Society for American Archaeology 14(2)

SAA BULLETIN

March/April 1996 14(2)

Mondo New Orleans: An Alternative Perspective

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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 the web at www.saa.org/Publications/saabulletin/. Items published reflect the views of the authors and publication does not imply SAA endorsement.

Mondo New Orleans: An Alternative Perspective

Mark Aldenderfer

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You've read the preliminary program, maybe you've taken a look at tour information and guide books, or perhaps you've asked your friends and colleagues just what's the story with New Orleans. You've probably been told plenty of interesting things about the town known variously as the Big Easy or the City that Care Forgot. Get the picture? Each of you that has previously attended a New Orleans annual meeting has at least one unforgettable memory. One of mine is not particularly impressive, but it recurs every February or so while anticipating the April meeting in the Big Easy:I was strolling along Bourbon Street one night, not too late, when odd movement caught the corner of my eye. Adjusting my blurred vision to the change in light (of course it was the light--what else could it have been?), I looked through a doorway up a steep flight of stairs, which I swear was as steep as the stairs of Temple 1 at Tikal, and watched a man crawling up the stairs on his hands and knees. One step up, two steps back, sliding on his belly. He was persistent, but pathetic. I watched for what seemed like hours, but he never reached the "House of the Rising Sun" while I was there. What it was, or why it was so compelling for him, I'll never know.

Following is an idiosyncratic sampling of information on possible alternative, as well as mainstream, entertainments in New Orleans. While I don't recommend crawling up the stairs of the House of the Rising Sun, you might try some of them when meeting fatigue sets in. Much of this research can be done at home *before* heading for New Orleans. You'll be prepared for whatever your tastes dictate.

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Literature: By all means read *A Streetcar Named Desire*, by Tennessee Williams, or watch the video with Marlon Brando as Stanley Kowalski. Still hot today, it really scorched the 50s. Into 70s-style black humor? Try *A Confederacy of Dunces*, by John Kennedy Toole. Set in the New Orleans of the 60s, you'll meet Ignatius J. Reilly, a 30-year-old genius described in the book's introduction as "a slob extraordinary, a mad Oliver Hardy, a fat Don Quixote, a perverse Thomas Aquinas..." You really will enjoy the book, and even learn about New Orleans in the process. Have a sense of the macabre? Anne Rice is your ticket to the truly dark side of town, this time in the antebellum Garden District, with *The Witching Hour*, her story of the infamous Mayfair witches.

Setting: I couldn't track down a truly modern history of New Orleans, but an older one did catch my eye--*The French Quarter: An Informal History of the New Orelans Underworld*, published in 1937 by Herbert Asbury. Dedicated to "Helen," the book looks and reads like it should have been published in 1880, and contains chapters entitled "An Epoch of Degeneration," "Hell on Earth," and "Criminals Paradise." (Note: the Library of Congress subject listing describes the book not as history per se, but as "New Orleans, LA--Moral Conditions.") It is very amusing, and you'll learn all about the characters of the early French Quarter, such as Bricktop Jackson, the toughest *person* in all New Orleans. If something a bit more sedate is your taste, like architecture, try *Southern Comfort*, an excellent historical review of the New Orleans architecture. While Mark Twain once said "New Orleans has no architecture except that found in its cemeteries," he probably hadn't spent much time in town. Speaking of cemeteries, a fine review of the extraordinary New Orleans mortuary art (always a favorite with the archaeologist) is *The St. Louis Cemeteries of New Orleans,* by Samuel Wilson, Jr., and Leonard Huber. Twain at least got that right.

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Information sources and other tidbits: Those of you who have access to the World Wide Web have some real advantages over your colleagues without it. To encourage its use among the membership without making folks actually do archaeology, I have assembled a sampling of Web sites and home pages about New Orleans for your perusal. They touch on just about everything, but in my defense, these are hardly the only ones out there. Although I've visited all of them, I can't vouch for their accuracy or veracity.

No SAA meeting is complete without beer; New Orleans is home to the Dixie Brewing Company, and while they don't have a web page, there is one about Louisiana microbreweries at http://www.csn.net/~scotto/la.html. Among the brews listed are some curious names by Dixie--Blackened Voodoo Lager, Crimson Voodoo Ale, Holy Smoke, and Graffi-tea(?). Try them at your own risk.

