be explored as an alternative to presenting data in paper reports. The National Archeological Database should receive greater use for recording and accessing technical reports.
- Because discussion among professionals is an essential part of the process by which archaeological knowledge becomes assimilated and validated, concise reports presenting the results of major publicly mandated projects must be circulated to the professional community and hence be subjected to formal and informal peer review; agency practices need to be adjusted to encourage or mandate such reporting.

Recognizing Multiple Interests in Archaeology and Archaeological Resources

In addition to the information they can yield to archaeological research, archaeological resources have heritage value to many groups within American society, and management decisions about them may also have significant economic implications for the users of other resources. The conferees felt that certain problems in the national archaeological program can be traced to a lack of understanding, by archaeologists, participants in the consulting

process, and resource managers, of the multiplicity of legitimate interests in archaeology and archaeological resources and the extent to which federal law requires that these interests be recognized. The participants therefore recommended:

- Regulators and managers dealing with archaeological resources need to explicitly recognize that values other than archaeological information may exist and proactively use Section 106 consultation, ARPA notification, NAGPRA consultation, NEPA compliance, and other processes to identify multiple values and bring their proponents together in an atmosphere of mutual understanding and respect. Consultation must begin early enough to ensure that multiple interests are adequately represented.
- Archaeologists must understand when they are providing information and views *as archaeologists* (i.e., as specialists who extract certain kinds of information from the archaeological record) and when they are functioning as resource managers helping to represent multiple interests, as noted above.
- Archaeologists must recognize that considering multiple interests regarding archaeological resources may constrain what can be done with these resources in the name of research (or for other goals).
- Federal agencies, tribes, and SHPOs must use the full range of existing legal and regulatory options more flexibly and creatively to assure recognition of multiple interests in archaeological resources while permitting agency undertakings to proceed in service of the broad national interest.

Translating Recommendations into Action

Although the "renewing" task force is not itself designed to serve as a political action group, the conference participants hope that their work will be a positive influence on the multiple and diffuse efforts to rethink and renew our national archaeological program that are currently under way.

The preliminary report of the Tempe conference is being disseminated to raise consciousness about the issues, largely within (but not confined to) the archaeological profession, and to promote discussion of these issues and possible solutions to the associated problems. The task force felt that a reasonable consensus among archaeologists was possible on most of the problems and potential solutions discussed at the conference. Most of the recommendations developed by the task force are at this point stated in a very generalized manner. Archaeologists, resource managers, and others participating in the national archaeological program need to consider how and whether the proposed solutions might work "on the ground," and provide feedback to the task force.

The "renewing" task force felt that many of the problems it identified were amenable to solution by changes in practice, but that some might require regulatory change. Whether amending existing laws would be desirable remained an open question; most thought there should be greater efforts to apply the laws more effectively. A number of mechanisms for promoting change in practice, laws, and regulations are available at a variety of levels.

First, as has been noted, a number of organizations that participate in the national archaeological program are engaged in redesigning and rethinking roles and practice. Federal agencies are in the process of "reinventing" themselves, and budgetary constraints are requiring them to accomplish the same functions with less money. The SHPOs are under similar constraints. The Advisory Council is in the process of revising its regulations governing Section 106. And judging by the traffic on the ACRA list-server, many consulting archaeologists are engaged in a reexamination of current practices. We hope that the recommendations of the task force can be an important influence in the outcome of these efforts to change.

Second, the major archaeological societies have some ability to promote particular courses of action in Congress and within the federal agencies, often in conjunction with other historic preservation groups. We hope that at least some of the recommendations of the task force will be adopted as policy goals by the major societies and that they will effectively promote these goals in their contacts with Congress and the agencies.

Third, most states now have active professional archaeological councils or similar groups. These organizations have the potential to be very effective at the grassroots level, and many are in fact achieving this potential. State-level groups are in the best position to work with SHPOs to promote change, and can also be effective in influencing agencies and members of Congress. These groups will also be key to any efforts to develop statewide certification processes for professional archaeologists. Again it is hoped that the reports of the task force and the discussions stemming from these reports will help focus the change agendas of statewide archaeological organizations.

Bill Lipe is president of SAA and Chuck Redman was the chair of the Tempe conference on "Renewing Our National Archaeological Program."

[To Top of Page](#)

Summary of Comments on the Draft Preliminary Report

Bill Lipe

A number of comments and responses to the draft preliminary report were received after it was circulated electronically and in paper form at the SAA annual meeting. Over 20 SAA members spoke from the floor at the open forum in New Orleans. A number of people sent thoughtful critiques and suggestions to me by mail or email, and several members of the task force weighed in with additional perspectives, some derived from discussions with colleagues. In July I was able to attend the meeting of the National Conference of State Historic Preservation Officers in Duluth, Minn., where the preliminary report received some attention. I would like to take this opportunity to thank all those who took the trouble to respond to me and to other members of the task force regarding the issues raised in the preliminary report.

Many comments indicated support of the "renewing" study and general agreement with most of the recommendations made in the preliminary report. In my summary below I have concentrated on those comments that provided criticism or additional points of view. I have rarely used direct quotations in this summary. Rather, I have attempted to synthesize the main points raised. Probably not everyone who sent in comments will agree with my phrasing; however, the approach I took seemed better to me than stringing together short quotations taken out of the context of longer messages.

General

- It will be difficult for SAA to promote real structural change from within archaeology--too many professionals depend on the status quo, and are reluctant to see any change in the present arrangements.
- Rather than presenting "solutions to problems," SAA should turn the more negative problem discussions into positive goals that will create less polarization and promote participation and support.
- Arriving at effective solutions to these problems will require more than archaeologists talking to each other. Additional stakeholders, including businesses, tribes, amateur archaeologists, and members of the general public, need to be part of the process.
- The report largely ignores the deepening split between academic archaeologists and those involved in resource management.
- The report has a "western public lands" bias; more input is needed from the eastern U.S., especially with respect to doing publicly mandated archaeology on private lands. Implementation of NHPA also poses somewhat different problems for granting, permitting, and technical assistance agencies than for those responsible for the public lands.

- A national archaeological program should be concerned with all types of archaeological resources of each region of the U.S., not just those subject to Section 106 review. On private lands, qualified avocational archaeologists are often in the best position to conduct surveys and studies; they need encouragement and support.
- We need to hear from the opponents of publicly mandated archaeology and historic preservation and be prepared to take them seriously.
- Partnering with industry, states, local government, and tribes holds promise for progress on most if not all the problems under discussion.
- We need to base restructuring on a good knowledge of what works and what does not in all the areas under discussion.
- Archaeologists' responses to all of these issues is taking place within a specific legislative, policy, and regulatory environment. We need more archaeologists who understand this environment--especially at the federal level--and who can be effective advocates for archaeology within it.
- We can't just keep adding activities and costs to publicly mandated and funded programs. If we want to expand public involvement or the dissemination of results, something else will have to be cut back.
- Some of the problems that are mentioned have been with us since the 1970s. What is it about them that has been intractable? Most of the problems mentioned require improving the existing system rather than revolutionary change.

[To Top of Page](#)

Improving the Implementation of the National Historic Preservation Act

- Regulated industries are most concerned about delays and lack of definitive closure in the Section 106 process. These issues must be addressed in any reforms that are undertaken.
- Industry should have access to an effective and time-limited appeals process regarding decisions made under Section 106.
- The Advisory Council must make a genuine effort to encourage more flexibility and common sense in applying Section 106, rather than just giving lip service to this goal.
- Changes in the Section 106 process must not unbalance the system so that tribes, states, or various publics are excluded from commenting on specific cases that concern them, or so that cases have to be revisited because these groups were initially bypassed.
- We need to move away from an almost exclusive emphasis on Section 106 compliance toward more proactive agency programs under Section 110 of the NHPA and to the production of more products for public and professional use.
- Serving the public interest is not something that can be tacked on at the end by "disseminating information." We need to involve the public more at all stages of Section 106 decision-making to ensure that the result is actually "in the public interest."
- SHPOs and the Advisory Council need to get out of their current roles as regulators and decision-makers and return to their roles as advisers to the federal agencies. The Council should focus on programmatic issues and play a mediating role for cases involving conflict and controversy.

- Checks and balances will continue to be needed in the Section 106 process to ensure that poor decisions and poor work are rejected and as a defense against political pressures on a single agency or SHPO.
- SAA should promote more simultaneous processing of projects pursuant to NEPA rather than the traditional sequential processing that creates unnecessary duplication, delays, and costs.
- Archaeologists should work more closely with architectural historians, historians, and other preservation specialists so that the treatment of archaeological sites is included within a larger historic preservation package and is not considered something separate--either by archaeologists or by others in the historic preservation field.
- More specific criteria should be developed for National Register eligibility to eliminate many of the wasteful and unproductive studies now being done as part of Section 106 compliance.
- We need to keep in mind that Section 106 is not designed to protect archaeological sites, but to protect the public interest in these properties. The public is not served when marginally important archaeological sites are elevated to National Register status.
- Beware of shifting away from Section 106 compliance to reliance on programs developed under Section 110; the latter have no regulatory checks and are increasingly being cut back due to funding problems. Agencies have much greater incentives to comply with Section 106 than with Section 110. It would be better to focus on developing good programmatic agreements under Section 106.
- We need more flexibility to combine survey and testing or testing and data recovery where it makes sense.
- We need to have more flexibility to incorporate volunteers and avocational groups into Section 106 compliance activities. This would help to ensure that these have wider public involvement and support.
- Programmatic agreements may look good on paper, but they do not work if some of the parties do not meet their responsibilities or if there are no independent checks on compliance.
- Regulators and managers need to have the timely and productive completion of required work as their primary goal; specific procedures should be a means to that end. Measures are needed to ensure that projects don't bog down because permit applications, reports, etc. languish on desks for months or even years at a time.
- The Advisory Council must move from a concern with process and control to one that focuses on successful outcomes.
- Our experience has been that when agencies get autonomy, they tend to produce lower quality, more poorly reported work done by less well-trained non-professionals. Standards are required. Review by the Advisory Council and SHPO as a check and balance works--be careful about doing away with it.
- In the case of many non-land-managing federal agencies, actions with great potential for harm to historic properties are often delegated to state or local agencies with little or no institutional preservation infrastructure. In such cases, the SHPO's active participation--on either a case-by-case or programmatic basis--becomes much more important.
- Federal agencies vary greatly in the extent to which their activities affect archaeology and other historic properties, in their staff capabilities and historic preservation procedures, and in their ability to control outcomes. We should not expect a single remedy for improving the implementation of Section 106 to be effective across all agencies.
- For agencies that have qualified staff and procedures in place, the Advisory Council and SHPOs should experiment with a more general level of oversight.

- Federal and state agencies need to prepare more detailed archaeological resource management plans than they now do and set specific heritage/archaeology priorities. Archaeology needs to be treated in agency decision making on an equal footing with endangered species.
- There is great variability from state to state in how archaeological identification and evaluation is carried out. There needs to be greater standardization of practice on at least a regional level.
- Upgrading CRM sections of federal agency manuals will promote greater agency accountability under programmatic agreements.

Increasing Professional Knowledge and Expertise at all Levels of Archaeological Resource Management

- Why is it that agencies expect fully professional training and experience in other scientific fields, but not in archaeology? Is it because archaeologists themselves are so resistant to the idea of professional standards, certification, or licensing?
- Professional skills should include the ability to bring archaeology to the general public or to work with people who can.
- Many of the problems in public archaeology are the result of inadequate training and experience among CRM staff on the regulatory side of the field (i.e., Advisory Council, SHPOs, federal agencies). Individuals in these positions not only need academic training, but in-the-field experience in the practical implementation of publicly mandated archaeology.
- SOPA (and the proposed ROPA) are unlikely to be successful in upgrading professional performance unless they are changed to ensure that members have met truly rigorous standards of professional training and experience. It is not clear, however, that archaeology is a profession in the same sense as, for example, engineering or community planning, and that rigorous qualifications can readily be established.
- A good CRM text is needed, but the publishing industry probably won't support one given the small classes that are involved. Federal agencies will need to encourage the production of texts and other educational materials in the context of agency-supported or partnered training courses.
- Texts and training need to be interdisciplinary and consider the role of archaeology in agency ecosystem management programs.
- There needs to be a concerted effort to improve university training for archaeologists so that it is more compatible with real-world employment opportunities. Currently, the smaller regional universities are more likely to be doing a good job of training than are the larger ones.
- More opportunities are needed for continuing education of archaeologists in practical approaches to doing cultural resource management. SAA, federal agencies, and educational institutions should form partnerships to offer such opportunities.
- Having different certification procedures in the 50 states and nine territories would cause problems. If we adopt certification, it should be at the national level.

[To Top of Page](#)

Making Better Use of Existing Information in Decision Making about Archaeological Resources

- Advisory panels are good in themselves, but they also can substitute for syntheses and regional databases if these cannot be afforded.
- Advisory panels can function to preserve the status quo against needed change. The question of who would appoint such panels and what their responsibility would be needs additional discussion.
- By the time they are available for circulation, many syntheses are already out of date and of limited use for planning and evaluation.
- Fuller public distribution of reports stemming from Section 106 compliance can help address both this issue and the next one.
- How can we justify spending additional public funds on excavations when every state has museums, repositories, etc. crammed with archaeological materials collected and maintained at taxpayers' expense? University graduate programs should be encouraged to use existing collections and "gray literature" reports as a source of student projects, and state and federal agencies should consider ways to promote study of such collections as part of their responsibilities in historic preservation.
- Much more attention needs to be paid to electronic means of assembling, accessing, and disseminating archaeological literature. The ability of modern archaeology to generate information has outstripped our ability to publish and disseminate it in traditional site reports.
- High-quality predictive models can incorporate what has been learned and help make the Section 106 process more cost efficient. Their development requires a significant investment in time, money, information, and expertise, however.

Improving the Dissemination of Information from Publicly Mandated Archaeology

- Consider "banking" some of the funds generated by Section 106 compliance to ensure that the information gained in publicly mandated archaeology is publicly disseminated. Don't forget that scholarly articles are often an important step on the way to reaching a broader audience.
- Who are "archaeology's many publics?" Why are they interested in archaeology? We can't design better programs for reaching the public until we know more about "the public."
- Educating K-12 teachers and students about the practice of archaeology and about what archaeologists have learned about the past is non-project specific, but it is a very cost-effective way to increase public understanding of archaeology and public support for the protection of archaeological sites.
- In some parts of the country, a dependence on close working relationships with amateur archaeologists once helped ensure public involvement in both planning and dissemination of archaeological research. The bureaucratization of the field has largely cut these former linkages.
- The incorporation of local oral histories into studies undertaken under Section 106 often helps ensure public participation and support and results in reports that are of public interest.
- Agency policies, as well as some provisions of ARPA and the NHPA, are increasingly being used to discourage the effective dissemination of information resulting from public archaeology. This is counter-productive and violates the spirit of historic preservation legislation as well as the *Secretary of the Interior's Guidelines and Standards*, which states that "Results must be made available to the full range of potential users."
- The profession of archaeology needs to identify, encourage, and reward its most effective public educators and spokespersons. We need a "Margaret Mead" of American archaeology, who can apply archaeological knowledge to the "big issues" of public concern and interest.

- Within each state, accessible regional repositories for the "gray literature" being generated by CRM work are much needed.
- Archaeologists should form partnerships with professional writers and media specialists to get their story to the public; archaeologists should not expect to be able to "do it all" themselves.
- Communities should be made aware of the economic benefits of publicly mandated archaeology, including potential contributions to tourism.
- The historic preservation system has been successful to the extent that the loss of major historic landmarks is now rare. As a result, the public--and legislatures--do not sense that historic properties are threatened. This needs to be considered in designing public education programs.
- Stabilized or restored archaeological sites can play an extremely valuable role in public understanding of archaeology.
- Although this section of the report emphasizes the research contributions of archaeology, a greater emphasis on public benefits will probably mean less emphasis on research as such. That is not necessarily bad in the larger scheme of things.
- Big money is being spent on public archaeology, and those aspects that have a research component should address big questions of concern to multiple disciplines and to a broad public audience.

Recognizing Multiple Interests in Archaeology and Archaeological Resources

- Archaeologists need to recognize legitimate claims made by Native Americans and other groups regarding the treatment of archaeological sites, but they must also take responsibility for defining and defending the public value of the knowledge that only archaeology can provide.
- Blanket claims by certain tribes that all or most archaeological sites are Traditional Cultural Properties (TCPs) are causing a number of problems. Tribes, agency managers, and archaeologists need to work together to come up with practical and balanced solutions for treating TCPs in the Section 106 process and in agency cultural resource management programs in general.
- Archaeologists need to stand up for intellectual freedom and to resist attempts based on religion or narrow cultural interests to prohibit or censor archaeological research and publication.
- Recognizing multiple interests is much more compatible with a contextualizing, post-processual theoretical stance than with the late processualism that dominates most public archaeology. Are archaeological resource managers taking this into account?
- Balanced recognition of multiple interests will include the majority American cultural tradition that is broadly derived from European sources, as well as the more focused interests of tribal and ethnic groups.
- Archaeologists should be advocates for stewardship of the archaeological record--including conservation, study, and interpretation. They should refrain from advocacy on behalf of particular cultural, environmental, or economic interests. Rather, they should maintain their professional focus, integrity, and credibility while encouraging an atmosphere of mutual respect and trust among all interested parties.

Bill Lipe is president of SAA.

[To Top of Page](#)

Archaeology Projects at the National Endowment for the Humanities: Past, Present, and Future

Bonnie Magness-Gardiner

Past

In the 30 years since its founding, the National Endowment for the Humanities (NEH) has given 575 grants to more than 300 archaeologists in 158 institutions for work conducted in more than 35 countries worldwide. During this period, archaeological projects received a total of \$16.5 million in outright funds and \$17 million in federal matching funds for fieldwork, analysis, and publication. The projects have in common a focus on interpretation of archaeological data and what it means to be human in complex physical and social environments. Excavated and surveyed sites range from world-class monuments (Abydos, Athenian Agora, Carthage, Corinth, Monticello, Pompeii, San Lorenzo, Tenochtitlan, Teotihuacán, Tikal, Vijayanagara) to rural towns and villages, rockshelters and camp sites, sanctuaries and cemeteries in the United States and abroad.

NEH has supported work in every period, culture, and area of the United States, from analysis and publication of Paleoindian materials from Hell Gap to the excavation of a Chinese mining camp dump in Pierce, Idaho. NEH-funded projects in Americanist archaeology include Cynthia Irwin-Williams's excavation at the Salmon Site (1970-1978), Stuart Struever's study of agriculture and animal use in Illinois (1975, 1977), Dale Croes's work on Paleoindian occupation at Hoko River (1981-1988), Dean Snow's Mohawk Valley Project (1984-1991), Kathleen Deagan's work at St. Augustine (1978, 1982) and La Isabela (1992, 1995), and John Broadwater's investigation of the York River Fleet shipwreck (1979-1992). Projects in Mesoamerica and South America include George Kubler's work on the art of Tikal (1970-1972), John Hyslop's investigation of the Inka road system (1981, 1983) and site planning (1985, 1987), Thomas Charlton's work on Aztec state formation at Otumba (1988, 1991), and George Cowgill's study of human sacrifice and society at Teotihuacán (1990, 1995).

The distribution of projects is primarily in five world areas:

Area	No. of PIs	Grants	Outright \$	Matching \$
U.S.	73	110	\$4,942,124	\$2,427,218
Near East	75	139	\$3,372,215	\$4,447,363
Classical & Preclassical	68	161	\$2,772,563	\$5,710,850
Mesoamerica	26	45	\$1,675,839	\$1,613,016
South America	13	20	\$ 431,594	\$ 310,045

No single approach or discipline characterizes the projects or participants: they are as diverse as the current universe of archaeologists. In 30 years of project grants, project directors have come from the following disciplinary departments:

Department	No. of Grants
Anthropology	216
Classics	133

Art History	70
NE Studies	48
History	45
Other	63

Present

Until FY 1996, the annual budget for the Archaeology Projects Program was approximately \$600,000 to \$800,000 in outright funds and about \$1 million in federal matching funds. Approximately 20 new grants were awarded each year. In 1996 the Congress slashed the agency budget by 37 percent and the Archaeology Projects Program deadline was suspended for the year. The program itself was then absorbed into a new Collaborative Research Projects Program. (The ongoing archaeology projects are being funded for their matching component with the reduced FY 1996 budget.) Although the FY 1996 budget battle was lost and the annual archaeology competition did not take place, the outlook for the FY 1997 is somewhat more optimistic. Unless something unforeseen happens, a competition will take place and funds will be available in 1997.

Future

The good news is that the archaeology projects will be accepted into the general Collaborative Research Program. The bad news is that the Collaborative Research Program competition will consist of proposals that would have gone to six separate programs (Archaeology, Translations, Conferences, Editions, Humanities, Studies of Science and Technology, and Basic Research), and the projected budget for the new combined program is somewhat smaller than what would have been spent on archaeology alone in earlier years. The success rate for archaeology projects is expected to drop from 1:5 to 1:10 (the current rate of success in the fellowships program).

However, the money exists (presumably). If you don't apply, you won't get funded. If archaeologists do not apply in large numbers, the odds in favor of continued funding for archaeology will be considerably reduced. To improve your chances of getting funded, do the following:

1. Call the program officer, John Meredith, (202) 606-8218, email jmeredith@neh.fed.us, and ask for the guidelines, the latest information on the budget, and an explanation of the evaluation process.
2. Look at a successful grant in your field. Ask for the list of funded projects for the last three years, select an appropriate project, and have John Meredith send you the proposal.
3. Seek the advice of colleagues who have received NEH grants.
4. Write a preliminary draft of your proposal and have it read by the program officer (John Meredith) and/or a friendly but critical colleague, preferably one who has served on a panel, reviewed grants, or received a grant. Pay close attention to the guidelines and elements for evaluation when writing your proposal.
5. Don't ask for too much money. Ask John Meredith for advice on how much to ask for. If you are asking for federal matching funds, try to get your donors lined up in advance. It makes a good impression. However, remember, it is *not* necessary to have the matching money before you apply for the grant: you only need to identify potential donors and sources.
6. Write your congressional representative to express your opinion about funding for research in the arts and humanities.
7. And remember to vote.

Bonnie Magness-Gardiner is a research associate at the Smithsonian Institution and can be reached at BonnieMG@aol.com.