No trip to New Orleans is complete without a nod to voodoo, and maybe even a deeper sampling. While it was undoubtedly introduced to the city during French colonial times, New Orleans became a haven for voodoo at the beginning of the 19th century as refugees from Santo Domingo flooded the city. There are a number of voodoo sites on the web, but those about New Orleans are *very* slow to load. If you must see something of voodoo before arrival, try http://ourworld.compuserve.com/homepages/LGilbert/voodoo.htm. The associated home page also has some good photos of cemeteries. For the digitally challengened, try reading *Voodoo in New Orleans*, by Robert Tallant, or *Voodoo and Hoodoo*, by Jim Haskins.

Yum, yum--red beans and rice. I know, *this,* when I could be sampling some of the finest cuisine in all America? I *like* them, and you should eat them at least once while there. Can't wait? Try *The Gumbo Pages* at http://www.webcom.com/~gumbo/no-home.html. In addition to recipes for Creole and Cajun cooking, you can learn about what's hot and happening for music, culture, and cuisine in town. Two other sites (thanks and a tip of the trowel to Ken Cannon of NPS who made this suggestion) that provide good reviews of club and restaurant listings are *Gambit Magazine* at http://www.gambit-no-com/ and *Offbeat Magazine* at http://www.neosoft.com/~offbeat.

Finally, for those of you who are interested in something a bit more mainstream, try the quasi-official pages at http://www.frenchquarter.com/default.html, the *New Orleans Connection* at http://www.noconnect.com/noconnec.htm, or Infolink New Orleans at http://www.infolink.com/infono.htm. Just one more offbeat source: for a real insider's view of their town, check out New Orleans à la Net, by Pamela Pipes, a self-described 7th-generation daughter of New Orleans, at http://www.alanet.com.

Enjoy your trip to New Orleans! Maybe I'll see you at the House of the Rising Sun or Felix's (you'll have to find that one for yourselves!)

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Mark Aldenderfer is at the University of California--Santa Barbara and is editor of the SAA Bulletin

Editor's Corner

By the time you read this, you will have made many of your plans for the annual meeting in New Orleans. This year's preliminary program has published much of what traditionally went into the pre-meeting *Bulletin,* and thus, you've probably noticed that we've significantly scaled back our meeting coverage, opting to publish a few reminders of major forums or sessions, as well as a somewhat idiosyncratic view of alternative ways to prepare for New Orleans. We chose to reduce coverage to avoid redundancy with the program and to save ever-tightening space for the kinds of things you've come to expect in the *Bulletin*--our columns, letters, and other features. Let us know what you think of this division of labor.

As you've seen in your ballot packet, SAAweb will be lit up and populated with plenty of useful information during March. Point your web browser to http://www.saa.org, and check it out. You can also view the text of the pages with a text browser such as lynx. While electronic media will never fully replace the printed page in the near term, these alternative media will continue to grow in importance, and each of us will find that regardless of whether or not we approve or disapprove of this trend, it is a major factor that is reshaping how we do archaeology no matter what the setting. SAAweb will likewise grow in importance to SAA, and we encourage your feedback and insights into how it serves your particular needs.

Another bit of news in your ballot packet is the resignation of Ralph Johnson as executive director. SAA owes much to Ralph's leadership and energy over these past three years, and he will be much missed by all of us who have had a chance to work with him. A search for his replacement is now under way.

Open Forum on ROPA

Bill Lipe

Work is continuing on a proposal to transform the Society of Professional Archeologists (SOPA) into a Register of Professional Archaeologists (ROPA), under the sponsorship of the SAA, the Society for Historical Archaeology, and the Archaeological Institute of America [see the related article in the *SAA Bulletin,* 1995 13(3)]. The plan will be reviewed and members can discuss it at an open forum at the Annual Meeting (3-5 p.m. Thursday, April 11). If the plan is approved by the boards of the respective societies, SAA members will vote on it later in 1996.

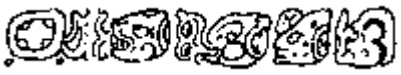
This initiative is one response to the growing concern within archaeology about ethics, professional standards, and public accountability. Under the plan being considered, the sponsoring societies would encourage their professional members to voluntarily register adherence to an explicit code of ethics and standards of research performance, and to commit to take part in grievance procedures if their work or behavior received a credible challenge. The ROPA ethical code, standards, and grievance procedures would be adopted from those currently maintained by SOPA.