[LAST PAGE](#)

[TABLE OF CONTENTS](#)

[NEXT PAGE](#)

Student Affairs Committee

Caryn M. Berg

Welcome back from the summer! The Student Affairs Committee has been busy since the 1996 annual meeting in New Orleans. We have been planning the workshops for the 1997 annual meeting in Nashville--this year, we will be focusing on practical issues in archaeology, including running field projects and writing vitas. We are also developing a World Wide Web page and a brochure for student members of SAA (look for these soon!). Finally, the committee is interested in trying to strengthen the Campus Representatives Network, which is designed to facilitate communication between the committee and student members throughout the country. If you are interested in being a campus representative, please see the announcement below. If you would like more information about the Student Affairs Committee, please contact Caryn M. Berg, Student Affairs Committee Chair, Department of Anthropology, Campus Box 233, University of Colorado, Boulder, CO 80309, (303) 684-6499 or (303) 492-7480, email bergcm@ucsub.colorado.edu.

Caryn M. Berg is chair of the Student Affairs Committee.

Student Affairs Feature

Writing Symposium Abstracts

William R. Belcher

Symposium abstracts summarize the conceptual framework of the contributors' papers. Abstracts are a critical component of scholarly exchange within our discipline, and conference attendees use them to decide whether or not to attend a paper or symposium. Abstracts are also used by SAA in public relations and are released to local and national media during the annual meeting. For the uninitiated, however, writing and submitting an abstract can be a daunting project. Students should know that their abstracts stand a good chance of being accepted; the average rejection rate over the last few years has been around five percent.

Abstracts present the topic's significance in archaeology and address larger issues in anthropology. Abstracts should be written in a clear and direct style, avoiding vague and jargon-filled language. The 150-word limit set by SAA necessitates succinct and articulate word choice and sentence construction. Avoid phrases such as "In this paper/symposium..." or "Here I examine..."; these are meaningless place holders that waste words.

Predominant within anthropology and archaeology is the context + problem + main point abstract structure (W. C. Booth, G. G. Colomb, and J. M. Williams, 1995 *The Craft of Research*. University of Chicago Press: Chicago, pp. 213-214). This structure includes an abbreviated introduction that establishes the context of previous research, followed by a few sentences that state the research questions, and, finally, the main result of the research. For symposium abstracts, this should include an introduction to past research or approaches, the general questions that are examined in the symposium, and conclude with how this symposium will help evaluate some of the problems stated initially.

If one follows these guidelines, it is relatively easy to write an abstract for either a symposium or research report for the upcoming annual meeting. It can take many drafts to get a good abstract, so let your fellow graduates or graduate advisor read over the text before submitting it. See you in Nashville!

I would like to thank past organizers of the annual meeting, particularly Gary F. Feinman and Paul Minnis, for their time and their observations on abstracts.

William R. Belcher is a Student Affairs Committee campus representative at the University of Wisconsin-Madison.

Interface--



Archaeology and Technology

Total Stations in Archaeology

John W. Rick

Table of Contents:

- [Introduction](#)
- [Angle and Distance Measuring](#)
- [Electronic Functions](#)
- [Data Storage and Transfer](#)
- [Some Things to Consider](#)
- [The Latest and Greatest](#)
- [Summary](#)

Introduction

My point in writing about total station-type transits is to provide current information about a technology of great utility to archaeologists. Total stations are best described as very accurate, distance-measuring electronic theodolites capable of diverse mapping and position-measuring tasks. I have considerable experience using total stations but am hardly a "power user," having little formal training in surveying. Thus, my target audience is primarily those archaeologists not currently using these types of instruments, but interested in their potential.



Conceptually, total stations are different from most measuring systems used by archaeologists because they are effective over a great range of scales and have an accuracy that is unusual in our experience. They encompass a range of about five to six orders of magnitude of accuracy. For example, you might be measuring the position of a point 1 km away from the total station and be accurate at least to the centimeter. The equivalent in a more common measuring system would be to use a tape to measure the distance to an object a meter away with .01 mm accuracy. To achieve an error of millimeters in measurements made over kilometers conflates scales we usually associate with different measuring devices. However, with a total station, the tool we use to make very large-scale maps can be used for precisely measuring objects in small excavations.

Archaeologists have probably been slow to use total stations, with notable exceptions, because of their cost and the complexity of their use and maintenance. I want to demonstrate that total stations are becoming cheaper and easier to use, and offer a greater range of applications than they have had previously.

[To Top of the Page](#)

Angle and Distance Measuring

Total stations combine a number of technologies to achieve their remarkable accuracy. The first, an extension of traditional transits and theodolites, is an ability to register very fine angular divisions. Accuracy varies with price, but total stations are capable of measuring to the thousandth of a degree. Obviously, the error of radial measurements increases with distance from the measuring instrument. The angular precision for commonly available instruments ranges from 20" (60"=1'; 60'=1^{deg.}) to less than 1". To give an idea of how well accuracy is conserved at distance with these levels of angular precision, a rule of thumb is that 1" is 1 cm at 2000 m of distance, so the maximum angular error of a 1" total station would be 1 cm when shooting 2 km. A 10" instrument would achieve the same accuracy at a distance of 200 m.

The second, more novel aspect of total stations is that they measure the distance to the target point with an infrared laser emitted by the EDM (electronic distance measuring device) and reflected by a prism held vertically above or below the actual point of interest. The actual accuracy is determined by the wavelength of the light used, and errors can range from as little as 1 mm plus 1 ppm (part per million; e.g., 1 mm in 1,000,000 = 1 mm/km) to around 5 mm plus 5 ppm. Thus, at 2,000 m, distance error would vary from 3 mm to 15 mm over this range of accuracies. The total distance that the EDM can measure depends on a number of variables, including atmospheric conditions, quality of the EDM, and the number of prism reflectors used as targets (generally one, three, or nine). The least powerful instruments are limited to 300-m maximum distance with one prism, while the most powerful, readily available instrument with nine prisms can exceed 5-km distance under ideal conditions. The telescopes of the theodolites vary in power from 24x to 43x, corresponding to the magnification necessary for the EDM's maximum range. Even the least accurate short-range total stations generally exceed the abilities of optical survey instruments. The angular accuracy matches that of the distance measuring, so that radial, lateral, and vertical errors are similar. Typical configurations are shown in Table 1. Anyone considering the acquisition of a total station will need to balance these factors, along with other features mentioned below.

Specification	Low-end Instrument	Middle-range Instrument	High-end Instrument
Angle accuracy	10"–20"	5" (sometimes 3")	1–3"
Distance accuracy	5 mm + 5 ppm	2–3 mm + 2–3 ppm	2 mm + 2 ppm
Maximum distance (1 reflector, ave. conditions)	300–1,000 m	1,500–1,500 m	2,000–3,000 m
Maximum error at 100 m	angle: 5–10 mm distance: 5.5 mm	angle: 2.5 mm dist.: 2.2–3.3 mm	angle: .5–1.5 mm distance: 2.2 mm
Telescope magnification	26–28x	30x	30–32x
Display lines/character	4/16	4/16–20	8–10/20–40
Onboard programs	none or minimal	various, including setting out. May/may not have free station.	many
Onboard storage	0–600 shots, none on minimal instruments	0–5,000 shots	highly variable, but usually substantial
Data transfer	RS-232 port	RS-232 port	RS-232 port, PCMCIA slot(s)
Cost (list, approx.)	\$5,000–7,000	\$7,000–10,000	\$10,000–18,000

Table 1: Typical configurations and approximate prices for total stations.

Electronic Functions

Total stations have one or two LCD (liquid crystal) displays, which range from 1 to 8 lines of 16–40 characters, and some are capable of simple graphical display. On high-end Nikon models, the user can display a crude map of points to be laid out.

Total stations produce the same basic spherical measures as optical survey instruments--horizontal and vertical angles and a radial distance measure. Total stations differ, however, by taking additional data and then calculating additional measures. Most importantly, most total stations are capable of simultaneous trigonometric

conversion of spherical survey coordinates into Cartesian orthogonal measures--usually east, north, and altitude. The coordinates of the instrument setup position can also be input (or found within a data register) and consistently offset from the measured points. This allows all measurements to be taken with reference to a single datum, eliminating the need to manually adjust the data from different local datums to the overall site grid.

Computational abilities go far beyond these simple transformations, and most total stations carry a number of useful programs in their memory. For instance, with the free station function, a total station set up at an unknown point can calculate its current position after measurements are made to a couple of known points. Another useful function for archaeologists is called "setting-out." The coordinates of desired points can be input manually or from data registers, and then the instrument will direct the user to the points. The screen will indicate the horizontal and vertical alignments of the point to be found, and then will report how far the prism target must be displaced out or in along the radial line of alignment. In this way the instrument can be used to lay out uniform grid systems on uneven ground, quickly locate the widely dispersed units of a random sample, or stake out the corners of perfectly square or rectangular excavation units.

The diversity and capability of available programs is increasing through new input and linkage devices that permit the use of complex code. While most total stations have small program storage areas accessible only by instrument dealers, we are beginning to see DOS-compatible operating systems and user-programmable abilities. These will allow custom design of the instrument's function and the expansion of available software. The standardization of PCMCIA-type cards and the inclusion of such slots on the total stations now allow personal computer programs to be easily transferred to the instrument.

[To Top of the Page](#)

Data Storage and Transfer

To be effective, the data the total station gathers and transforms must be input into a computer. The transfer of information from computer to theodolite is useful as well. Previously shot points, perhaps from an earlier project, can be very useful reference points in the field. Complex grid system points can also be transferred to the theodolite for the setting-out process. These upload and download transfers can be done directly or through an intermediary storage device. I will review these systems, going from the most established to the most innovative.

For many years the most common data transfer method was through data collectors, which resemble oversize calculators that typically hang on theodolite tripod legs. Not only do the collectors store data in fairly large amounts (they may exceed 1 megabyte of memory), but they also have the ability to manipulate and display the survey data. In effect, they are in competition with the total stations themselves for being the brains of the survey instrumentation. They are time-tested, durable, shock-resistant, and increasingly they accept removable memory or program cards, giving them much greater potential than they had previously. For a lower end instrument, they continue to be a very viable solution.

A second transfer medium, which probably will decline in usage, is the proprietary memory module, usually of modest capacity (approximately 64 to 128 kilobytes), which is inserted into a receptacle on the total station. The memory modules require a specially designed reader that is attached to the data-receiving computer through either serial or parallel ports. Although now surpassed in capacity, economy, and convenience by other transfer methods, in my experience the memory modules are nearly indestructible; I have never experienced a module-related data loss of any sort. Time will tell whether the PCMCIA cards, a design not intended for rough outdoor use, will prove to be as durable.

PCMCIA data cards are rapidly becoming an industry standard for data transfer. They are relatively inexpensive depending on the capacity--which ranges into multiple megabytes--and they are easily moved between the slots on a theodolite and a computer. Almost all laptop, IBM-compatible computers now have such slots, and a slot interface is readily available for desktop machines. Given the large capacity, entire field seasons of data can easily fit on a single card, reducing the equipment necessary for field data collection. The need for computer

transfer while in the field may be reduced to backup functions. Many advances can be expected in the arena of the PCMCIA interface; programs for the total station and data itself can all reside on one form of media, so that input, output, and program control are greatly simplified. One powerful Nikon total station even carries two PCMCIA slots, allowing segregation of program and data cards.

Direct transfer of data from total station to computer appears at both ends of the price spectrum. Less expensive instruments often have an internal memory, around 256 kilobytes to 1 megabyte, which can store in the range of 500 to over 2,000 measurements, depending on the particular data recorded per shot. The data can then be transferred when the total station returns to the computer at home base; an RS-232 serial connection is standard on almost all electronic theodolites. The alternative form of direct transfer puts the computer in the field linked to the total station. Each shot is recorded directly to hard or floppy disk, circumventing any necessary on-board theodolite storage.

Storage is only one aspect of field computer direct links. When attached to the total station, the computer's greater memory and computational capability become available. Control of the total station usually passes to the computer, and complex annotation of points (types of shots, feature numbers, contextual information, etc.) can be input through menus, pointing devices, or keyboard. This alphanumeric information is not easily added from the cramped and limited keypads of theodolites. Immediate data reduction and display are another obvious outcome--the larger screens of notebook computers are much more effective than the best of total station displays in showing data point positions as they are shot. In this way, data relationships can be identified during fieldwork, and grievously aberrant point positions can alert the survey team to errors in instrument setup or alignment before significant amounts of erroneous data are collected.



I am familiar with LISCAD Plus, a Leica product, that I have used with a small IBM notebook computer, the Thinkpad 500. The software has a number of CAD (computer-aided design) features, such as surface modeling, and works within MS Windows. Output of CAD files allows direct export to AutoCAD or Microstation programs. The greater readability of the menus of such programs and the immediate graphic feedback allows crews with little field experience to be productive right away and reduce error rates while at the same time recording much more detailed information than before. Our data files are ready for mapping and CAD use immediately after error scanning.

One weak link in this field setup is the computer, which may have problems in the field, especially in dusty or wet settings. But my experience in the dry and relatively calm highland valleys of Peru suggests that with care, a notebook computer can be reliably used alongside the total station, taking into account three problem areas. First is that the computer needs an adequate platform that places it conveniently close to the total station operator and well above the ground. For a light computer, I have found that a strong wooden platform attached to tripod legs is quite adequate. Mine was produced by a helpful surveyor-tinkerer with archaeological interests; I have had little luck turning up any sort of commercially available equivalent.

Second is the problem of screen readability in bright light--this is particularly a problem with color screens, which are rapidly becoming the standard on portable computers. Shading the screen is helpful but clumsy. The best monitor for daylight readability and battery savings is a monochrome LCD screen whose backlight can be completely turned off in sunlit conditions. Another solution is a pen-based computer designed with readable screens and less vulnerability to contamination and dampness, although these are often expensive features.

The final problem is not unique to field computers but aggravates an existing total station problem: battery life. Most total stations run on removable, rechargeable, proprietary NiCD battery packs. Their duration depends on the amount of time that they are in use and the number of shots taken, but with recent improvements many battery packs are capable of lasting a full day of intense measurement. Battery chargers usually require line voltage, making them difficult to use in remote locations. We are beginning to see some instruments that accept

standard alkaline batteries, and solar charging systems could be assembled but are not generally available for total station situations to my knowledge. A partial solution to both computer and total station battery problems can be found with rechargeable lead-acid sealed batteries, which also require solar or line-current charging but have much greater capacity than on-board batteries. Total station batteries, and many laptop ones as well, range around 1-3 amp hours, compared to typical lead-acid cells of 7-12 amp hours. With the right cabling and conversion, both the computer and the total station can be run off a single large battery. Two such batteries, judiciously used, could run a system for a week in the absence of line voltage.

[To Top of the Page](#)

Some Things to Consider

Total stations are not for everyone, and they do have some often unforeseen liabilities. They are still fairly heavy, averaging around 5-7 kg for the instrument, and another 3-5 kg for the very necessary protective travel case. They must be treated with great care, although most product lines are built with durability in mind. An inopportune spill of a tripod-mounted theodolite may put you out of business for some time, given repair availability and costs. Calibration, testing, and cleaning of the instrument is advisable before every major season, which may cost two hundred dollars. I feared relying on a single, electrically based system that was not field-repairable, but have not had a failure of any part of my total station system in six major field seasons.

Apple computer users may face difficulties, given that much of the survey hardware and software has traditionally been only compatible with the IBM-type personal computers, but this seems to be slowly changing toward greater flexibility.

For those working outside the United States, a total station is an expensive piece of equipment to put at risk and one that may be difficult to pass through foreign customs. Yet I have found that it is not a recognized target of thieves or zealous inspectors because the value of the instrument is largely unknown, if not indeterminable, in many countries. Passing through customs has therefore been relatively easy in my experience.

Finally, to make use of the long-distance measuring abilities of the total station, quality two-way hand-held radios are essential. When measuring distances over 50 m, and especially at distances beyond 200 m, voice communication is not realistic and hand signals are of limited utility. Radio communication gets to the heart of the matter and pays off many times in temper and efficiency. We have also found that simple signals, such as sending quick clicks with the radio's send button, can greatly speed routine messages.

The Latest and Greatest

As with most technologies, the most exciting new features are at the top and bottom of the price range. Decreasing prices at the lower end should allow cash-strapped archaeologists into the market. Street prices for lower end total stations (5"-20" angular accuracy, 3 mm plus 3 ppm to 6 mm plus 6 ppm) should fall in the \$5,000-7,000 range. Tripod, reflector, and reflector rod need to be purchased as well, but with some competitive pricing, you can work with an excellent instrument for far under \$10,000, something unthinkable just a couple of years ago. Think carefully about your accuracy, distance, data storage, and special program needs, and choices will narrow quickly.

At the high end, in addition to ever-increasing accuracy, there are some very useful features emerging. Most outstanding are the motorized and automatic target recognition instruments starting to appear on the market. A number of manufacturers are making total stations that have motor drives to seek specific vertical and horizontal points, something useful in setting-out or finding previously recorded points. While this increase in speed and ease of sighting has value in archaeology, it may not justify the considerable additional cost. Automatic target recognition allows one-person operation, because the total station will track the reflector as it moves across the landscape, and its functions can be radio-controlled by the person holding the reflector. This technology is new and expensive (expect \$30,000 plus), but will undoubtedly mature and become more accessible in the near future. For CRM projects, the reduction in costs (one person less and greater speed of measurement) may help

justify purchasing the instrument. Although even at this expense the instrument has a limited tracking range generally not exceeding 1,000 m, in my experience it is not usually effective to work at this distance.

Another new innovative feature helps in setting-out. Normally, one of the most time-consuming tasks is bringing the rod person into line with the theodolite's orientation. However, a number of higher-end instruments have point guides that project a split, low-power visible light laser, half of which is intermittent. The reflector-holding person knows they are in alignment with the theodolite telescope when both the flashing and constant beams are visible. This feature has a working range of about 100 m, beyond which it is difficult to distinguish the guide.

Summary

Because of dropping prices, increasing reliability and numbers of features, and decreasing weight, total stations are increasingly likely to enter the archaeologist's toolkit. For mapping of all kinds, the additional speed and accuracy offered by total stations demand our attention. The reduced error rate, greater annotation potential, and higher efficiency of electronic data transfer contribute to timely, successful data processing. For local area surveys, total stations could be quite useful in place of or in conjunction with GPS instruments. Visibility of the target reflector will always be a problem over significant distances of broken or heavily vegetated terrain, but the accuracy of measurement would be difficult to match with current GPS technology of equivalent cost. For example, in open country, a high-power total station on an elevated point could potentially record points within an approximately 50 km² circular area, with even the farthest points not exceeding an error of about 2 cm. Total stations can also work efficiently and accurately on a very local scale, such as profiling excavation features and recording three-dimensional artifact locations. With the additional notation abilities of theodolite-linked computers, excavation materials can leave the site fully cataloged, with excellent numeric control and the potential for immediate spatial display. Now is a great time to assess whether a new total station or an upgrade of an old one would make sense in your field project.

I would like to thank representatives of Leica (800-645-9190), Nikon (East Coast 516-547-4200, West Coast 310-516-7124), Sokkia (800-476-5542), and Topcon (201-261-9450). My Leica distributor, Haselbach Surveying Instruments of Burlingame, Calif. (415-348-7247), has been instrumental in keeping me equipped and updated on trends in total stations.

John W. Rick is in the Department of Anthropology at Stanford University.

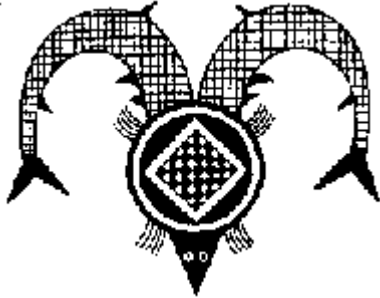
[To Top of the Page](#)

LAST PAGE

TABLE OF CONTENTS

NEXT PAGE

Working Together



The Integration of Traditional and Scientific Knowledge on Leech Lake Reservation, Cass Lake, Minnesota

Rose Kluth

When asked to submit an article for the Working Together column, I experienced the same reactions that I always do when asked to represent the reservation on tribal issues--apprehension followed by a sense of responsibility. The reason for this is simple--I am a non-Indian archaeologist who believes that Indian people should represent themselves regarding these sensitive issues that are very close to their heart. However, the reason that I was employed by the reservation was to do exactly this--bring their opinions and ideas directly to the archaeological community by using my acquired training and skills. For this reason and because they have entrusted me with their knowledge, I feel a responsibility to bring this information to you through this forum.

Traditional vs. Scientific Knowledge

Integrating scientific and traditional knowledge on archaeological projects is an attainable goal. However, there are inherent challenges in combining these approaches. We have been successful in incorporating traditional and scientific research in the Leech Lake Heritage Sites Program. While this approach may not work for all tribes due to differing perspectives on archaeology, our program has served the needs of the Leech Lake Reservation well. I will first present a discussion of the mission and objectives of the Leech Lake Heritage Sites Program, offering examples of integrating traditional knowledge into Section 106 compliance and tribal archaeology projects.

The Leech Lake Heritage Sites Program is a part of the Division of Resource Management of Leech Lake Reservation in north-central Minnesota. The objective of our program is to provide cultural resource management services from a Native American perspective. These services are provided to federal and state agencies, and include all facets of Section 106 compliance. We exclusively hire Native Americans to participate in this program, and provide training supplemented with on-the-job education. What sets our program apart from others is that the employees provide us with a unique perspective about prehistoric cultural materials, as well as how to deal with sensitive sites and objects in a manner that is acceptable to their cultural beliefs.

Typically, Native Americans have not been encouraged to participate in the preservation process. Traditional beliefs have led some Native American people to avoid the field entirely. In the past, most archaeological fieldwork was performed by non-Native Americans, and the resulting reports were reviewed by non-Native Americans, even if the project involved tribal lands. At no point in the process was there a mechanism for Native American review or consultation, even if burials were involved. This process has changed dramatically within the last decade, with the implementation of federal legislation such as NAGPRA and the 1992 amendments to the National Historic Preservation Act. At last, the time has arrived for Native Americans to play a primary role in the preservation process.

Before discussing the integration of traditional and scientific archaeology, we must define both. *Traditional knowledge* is a compilation of the knowledge of tribal culture history, past and present lifeways, language, spirituality, rituals, and ceremonies. This knowledge is gained by living the culture and by listening to the stories and oral histories of elders, parents, and grandparents. *Scientific knowledge* is knowledge that is obtained through testable and reproducible data. Archaeological data, and the means employed to obtain that data, are, for the purposes of this discussion, an example of scientific knowledge.

Incorporating Traditional Knowledge in Section 106 Compliance Work

In order to accurately convey the process of integrating traditional and scientific knowledge within our program, I will first discuss the incorporation of tradition on a daily basis. Following this, four projects will be presented. Each project is an example of what we consider to be the successful integration of both traditional and scientific knowledge.