Demonstrating accountability to published standards of ethical and professional behavior is essential if archaeologists are to be recognized as true professionals by the public that supports them. I believe that ROPA provides a way to achieve this goal. By sponsoring ROPA, the major archaeological societies can encourage and promote greater accountability and professionalism in archaeology.

I know many SAA members are unfamiliar with the plans for ROPA, or have questions about its feasibility and how it would actually work. Many may question the basic premise I've stated in the preceding paragraph. If you wish to know more about the proposal, I urge you to attend the open forum on April 11 to ask questions or make your concerns known.

Bill Lipe is president of SAA.

Letters to the Editor



Letter from Lawrence E. Moore on historical archaeology

Leone's [*SAA Bulletin* 13(5):3] provocative comments regarding historical archaeology and the archaeology of capitalism are much appreciated. He outlined his vision of capitalism and acknowledged that the marxist perspective occupies only a corner of the discipline. With brevity in mind, I reply to his views on the changing nature of capitalism, his definition of it, and the issue of objectification.

Leone believes that people, who are either politically conservative or neutral, find his perspective unacceptable because it "assumes change within capitalism, assumes that change is based on conflict, and that conflict stems from exploitation." And, maybe some feel this way. Several other reasons are likely as well. First, being a counter cultural view, marxism has no credibility in American society. Second, it is a negative view of life that contradicts Leone's claim that it is comprehensive. By assuming that all change is due to conflict, he denies any possibility that change occurs through agreement. Public archaeology, at least, needs to be positive and inspirational, not gloomy culture critique.

Finally, marxism just does not work. It offers a diachronic model of life that has not really changed since Marx presented it. It was not accurate for mid-19th century life then and it does not describe society today. Marx misunderstood his topic because he avoided as much of it as possible in his daily life. Similarly, marxists do not understand their enemy. The place to begin is Napoleon Hill's *Think and Grow Rich*. There, they will find that accumulating wealth is a spiritual and intellectual process that need not be seen as crass.

Contrary to Leone's suggestion, American economists do accept that capitalism has changed. Heilbroner (*Twenty-First Century Capitalism*) notes that today's economy is very different than it was a hundred years ago. His Keynesian perspective appears to avoid discussing change because it is a synchronic model akin to Anthropology's functionalist ones. Other scholars do provide diachronic views of capitalism. Peter Drucker's book *Post-Capitalist Society* is the best explication of our knowledge-based society and information economy. To him, America left capitalism behind in the first quarter of this century, particularly after the gold standard was abandoned. Nobody could have predicted that the knowledge-based society would follow capitalism, and, clearly, Marx had it wrong.

Basically, Leone's definition of capitalism will not help archaeologists. To him, it is a set of social relations comprised of three parts. The first is that a "landless work force is created whose only way to make a living is selling its labor." This statement is somewhat true as it brings to mind the evil company towns and sweat shops of a previous era. While these working conditions exist they do not represent the majority of labor conditions within capitalism. In the 19th century the American Homestead Act allowed thousands to own land. Eventually there arose the "American Dream" wherein everyone could own a home. Under capitalism, a larger percentage of a society's workers become home and land owners. More importantly, people have the choice of whether or not they want to be owners or renters. As for the selling of one's labor, it is better to choose your employer than be indentured.

The second part is that "land and other means of earning a living are privately owned." This statement does not describe the situation. Within capitalism land and "other means" are owned both privately and publicly. In a publicly held company ownership is shared by many people and even other companies. Stock markets exist to

buy and sell shares of ownership and any person or entity can participate in the market. Privately held companies can be corporations, partnerships, or sole proprietorships. Another version of public ownership is represented by the assets controlled by governments. In some places, like Montana, governments control two-thirds of the state's lands. Finally, private ownership of land is not absolute as governments can limit the use of property through zoning or even take it, with good cause. For the marxists, the sole proprietor concept above is anomalous as the manager and laborer can be the same person. Furthermore, sole proprietors are the backbone of any capitalist economy, constituting the largest group of businesses.

Leone's third social relation of capitalism is important: "continuous technological change and expansion of markets is needed to ensure profits." Economists refer to continuous change in technology and other areas as "creative destruction"; it leads to fads, fashions, and the obsolescence of products. This process exists in non-capitalist societies as well but perhaps capitalists have perfected it. Rapid cultural change is the key trait of the Modern Period and is present in communist, capitalist, and knowledge-based societies.

Another trait that Leone believes to be characteristic of capitalism is that human labor is objectified, treated as a thing, and used to make a profit. Marxists often decry objectification, believing it to be a dehumanizing process. Critical theorists, such as Leone, also argue that archaeologists need to be self-reflective. They can't have both because the cognitive ability to be self-aware, sapient, entails objectification. Without this ability *homo sapiens* is poorly defined. On a positive note, this use of objectification frees people from the burden of being over identified with their occupation. People are more than what they do for a living, which is what the marxists presume.

Overall, Leone reaffirms Daniel Bell's 1952 observation that Marxian Socialism in the United States is "in but not of the world" (1967, *Marxian Socialism in the United States,* Princeton, reprint, p. 5). Archaeologists interested in studying capitalism will do better by following some other perspective or by being eclectic as Matthew Johnson has done in *An Archaeology of Capitalism* (Blackwell, 1996).

Lawrence E. Moore
Heritage Resources Branch
Fairfax County, Virginia

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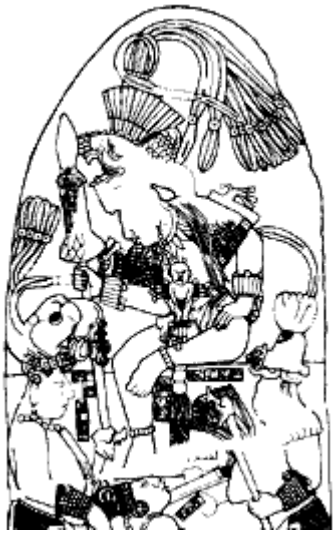
Government Affairs Update



Donald Forsyth Craib

Forum at Annual Meeting--The Government Affairs Committee is sponsoring a forum Friday, April 12 "Washington Politics and Archaeology: What The Heck Is Going on and What Can We Do about It?" The session will include an overview of archaeology and politics, a review of current political events and the effects on archaeology, and the role of SAA and its members in the national historic preservation political strategy. The speakers have extensive and varied experience in government affairs; they will review the legislative and regulatory processes and discuss how to be an effective advocate for archaeology. A packet of information will be provided summarizing key political information, contacts for all members of Congress, and examples of effective communication methods.

Government Affairs on SAAweb--Information about the SAA government affairs program and committee can now be found on SAAweb (http://www.saa.org). This site will provide updates on legislative and regulatory issues, information about the Government Affairs Committee, a form to join the Government Affairs Network, a piece on lobbying and advocacy techniques, and links to government and political news sites. If you have any suggestions for improving the site, please contact me.

Looting during Government Shutdown--SAA sent a letter to National Park Service Director Roger Kennedy after learning that during the November government shutdown, extensive looting occurred at a historic archaeological site resulting in serious damage. While it was no doubt difficult to protect archaeological resources adequately during the shutdown, SAA wrote, the reduction in funding severely compromised the NPS's legal mandate to protect cultural resources. SAA urged NPS to adopt shutdown procedures that would ensure adequate staffing of parks in order to meet the agency's statutory obligation and protect archaeological resources.

Letter to Speaker Gingrich--SAA President Bill Lipe fired off a letter to the Speaker of the House Newt Gingrich protesting the use of federal government employees as hostages in a partisan political contest between congressional Republicans and the Clinton administration. Lipe stated that "a number of the members of the Society for American Archaeology are employed by federal agencies....They are hard-working public servants who have dedicated their careers to helping preserve and interpret this nation's archaeology and history. They do not wish to be idled, even with pay, while the work they care about piles up. They do not deserve to be treated with the contempt that the continued shutdown implies." He summed up by urging the Speaker to "live up to the responsibilities of your leadership position and bring about an immediate reopening of the government."

Presidents Meet at Society for Historical Archaeology (SHA) Meeting--Bill Lipe along with Donna Seifert (past-president, SHA) and Steve Dyson (president, Archaeological Institute of America) met during the SHA's annual meeting in January to discuss issues of mutual concern. One prioritized issue was government affairs and how the three organizations could work together to further the agenda of the profession. The three presidents decided to meet this spring along with their respective government affairs chairs in Washington, D.C., to discuss legislative and regulatory issues of importance to the archaeological community and to meet with legislators, officials from the administration, and colleagues in the historic preservation community. Further opportunities to cooperate in government affairs are being explored.