Daily Traditions

When the cultural resources management program was created, the employees were consulted about their concerns regarding archaeological fieldwork. Several individuals mentioned that their grandmothers had told them never to work on or near burial sites, and that they should smudge themselves with sage or cedar every morning before work. They were also instructed to place tobacco on the ground before excavating. This was to be done as a sign of respect to Mother Earth for the disturbance that was about to take place. They were warned that if they did not do these things, they or their families might be hurt. Also, they expressed concern about the use of alcohol on the job--this must be avoided in order to maintain respect with the spirit world and Mother Earth. After hearing their concerns, we assured them that an ample supply of cedar, sage, and tobacco would be on hand for them to complete these functions before beginning fieldwork, and any necessary ceremonies should be completed as they saw fit. By doing this we have created an atmosphere that is comfortable and respectful to the needs of the crew without in any way affecting contractual needs or specifications.

The Ogema-Geshik Site

In summer 1993 we were asked to investigate a possible archaeological site disturbance in the northwestern corner of the reservation. A survey to determine site limits was initiated, as was an evaluation of the level of site disturbance.

Shovel tests were placed on a 10-m grid in order to determine the horizontal and vertical extent of the site. During shovel testing, four bear claws were found in a single shovel test. The bear claws were removed and bagged for transport back to the lab, along with the other artifacts located that day. Later, one of the crew members, speaking with the field director, said that he was a member of the Bear Clan and requested that the field director place the bear claws back where they were found. The field director complied, and the bear claws were reburied in their original location. The crew member placed tobacco near this location. This individual was satisfied with the resolution, and felt comfortable with our reporting the information in the final archaeology report.

Fieldwork continued at the site, and the crew located human remains. These remains were immediately reburied by the same crew members. They then placed tobacco near the area where the remains were found, as well as a dish with food for the spirit of that individual. They spoke to the spirit, asking the spirit to understand that they meant no harm, and that they would move away from the area. The crew members discussed the situation with the field director and requested that they move their shovel tests back at least 200 ft from this area, as they felt that it was a very sacred area that must not be disturbed. We complied, continuing our survey, and were able to delineate site limits without further disturbance to the sacred areas. We uncovered the remains of an important prehistoric wild ricing site, obtained the information needed to make an assessment of the site, and the crew felt comfortable working in the area because proper respect had been paid to the sacred areas.

U.S. Tribal Highway (U.S.T.H.) 169 Project

In summer 1995 we completed an archaeological survey for the Minnesota Department of Transportation along a portion of U.S.T.H. 169 in north-central Minnesota, near the Mille Lacs Reservation. We maintained daily contact with Mille Lacs Reservation staff, informing them of our progress. Before excavating test units, an intact catlinite pipe was found eroding from a bank located above an old roadbed. When the pipe was discovered, we

immediately contacted Mille Lacs Reservation staff, who met us at the site. The crew members did not remove the pipe from the ground, but rather left it in situ for the Mille Lacs staff to observe. The Mille Lacs staff wanted the pipe reburied immediately as they felt that it indicated the presence of an Ojibwe burial site. They reburied the pipe out of the proposed right-of-way, west of the area where it was found. Our crew was instructed to place our test units away from the area where the pipe was originally located. We respected their concerns and completed our excavations away from this area. As a result of our fieldwork, we determined that this site was eligible for listing in the National Register of Historic Places. We were able to complete the archaeological fieldwork, yet respect the concerns and traditional beliefs of the Mille Lacs Reservation representatives.

NAGPRA

In fall 1993 we received more than 200 museum inventories of sacred objects, unassociated funerary objects, and objects of cultural patrimony that may have been associated with the Leech Lake Anishinabe people. In order to begin the NAGPRA process, the Leech Lake Tribal Council created an elder council, called the Leech Lake Advisory Council on Cultural Resources. The council was to work with the heritage sites program director in deciding whether these objects should be repatriated. After many prayers, meetings and discussions, the elder council determined that the way to proceed was to combine oral and written histories regarding these objects. The council asked me to visit all museums in Minnesota in order to determine if their collections contained items that could be attributed to the Leech Lake Anishinabe people. If so, these objects would be brought back to the reservation and dealt with in the proper traditional manner. All of the meetings to date have involved much prayer and a great deal of discussion regarding the old ways and the proper and respectful disposition of these objects. However, the council has chosen to rely on existing museum records to determine which objects came from the Leech Lake Anishinabe people and has combined both written and oral histories in its work with NAGPRA.

Pug Hole-Klein Lot Site

In summer 1995 we completed an archaeological survey on Leech Lake Reservation tribal lands before leasing a lakeshore lot. A previously recorded site was relocated, and the site limits were expanded to include the lot in question. Severe erosion was noted on the lake side of the lot. Later that summer, human remains were found exposed within the eroded area. A representative of our elder council was contacted, and he came with us to the site to rebury the remains. He instructed us to remove only those remains that were actually visible. We were not to displace any soil to remove any of the human remains still located within the bank. These remains were reburied on the lot farther inland from the shoreline.

A meeting was held to discuss possible methods to halt the erosion. Because an archaeological site was located on this lot, I was consulted regarding erosion control methods. Would it be possible to plant trees on the lot, or should the bank be shored with large stones? I contacted our elder council for advice. One of our elders said that the shore should be left to erode, as it was a natural process that should not be fought. He said that the spirit of the human remains that were still buried there either wanted to move to the water in order to be near the water spirits or they were on the next step of their journey. He said that if we placed rock on the eroded area it would not stay put, as the spirits in that area would be much more powerful than any stones. He said that it would be dangerous for a heavy equipment operator to drive over this site, as he might be injured or killed because of his actions. His decision was respected, and the site was left alone. Although it was difficult for me to allow the site to erode, I felt that we must heed the traditional knowledge of the elders. There was no alternative once we understood. It was a decision that respected the elders' traditional knowledge.

Discussion

These examples are specific to our reservation and tribal archaeology program. We understand that it may not be feasible for archaeologists to access traditional knowledge in many settings. However, I strongly encourage communication between archaeologists and Native Americans in a manner that is appropriate and respectful to tribes and amenable to archaeologists.

I read again with interest previous Working Together articles. There is a commonality in approaches between tribal archaeology programs, with a strong reliance on oral histories and a respect for traditional knowledge. After reading these articles I was proud to have been asked to participate in this forum. However, I hope that we do not suggest that archaeologists cannot work with tribes regarding archaeological issues. John Allison's recent

submission was somewhat unsettling to me for this reason. Mr. Allison states that "I tend to get a little impatient...reading articles by archaeologists who still don't get 'it'," and "There are lots of jokes among tribal people about the ignorant anthropologists asking ridiculous questions and getting ridiculous answers from people who don't trust them" [*SAA Bulletin* 14(1)]. These types of statements have undoubtedly angered and frightened archaeologists away from the tribal consultation process for years, and I believe they have also hampered the NAGPRA process. If we tell archaeologists that their questions and process are ridiculous, why will they bother to consult with tribes except when they absolutely must? We have to encourage dialogue between the archaeological and tribal communities rather than inflaming both sides.

Archaeologists have to be informed as to what the "rules" are when working with tribal people. On the other hand, they must understand that a lack of trust exists because, in the past, archaeologists have not consulted with Native Americans regarding their projects, and they have not trusted their oral histories when presented as evidence. This has been made clear to me through the NAGPRA process--if we can find a written history documenting cultural affiliation between human remains or sacred objects, this serves as evidence for the proof of cultural affiliation. In the current climate, traditional knowledge simply does not carry the weight that a written history does.

There has to be an outreach from the Native American community as well as from the archaeological community in order to share perspectives. We are all a part of our own culture; my culture places a strong emphasis on scientific research and data. Native American culture places a great emphasis on oral histories and traditional beliefs. Neither is wrong. We must come together and try to understand the other. If we do not, we will be battling the same issues over and over again with bad feelings on both sides. I believe that we can work together because we have the same goals--site protection and a knowledge of past lifeways. Through frank communication, we can work toward those goals.

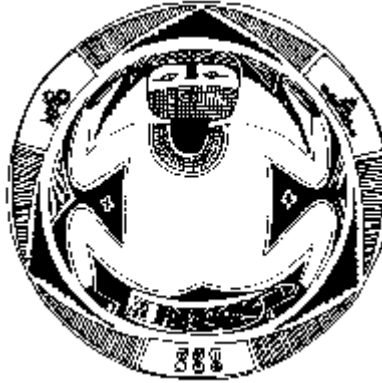
Rose Kluth is program director for the Leech Lake Heritage Sites Program at Cass Lake, Minnesota.

[LAST PAGE](#)

[TABLE OF CONTENTS](#)

[NEXT PAGE](#)

INSIGHTS



THE MANY FACES OF CRM

Using National and State Databases to Demonstrate Value and Efficiency of Federal Archaeology Programs in the United States

Gary D. Shaffer

According to NADB-Reports online, archaeological evaluation studies make up just 13 percent of the identification studies nationwide. One might expect that more surveys take place to locate archaeological sites than to evaluate the significance of known sites. Not all surveys find archaeological resources; some surveys find sites that readily allow determinations of ineligibility for the National Register; and still other identification studies locate sites that agencies or other proponents of undertakings plan to avoid through project redesign.

On a comparative note, NADB-Reports records online 253 identification and 78 evaluation reports for Maryland. These numbers indicate that evaluation projects constitute 31 percent of the identification projects. Also, Maryland's review and compliance log shows that the mean annual number of archaeological evaluation reports for FY 1992 through FY 1995--27.8 (s.d. = 5.9, range = 22-36)--represents 39.3 percent of the mean annual number of identification reports for the same period--70.8 (s.d. = 13.6, range = 55-84).

While several factors could well be involved, these figures *may* indicate that Maryland's identification surveys more effectively locate sites that warrant additional field studies of significance. NADB-Reports, however, includes records on projects other than Section 106 or even CRM studies, so it is not prudent to put too much stock in the absolute differences between the NADB and state databases. Still, the national numbers of evaluation studies are less than those of identification surveys; and, based on the Advisory Council statistics, *less than 5 to 7 percent* of all federal undertakings require separate field evaluations of National Register eligibility.

The degree to which archaeological properties are found to be eligible for the National Register of Historic Places is of further interest. With respect to Section 106 reviews, the determination that a National Register-eligible archaeological site lies within a project's area of potential effects generally leads to findings of "adverse effect" or "no adverse effect" (36 CFR 800.5 and 800.9). Federal agencies that find their undertakings to have such effects must consult with the Advisory Council [36 CFR 800.5 (d) and (e)]. The Advisory Council estimates that in FY 1994 it reviewed under Section 106 some 700 federal projects involving effects of one kind or another on archaeological properties (Thomas McCulloch, 1996 personal communication). Given that 4,800 to 6,720 of the 96,000 undertakings in the same period entailed archaeological field studies for identification or evaluation, only about 10 to 15 percent of the initial Section 106 investigations discovered significant archaeological sites. Furthermore, the 700 projects with adverse or no adverse effects on significant archaeological resources represent less than one percent of all federal undertakings for FY 1994. The small proportion of federal undertakings involving National Register-eligible archaeological properties is clear.

At the state level for FY 1992 through FY 1995, Maryland's compliance log shows a mean annual number of adverse or no adverse effects on archaeological historic properties of 32.3 (s.d. = 23.6, range = 4-61). This figure represents 1.3 percent of all federal projects reviewed for the same period (mean = 2,457), thereby underscoring the limited proportion of federal undertakings involving significant archaeological sites. The Maryland data also indicate that 19 percent of the initial recommendations for field identifications of archaeological historical properties (mean = 174, for FY 1992-FY 1995) actually find sites eligible for the National Register. This amount--or the "success" rate in finding significant sites--is slightly higher than the national estimates of 10 to 15 percent.

It is difficult to examine precisely how often field evaluations determine that given archaeological sites are eligible for the National Register, because figures on identification and evaluation projects have been combined. The available data do reveal, however, that more evaluation studies take place than result in determinations of National Register eligibility. Queries of NADB-Reports online for the 50 states and the District of Columbia show 8,149 evaluation studies and 6,317 data recovery studies, the latter presumably of National Register sites. Figure 1 provides regional comparisons of the numbers of archaeological data recovery studies with evaluation projects. For four of the five former NPS regions, the amount of data recovery (range = 357-2,142 records/region) is less than or similar to the frequency of evaluation (range = 452-2,817 records/region). The somewhat higher than expected numbers of data recovery projects in NADB reflect several factors: the inclusion of archaeological projects undertaken for reasons other than compliance with Section 106 (e.g., Section 110 studies, state or locally mandated projects), variable interpretation of the worktype "data recovery study" during NADB-Reports data entry, and the temporary (between years 1987 and 1992) reduction in NADB-Reports worktype categories by the NPS. The provisions of a field for National Register determinations in future versions of NADB-Reports may prove useful.

While we have examined the annual frequency of various adverse effect determinations on significant archaeological properties, we have not yet seen how many of these projects actually involve data recovery excavation. One must realize that not all Section 106 projects found to involve adverse effects will necessitate such intensive study. The proponents of a construction project, for example, might abandon their plans for a number of reasons; or they might decide to redesign their projects to avoid archaeological impacts. Also, if rarely, consulting parties might decide that destruction of a National Register-eligible site is an appropriate, even if regrettable, "treatment" in the public interest. According to the Advisory Council (Thomas McCulloch, 1995 personal communication), there were at most 98 council reviews of archaeological data recovery plans for undertakings with various adverse effects in FY 1994. This, again, is less than 1 percent of all federal undertakings for the same period. Even if all such reviews led to archaeological excavations, relatively few federal projects ever entail large-scale excavations. In Maryland the mean annual number of data recovery reports for FY 1992 through FY 1995 is 3.8 (s.d. = 1.7, range = 2-6). This quantity represents only .2 percent of all annually reviewed federal undertakings and it underscores again the extremely limited proportion of federal undertakings that need expansive archaeological excavations.

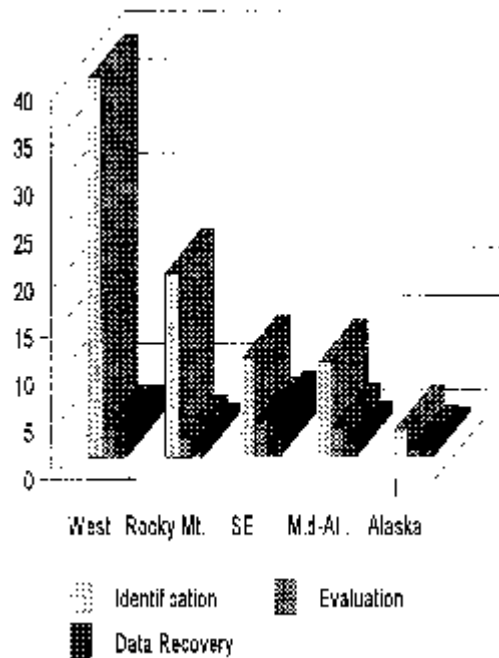


Figure 1

Conclusion

This examination of federal archaeology, while brief and employing several estimated statistics, has incorporated multiple lines of evidence and has indicated several points:

- * Only a small proportion (ca. 5 to 7 percent) of the large number of annual federal undertakings reviewed through the Section 106b process ever require archaeological fieldwork to locate sites or to assess site significance.
- * Fewer of the more intensive evaluation studies are needed than the initial identification surveys; and these archaeological identification/evaluation projects appear to find significant archaeological sites for less than 1 percent of all annual federal undertakings.
- * Consultation among participants in the Section 106 process leads to large-scale data-recovery excavations for a fraction of the yearly federal projects with significant archaeological properties.

The federal archaeology program serves a valuable function by forcing archaeologists to distinguish between sites with little research potential and significant sites worth studying for public benefit. This screening process also provides basic information on past human settlement, technology, and adaptations in geographical areas that archaeologists otherwise would rarely investigate. Furthermore, the presented statistics reflect the success of Section 106 in getting preservationists and developers to work together to avoid most impacts on important sites.

Given the minimal proportion of federal projects ever needing archaeological investigations, Section 106 archaeology should not be a heavy burden on federal agencies. Indeed, the federal government is getting a relative bargain from its regulatory process of preserving important archaeological information. Accurate monetary figures on the combined governmental and private costs of this archaeological program are, unfortunately, unavailable. Still, American archaeologists would be wise to communicate the small percentage of Section 106 field projects to Congress and the public.

In our conversations with legislators and their constituents, we should also indicate that the current historic preservation system could still benefit from some change. For example, a good deal of time may be wasted in the Section 106 review of the 93 to 95 percent of annual federal undertakings that need no archaeological field

study. Additionally the NADB-Reports data showed certain regional differences in the relative numbers of identification and evaluation studies. Analysis of these data may reveal how to conduct more effective surveys to locate sites eligible for the National Register. Further, some monies spent on the many identification and evaluation projects that find no significant sites might be better used for the intensive study of important sites and research problems.

Efficiency could be increased if we better establish which projects are unlikely to affect significant archaeological sites and more routinely institute programmatic agreements or other measures to eliminate them from future review. As I pointed out in a paper at the SAA Annual Meeting of 1987, there should be more consideration of project size and estimated site density when deciding if surveys of lands with otherwise "high archaeological potential" truly would be fruitful. Also, it might be better to streamline Section 106 and comparable state statutes so that CRM archaeologists are charged not with protecting individual historic properties but with investigating significant research questions in select geographical areas threatened by development (cf., A. C. Goodyear et al., *American Antiquity* 43:159-173; T. F. King, 1977, Resolving a Conflict of Values in American Archaeology. In *Conservation Archaeology: A Guide for Cultural Resource Management Studies*, edited by M. B. Schiffer and G. J. Gumerman. Academic Press: New York). Such a change may lead to the loss of some archaeological information. However, this new focus could help preserve data that we are more likely to use to interpret past human behavior for larger professional and lay audiences.

Fine-tuning the "motors" of our governmental archaeology programs can only be in our best interest. American archaeologists must recognize that the costs of the few warranted archaeological studies can still be substantial for the individual agency or the private sponsor. Besides improving the methodological bases of current CRM archaeology, we should assist lawmakers in finding creative ways to pay for archaeology and to compensate private landowners for the archaeological studies they sometimes must fund. In the latter case, it would be worth supporting the provision of tax benefits to private individuals for public archaeology.

Finally, American archaeologists should employ the data presented here and readily available through additional searches of NADB online and state CRM databases to make the case for public support of archaeology. *It is critical to emphasize the importance of our discipline as the only means to learn about most of human history.* We also must provide readily understandable examples of the significance of archaeology, perhaps using the services of a mascot like Smokey the Bear as a friendly spokesman. If we fail to communicate the benefits of archaeology to the public, our governmental archaeological programs--no matter how efficient--may themselves become antiquities. *

The following individuals provided helpful assistance and useful comments: Ron Anzalone, Lloyd Chapman, Terry Childs, Beth Cole, Al Dekin, Dan Haas, Bob Harris, Eric Hertfelder, Lucinder Jones, and Tom McCulloch.

Gary D. Shaffer, Ph.D., is the Preservation Officer for Archaeological Services at the Maryland Historical Trust.

[LAST PAGE](#)

[TABLE OF CONTENTS](#)

[NEXT PAGE](#)

CRM to be Highlighted at the 1997 Annual Meeting

Cultural resources management (CRM) contributions, accomplishments, and issues will be highlighted at the upcoming SAA Annual Meeting in Nashville, April 2-6, 1997. A statement about the meeting theme, "Celebrating National Commitments to Archaeology" was presented in the May issue of the *SAA Bulletin* [14(3):5], and detailed announcements about the theme and the meeting in general have been posted on a number of electronic lists, including ACRA-L, the Public History list, Federal Preservation Forum, and the NCSHPO list. On behalf of the program committee, I would urge and encourage CRM practitioners to attend and participate in the meeting through papers, workshops, forums, or other venues. Some of the most important work in American archaeology and history today is occurring through CRM, and the SAA meetings are a good venue to let the world know what we have been accomplishing.

In 1997 the National Historic Preservation Act will have been in place for 30 years, and during that time CRM, very broadly defined, has revolutionized archaeology in the United States and shaped national programs far beyond our borders. It is appropriate that we as a profession celebrate as well as evaluate what has been accomplished and what we have learned. Toward this end, the plenary session Friday evening will focus on CRM, emphasizing the triumphs of various national archaeological programs. Furthermore, the opening session Wednesday evening will cover relationships between archaeologists and Native Americans as a result of the momentous changes that have occurred regarding national commitments to historic preservation over the past three decades.

In a closely related matter, the Archaeology and Ethnology Program of the National Park Service will devote an issue of *Common Ground* (formerly *Federal Archeology*) to the meeting theme, and we hope to release an issue about a month before the meeting (circulation ca. 10,000 copies). Dave Andrews (the editor of *Common Ground*) and I envision the issue focusing on the triumphs of national programs, with major emphasis on accomplishments in various parts of the United States. Interested participants should contact Andrews or me as soon as possible to discuss ideas or paper topics; we will need manuscripts in hand by late fall if we are to mail an issue out by early March. Contact me at (904) 580-3011 ext. 344, email danderso@seac.fsu.edu.

David G. Anderson of the National Park Service Southeast Archeological Center is chairman of the 62nd Annual Meeting.



NEWS AND NOTES

The H. John Heinz III Charitable Trust Grants for Archaeological Field Work in Latin America announces its grant program for 1997. This program will fund four to six scholars to conduct archaeological research in Latin America. Applications for dissertation research will not be considered. The maximum amount of the award is \$8,000. The deadline for submission is November 15, 1996, and notification of the award will be made by March 1997. For complete information, write to Rose Gibson, H. John Heinz III Charitable Trust, 32 CNG Tower, 625 Liberty Ave., Pittsburgh, PA 15219. If you have any questions, please contact James B. Richardson III, Chairman, Division of Anthropology, Carnegie Museum of Natural History, (412) 665-2601, fax (412) 665-2751.

The National Center for Preservation Technology and Training announces its 1997 Preservation Technology and Training Grants in historic preservation. The center is a National Park Service initiative to advance the practice of historic preservation in the fields of archaeology, architecture, landscape architecture, materials conservation, and interpretation. Grants will be awarded in three program areas: research, training, and information management. All proposals that seek to develop and distribute preservation skills and technologies for the identification, evaluation, conservation, and interpretation of cultural resources will be considered. Grants will be awarded on a competitive basis, pending the availability of funds. Only government agencies and not-for-profit institutions may apply. The proposal deadline is December 20, 1996. The complete 1997 PTTGrants announcement, including the request for proposals and instructions on how to prepare and submit applications, is available exclusively via NCPTT's fax-on-demand computer at (318) 357-3214, web page at <http://www.cr.nps.gov/ncptt/>, and Internet gopher at <gopher://gopher.ncptt.nps.gov>.

The National Preservation Institute announces a series of professional development seminars on the management and stewardship of cultural and historical resources. These one- and two-day seminars bring distinguished faculty to highlight state-of-the-art professional practice in important areas of historic preservation and cultural resource management. Seminars focus on enhancing the skills of professionals responsible for the preservation, protection, and interpretation of historic, archaeological, and cultural resources. The National Preservation Institute, a nonprofit organization, also will customize seminars or workshops to focus on the needs of a particular organization. For further information, contact Frances Lumbard, Director of Program Development, P.O. Box 1702, Alexandria, VA 22313, (202) 393-0038, email info@npi.org, web <http://www.cr.nps.gov>.

Ancient Architects Headline New National Park Service Electronic Magazine. "Ancient Architects of the Mississippi," an on-line exhibition on the World Wide Web, was unveiled on *ParkNet*, the new National Park Service (NPS) electronic magazine launched during National Park Week, April 22-28, 1996. The Web site, developed jointly by the NPS archaeology and ethnography program, the University of Arkansas, and national and state parks of the region, is a virtual museum of earthen prehistoric architecture of the Mississippi River.

Web site visitors take a journey down the Mississippi to a time when the river and its tributaries teemed with prehistoric metropolises, arts and crafts flourished, and elaborate plazas and mound complexes anchored towns and urban centers. "Ancient Architects" is located at the "Links of the Past" gateway in *ParkNet*. The Web address is <http://www.cr.nps.gov>.

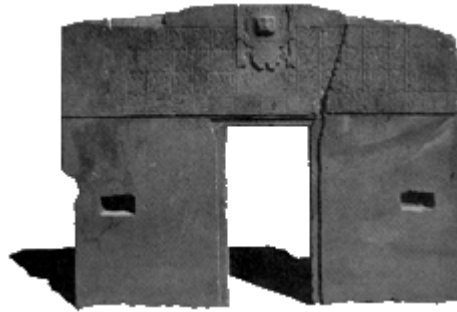
The American Academy in Rome announces the 1997/98 Rome Prize fellowship competition in the fields of architecture, historic preservation, landscape architecture, conservation, and archaeology. The deadline for the competition is November 15, 1996. Winners of the Rome Prize are selected by rotating juries of prominent artists and scholars drawn from all regions of the country. Each Rome Prize recipient is given a stipend, travel funds, room and board, and a study or studio in which to pursue independent work for periods ranging from six months to two years at the academy's 11-acre, 10-building facility in Rome. The American Academy in Rome is the foremost American overseas center for independent study and advanced research in the fine arts and humanities. Applications may be obtained by writing to the Programs Department, American Academy in Rome, 7 E. 60 St., New York, NY 10022-1001, (212) 751-7200. Please specify field of interest when requesting an application.

The Pennsylvania Historical and Museum Commission invites applications for its 1997-1998 Scholars in Residence Program. The program provides support for full-time research and study at any commission facility, including the State Archives, the State Museum, and 26 historical sites and museums. Residencies are available for four to 12 consecutive weeks between May 1, 1997, and April 30, 1998, at the rate of \$1,200 per month. The program is open to all who are conducting research on Pennsylvania history, including academic scholars, public sector professionals, independent scholars, graduate students, writers, filmmakers, and others. For further information and application materials, please contact Division of History, Pennsylvania Historical and Museum Commission, Box 1026, Harrisburg, PA 17108, (717) 787-3034. The deadline for applications is January 17, 1997.

The Archaeology Division (AD) of the American Anthropological Association offers travel awards up to \$100 for any student member of the AD who presents a paper at the AAA annual meeting in San Francisco. To qualify, students must submit the following: paper title and author(s) as listed in the AAA meeting program, photocopies of both a current student identification card and a name badge from the meeting, Social Security number, and mailing address. Submit these materials by December 31, 1996, to William H. Doelle, AD Treasurer, Desert Archaeology, 3975 N. Tucson Blvd., Tucson, AZ 85716. Actual reimbursement depends on the number of qualified applicants.

The Archaeology Division (AD) of the American Anthropological Association calls on professional archaeologists to join the organization. Archaeology has a great deal to offer the AAA, but we need to maintain our strong membership position. Key benefits to membership include the following: participation in the major national level organization that seeks to integrate the four subfields of anthropology; the AD's special publication series, *Archaeological Papers of the AAA*; the *Anthropology Newsletter*; and the right to participate at the AAA Annual Meeting. Students receive a reduced membership rate.

The William P. Clements Center for Southwest Studies in the Department of History at Southern Methodist University in Dallas welcomes applications for two research fellowships: (1) the Clements Research Fellowship in Southwestern Studies, in any field in the humanities or social sciences, from individuals doing research on southwestern America, and (2) the Summerlee Research Fellowship, specifically in the field of Texas history. Fellowship holders would be expected to spend the 1997-1998 academic year at SMU as research fellows of the Clements Center, teaching one course and participating in Center activities. The fellowships are designed to provide time for senior or junior scholars to complete book-length manuscripts. Each fellow receives the support of the center, access to the extraordinary holdings of the DeGoyler Library, and a subvention toward publication. Each fellowship carries a stipend of \$30,000 and modest allowance for research and travel expenses. Applicants should send a vita, a description of their research project, a sample chapter or extract, and three letters of reference from persons who can assess the significance of the proposal and the scholarship record of the proposer. Send applications to David J. Weber, Director, Clements Center for Southwest Studies, Department of History, SMU, Dallas, TX 75275. Applications must be received by January 15, 1997.



POSITIONS OPEN

The Ohio State University, Department of Anthropology, invites applications for a tenure track appointment in Archaeology at the Assistant Professor level commencing October 1, 1997. Applicant must have an active program of field research, and publications in leading, peer-reviewed journals. Latin America geographic focus preferred. Theoretical specialty open. Excellence in teaching and research required. The appointee's duties include teaching and advising at the undergraduate and graduate levels, including introductory archaeology and upper division region, method, and theory courses, and graduate seminars. Salary negotiable and commensurate with qualifications. Deadline for applications is November 15, 1996, or until position is filled. Send cover letter, vita, and names of three references to: William Dancey, Search Committee Chair, Department of Anthropology, The Ohio State University, 110 Lord Hall, 124 W. 17th Avenue, Columbus, OH 43210-1364. The Ohio State University is an Equal Opportunity, Affirmative Action Employer. Women, minorities, Vietnam-era veterans, disabled veterans, and individuals with disabilities are encouraged to apply.

Lamanai (South) Archeological Project needs full or part time PI for excavations in Belize. Qualifications: Ph.D. in hand; field experience in the Maya realm; 3 letters of recommendation, one of which must be from an archaeologist who has worked in Belize. Contact Mr. Colin Howells at Lamanai Outpost Lodge, PO Box 63, Orange Walk Town, Belize, Ph/Fax 501-2-33578.

Jones & Stokes Associates, a leading environmental consulting firm, has an immediate opening for an archaeologist for its Sacramento headquarters. Key responsibilities include conducting archaeological investigations, including survey and excavations for historic archaeological resources; preparing technical reports; evaluating the significance of historic resources; supervising field projects; and preparing historic period contextual studies. The position requires a master's degree in anthropology or a closely related field with an emphasis on historical archaeology; ability to write and work independently; and supervisory experience. Candidates should have knowledge of the western U.S. history; experience conducting architectural inventories and evaluating historic buildings; experience conducting prehistoric surveys and excavations in the western U.S., preferably in California. Please send a cover letter, resume, and three professional references to: Human Resources/96-024, Jones & Stokes Associates, Inc., 2600 V Street, Suite 100, Sacramento, CA 95818-1914, fax (916) 737-3048. Visit our web site at: <http://www.jsanet.com>. No telephone calls please. EOE/AA. M/F/D/V.

Director, Archaeological and Historical Services, Eastern Washington University. The University seeks a dynamic individual to direct a large and diverse grant and contract funded program. With current staff of 25 and three offices in the state of Washington, AHS conducts cultural resources management (CRM) projects and grant-funded research within a five-state region of the Pacific Northwest. Candidates must have a Ph.D. in Anthropology or Public History. Candidates must have strong organizational skills; demonstrated knowledge of

CRM requirements; the ability to manage project records and artifact collections and the direction of projects in archaeology and history. Research interest in the prehistory or history of the Pacific Northwest preferred, but a specialization in North America is required. This is a non-tenure track contract funded position; salary negotiable. This position, during the course of university employment, will be responsible for the receipt of, or accountability for, university funds or other items of value. Successful candidate must pass a background check. Review of applications will begin October 14, 1996. Submit letter of application; vitae; examples of publications or research reports; and the names, addresses, and phone numbers of three references to: Selection Committee, Division of Human Resources, MS 114, Eastern Washington University, 526 5th Street, Cheney, WA, 99004-2431. Eastern Washington University is an affirmative action/equal opportunity employer and applications from members of historically underrepresented groups are especially encouraged to apply.

San Diego State University, Department of Anthropology, invites applications for a funded tenure-track Assistant Professor in southern California beginning fall semester, 1997. Demonstrated teaching excellence, hands-on community involvement, *southern* California research experience & completed Ph.D. required. SDSU is a community-oriented institution of higher learning serving the unique needs of the US-Mexico border-Pacific Rim populace of the greater San Diego region. The successful applicant will have a demonstrated commitment to the prehistoric and historic archaeology of the greater southern California-northern Baja region exemplified by extensive personal field experience, read-papers and publications, and should be prepared to teach at least one course each semester on California archaeology, ethnography, or ethnohistory. Position responsibilities also may include one or more lower division general introductory courses in biological and/or cultural anthropology and at least one graduate-level seminar each year. The primary responsibility of the successful candidate, however, will be development and maintenance of a locally based field school in archaeological techniques accessible both to SDSU students and to interested volunteers from the general public. This field school will emphasize approaches and techniques acceptable to local Native American communities and in conformity with standards approved and employed by the southern California CRM industry. As regular interaction with local Native American, CRM, and other San Diego communities will comprise an essential aspect of this position, demonstrated abilities and experience in working with these groups will be essential to successful application. Additional position responsibilities will include initiating a formal program of appropriate interdisciplinary collaboration with other academic departments involving both regional historical and methodological issues, e.g., the multiethnic cross-border history of the region or the uses of GIS applications in archaeology. Application deadline is November 15, 1996. Completed Ph.D. required. Southern California area-emphasis firm. Applications, including letter stating qualifications, background, teaching/community outreach/research interests, vita, and names/addresses/phone/e-mail of 4 referees should be sent to Joseph Ball, Arch. Search Comm., Dept. of Anthropology, SDSU, 5500 Campanile Drive, San Diego, CA 92182-4443. SDSU is an Affirmative Action/Equal Opportunity Title IX employer and does not discriminate against persons on the basis of race, religion, national origin, sexual orientation, gender, marital status, age or disability. VPAA #97/98-13.

University of California at Los Angeles seeks applications for the position of Assistant to the Director, Institute of Archaeology with the title of Academic Administrator, Rank I. Ph.D. in Archaeology or related field is required. Strong writing skills and ability to communicate with the general public also necessary. Will work directly with the Director of the Institute in fund raising, programmatic development and implementation, and day to day operations. This is a 50% time position with a salary of \$20,000. Please send cover letter, CV, and names and addresses of 3 referees to: Nancy C. Davis, UCLA Institute of Archaeology, A210 Fowler, Box 951510, Los Angeles, CA 90095-1510. Deadline: September 30, 1996. UCLA is an equal opportunity/affirmative action employer.

[LAST PAGE](#)

[TABLE OF CONTENTS](#)

[NEXT PAGE](#)

CALENDAR



*September 15, 1996
is 1,866,057 days since
the Maya zero date*

October 2-4, 1996

JORNADAS DE ANTROPOLOGIA DE LA CUENCA DEL PLATA will be held at Rosario city, Santa Fe, Argentina. For information, contact Jornadas de la Cuenca del Plata, Escuela de Antropologia, Entre Rios 758, 2000 Rosario, Argentina, (+54 41) 21-5113 or 40-0107, fax (+54 41) 25-4446, email zulema@solana.envios.sicoar.com

October 3 - 5, 1996

9th MOGOLLON ARCHAEOLOGY CONFERENCE will be held at the Western New Mexico University Museum. To receive conference information, contact the program organizer, Cynthia Ann Bettison, Director, Western New Mexico University Museum, Box 680, Silver City, NM 88061, (505) 538-6386, fax (505) 538-6178, email bettisonc@wnmu.edu

October 10 - 12, 1996

SHIPWRECKS OF THE GREAT LAKES, a conference sponsored by the Minnesota State Historic Preservation Office in cooperation with the Gales of November Conference, will be held at the Radisson Hotel, Duluth, Minn. Those interested in presenting papers should contact Scott Anfinson; those interested in registration information should contact Michele Decker. Both are at the Minnesota State Historic Preservation Office, (612) 296-5434.

October 16 - 20, 1996

THE 50TH NATIONAL PRESER-VATION CONFERENCE, "Preserving Community: City, Suburb, and Countryside," will be held at Palmer House Hilton, Chicago Ill. For more information, call the National Trust for Historic Preservation at (800) 944-6847.

October 18 - 19, 1996

GENDER AND ARCHAEOLOGY: DIVERSE APPROACHES will be held at Michigan State University. For more information or to discuss potential topics, contact Alison Rautman, Department of Anthropology, Michigan State University, East Lansing, MI 48824, (517) 351-4913, email rauk@pilot.msu.edu.

October 19, 1996 2ND ANNUAL MEETING OF THE MIDWEST EUROPEAN ARCHAEOLOGICAL DIASPORA (MEAD) will be held at the University of Iowa, Iowa City, Iowa. We invite participation from all archaeologists working in Europe. For more information, contact Glenn R. Storey or James G. Enloe, Department of Anthropology, 114 Macbride Hall, Iowa City, IA 52242-1322, (319) 335-0522, fax (319) 335-

0653, email gstorey@blue.weeg.uiowa.edu or james-enloe@uiowa.edu. There are still openings for papers, and abstracts may be submitted.

October 24 - 26, 1996

CONFERENCE ON THE ARCHAIC PREHISTORY OF SOUTHWESTERN NORTH AMERICA will take place at the University of New Mexico. The goals of the conference are to bring together scholars from contract, academic, museum, and agency settings to discuss theoretical and methodological approaches to Archaic prehistory, review the current state of knowledge, describe research results, and explore opportunities for information sharing and cooperative research. For information, contact W. H. Wills (Department of Anthropology, University of New Mexico, Albuquerque, NM 87131, email wwills@unm.edu), B. B. Huckell (Maxwell Museum, University of New Mexico, Albuquerque, NM 87131, email bhuckell@unm.edu), P. Hogan (Office of Contract Archeology, University of New Mexico, Albuquerque, NM 87131, email phogan@unm.edu), or D. J. Phillips (President, New Mexico Archeological Council, P.O. Box 1023, Albuquerque, NM 87103, email dap@unm.edu).

October 30 - November 2, 1996

THE 54TH ANNUAL PLAINS ANTHROPOLOGICAL CONFERENCE will be sponsored by the Office of the State Archaeologist, University of Iowa, and held in Iowa City. For program information, contact Joseph Tiffany, Program Chair, Department of Anthropology, 319 Curtiss Hall, Iowa State University, Ames, IA 50010-1050, email jtiffany@iastate.edu. For general information, contact William Green, Office of the State Archaeologist, Eastlawn, University of Iowa, Iowa City, IA 52242-1411, fax (319) 335-2776, email bill-green@uiowa.edu, web <http://www.uiowa.edu/~osa/events>.

November 6 - 9, 1996

THE SOUTHERN ARCHAEOLOGICAL CONFERENCE will be held at the Sheraton Civic Center in Birmingham, Ala. For more information, contact Ian Brown, Program Chair, Alabama Museum of Natural History, University of Alabama, Box 870340, Tuscaloosa, AL 35487-0340, (205) 348-9742, fax (205) 348-4219.

November 7 - 10, 1996

THE AMERICAN SOCIETY FOR ETHNOHISTORY will hold the 1996 annual meeting in Portland, Ore. For information, contact Jacqueline Peterson, ASE 1996 Meeting Chair, Department of History, Washington State University, 1812 E. McLoughlin Blvd., Vancouver, WA 98663, (360) 737-2179.

November 14 - 17, 1996

THE 29TH ANNUAL CHACMOOL CONFERENCE has chosen as its theme "The Archaeology of Innovation and Science," hoping to reveal how archaeologists identify techniques, technologies, and sciences used by past cultures. Suggested topics include communications systems, numerical systems and calendrics, public works, health and healing, domestication, warfare, hydrology, and transportation. Send suggestions and session or paper abstracts to 1996 Conference Committee, Department of Archaeology, University of Calgary, Calgary, Alberta, Canada T2N 1N4, (403) 220-5227, fax (403) 282-9567, email 13042@ucdasvml.admin.ucalgary.ca

November 20 - 24, 1996

THE 95TH ANNUAL MEETING OF THE AMERICAN ANTHROPOLOGICAL ASSOCIATION will be held in San Francisco, Calif. The theme of this year's meeting is "Anthropology: A Critical Retrospective." In addition to the many sessions sponsored by the Archaeology Division, Yolanda Moses, AAA president, has given the division a "Presidential session," which has been organized by Elizabeth Brumfiel on the topic "The Place of Archaeology within Anthropology." The Division's General Meeting will feature Jeremy A. Sabloff, who will speak on "The Past and Future of American Archaeology."

December 2 - 6, 1996

THE 5TH SYMPOSIUM ON MATERIALS ISSUES IN ART AND ARCHAEOLOGY will be held in Boston, Mass., as part of the fall meeting of the Materials Research Society. Content questions should be addressed to Pamela Vandiver, CAL, Smithsonian Institution, Washington, DC 20560, (301) 238-3700 x162, fax (301) 238-3709, email pbv@cal.si.edu

December 5 - 7, 1996

AUSTRALIAN ARCHAEOLOGICAL ASSOCIATION CONFERENCE 1996 will be held at the Dzintari Camp, Fleurieu Peninsula, South Australia. For information, contact Colin Pardoe, South Australian Museum, University of South Australia, North Terrace, Adelaide, S.A. 5000, (08) 207-7611, email pardoe@ozemail.com.au

February 10 - 13, 1997

6TH AUSTRALASIAN ARCHAEOLOGY CONFERENCE will be held at the Australian Museum in Sydney, Australia. The Organizing Committee invites contributions in the form of major reviews of dating methods and other archaeometric techniques, papers summarizing recent advances in the development and application of archaeometric techniques and analysis, and papers addressing specific case studies and themes in which archaeometry has played a vital role. For information, contact Robin Torrence, (02) 339-8238, email robint@amsg.austmus.oz.au

March 26 - 29, 1997

THE 20TH ANNUAL MEETING OF THE SOCIETY OF ETHNOBIOLOGY will be held at the University of Georgia, Athens. For information, contact LaBau Bryan, Department of Anthropology, University of Georgia, Athens, GA 30602-1619, (719) 542-1433.

April 2 - 5, 1997

THE 66TH ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF PHYSICAL ANTHROPOLOGISTS will be held at the Adam's Mark Hotel, downtown St. Louis, Mo. For program information, contact Clark Larsen, Research Laboratories of Anthropology, Alumni Building, CB#3120, University of North Carolina, Chapel Hill, NC 27599-3120, (919) 962-3844, email cslarsen@email.unc.edu. For local arrangements, contact Charles Hildebolt, Department of Radiology, 510 South Kingshighway Blvd., Washington University School of Medicine, St. Louis, MO 63110, (314) 362-8410, email hildebolt@mirlink.wustl.edu

April 2 - 6, 1997

THE 62ND ANNUAL MEETING OF THE SOCIETY FOR AMERICAN ARCHAEOLOGY will be held at the Opryland Hotel, Nashville, Tenn.

April 16 - 18, 1997

THE 1ST INTERNATIONAL SPACE SYNTAX SYMPOSIUM will be held at the University College London. The symposium will bring together researchers and designers currently using space syntax techniques to discuss theoretical and methodological issues. For information, contact Mark David Major, Symposium Organizer, Space Syntax Laboratory, Bartlett School of Graduate Studies, 1-19 Torrington Place, University College London, Gower St., London WC1E 6BT, email mark.major@ucl.ac.uk, web <http://doric.bar.ucl.ac.uk/web/slab/slabhome.html>.

April 20 - 24, 1997

ANATOLION PREHISTORY: ON THE CROSSROADS OF EURASIA AND AFRICA, an international symposium, will be held at Liège University, Belgium. Abstracts should be sent to Marcel Otte, Université de Liège, Service de Préhistoria, 7 place du XX Août, Bât A1, 4000 Liège, Belgium.

June 4 - 7, 1997

SYMPOSIUM ON BISON ECOLOGY AND MANAGEMENT IN NORTH AMERICA will be held at the Holiday Inn in Bozeman, Mont., to provide a forum on utilizing various disciplines to understand and manage bison in North America. Sessions explore how disease, genetics, ecology, management, prehistory, and tribal concerns affect bison. For information, contact Bison Symposium, Montana State University, 235 Linfield Hall, Bozeman, MT 59717, (406) 994-3414.

June 7 - 8, 1997

THE 18TH MID-SOUTH ARCH-AEOLOGICAL CONFERENCE will meet at the Arkansas State University Museum in Jonesboro, Ark. Topics are "Native American Reaction to Archaeology," "History of Archaeology," and "Current Research in the Mid-South." For information, contact Dan or Phyllis Morse, email dmorse@osage.astate.edu.

August 5 - 9, 1997

SOUTH SEAS SYMPOSIUM: EASTER ISLAND IN PACIFIC CONTEXT. The Easter Island Foundation and the Maxwell Museum of Anthropology, University of New Mexico, are cosponsoring a conference on Easter Island and the Pacific region. Papers focusing on Polynesian social organization, prehistoric adaptation, linguistics, paleo-environments, and the archaeology of stone architecture are especially encouraged. For more information, please contact Christopher Stevenson, ASC Group, 4620 Indianola Ave., Columbus, OH 43214, (614) 268-2514, fax (614) 268-7881, email obsidlab@aol.com.

September 18 - 21, 1997

THE 3RD BIENNIAL ROCKY MOUNTAIN ANTHROPOLOGIC-AL CONFERENCE will be held at the Holiday Inn in Bozeman, Mont. Deadline for proposals is March 15, 1997. For more information, contact Ken Cannon, National Park Service, Midwest Archeological Center, Federal Bldg., Room 474, 100 Centennial Mall N., Lincoln, NE 68508-3873, (402) 437-5392 x139, fax (402) 437-5098, email ken_cannon@nps.gov; or Jack Fisher, Department of Sociology, Montana State University, Bozeman, MT 59717-0238, (406) 994-6879, email isijf@msu.oscs.montana.edu. *

LAST PAGE

TABLE OF CONTENTS