Lawyers Meeting in New Orleans--Several members who are lawyers have asked how they can contribute to the efforts of the society and archaeology. As a result of this interest, I am holding a meeting in New Orleans with those member/lawyers who might be interested in forming an advisory group. If you would like to participate, please contact me at SAA headquarters.

Government Affairs Network--SAA continues its efforts to expand and broaden member participation in its government affairs program. One effective way that you can become involved in this effort is by joining the Government Affairs Network (GAN). By participating in GAN, you become an advocate for archaeology and cultural resource preservation by communicating directly with your elected representatives in Washington, D.C. The continued success of the program depends on your involvement! If you would like a GAN membership form, please write to me or you can locate a copy on the government affairs page on SAAweb. You can reach me at SAA headquarters: 900 Second St., NE #12, Washington, D.C. 20002-3557, (202) 789-8200, fax (202) 789-0284, email donald_craib@saa.org.

NSF Update--The government shutdown in December and January has not had a major impact on the National Science Foundation's (NSF) Archaeology Program, according to NSF staff. While the shutdown has caused slight delays in the review process, the overall effect is not that serious. NSF's funding under the current continuing resolution is at a level that will not have major impacts on awards.

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

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How to Get a Legislator to Visit Your Site and Why

Judith A. Bense

Last year northwest Florida elected a Republican freshman, Joe Scarborough, who was sent to Washington to change the way Congress does business. He has strong voter support in the area, and has been selected to run to fill the vacancy for "Freshman Class President." As a way to educate Rep. Scarborough about archaeology in his district, I picked up the phone one day last summer, called his district office, and invited him to visit the site that we were excavating at the Naval Air Station. To my surprise, he immediately accepted and we set a date.

He arrived one hot summer day with a small entourage and his six-year-old son, Joey. We spent a couple of hours looking at open test units in the old 18th-century Spanish Presideo and at artifacts and computer maps in the lab. I provided Rep. Scarborough with some background and then I asked the students, volunteers, and staff to explain what they had found in their unit. In this short span of time I learned that Rep. Scarborough, who has a B.A. in history easily understood that Pensacola's heritage was important to the community and that the archaeological record interpreted through our project provided a great deal of knowledge. He learned that the project was funded by the Department of Defense's Legacy program and asked how he could help. I told him that I would let him know when the time came.

As many of you know, funding for the Legacy program has been greatly reduced, and the appropriated funds are currently being withheld. These funds are important to the research that I am conducting at the Naval Air Station. I have informed Rep. Scarborough about the situation and explained to him that we can't complete the project he visited without the continued funding. Because of the impact that the lack of funding will have in his district, he is eager to work on the problem.

Rep. Scarborough's willingness to help is tied directly to his visit to the site and understanding of how the work conducted there is important to the community. I want to stress that arranging the site visit and tour was easy. It took very little effort and both Rep. Scarborough and I learned a lot about each other. I encourage all of you to call your congressional representatives and show them the archaeology in their districts. Take it from me; it is worth the effort.

Judith A. Bense is chair of the Government Affairs Network.

Briefings

Ralph Johnson

Meeting News--By the time you receive this issue of *SAA Bulletin,* you're likely to have registered already for SAA's 61st Annual Meeting in New Orleans (April 10-14). You've probably prepared your schedule based on a review of all the workshops, fora, scientific sessions, excursions, and special events. Indeed, the program is an embarrassment of riches--thanks to the nearly 1,600 members who will be presenting (a 33 percent increase over last year's record!) and the incredibly energetic and synchronized efforts of the program committee, the local advisory chair, and SAA staff members. But in case you have a free minute, check out these additions:

Internet Access Center--This new feature of the annual meeting will enable you to check your email or cruise a few Web sites. Several computers will be available at the center, which will be located near the exhibit hall entrance. SAA thanks the National Center for Preservation Technology and Training, Getty Conservation Institute, and the National Park Service (Archaeology and Ethnography Program) for sponsoring the center.

Interest Group Reception--Since the preliminary schedule was published, two additional interest groups--archaeological field technicians and rock art--have been added to the cash bar reception. From 5 to 6 p.m. on Thursday, individuals who wish to discuss the role of interest groups (IGs) within SAA and explore the formation of specific IGs will be gathering. Eight potential IGs will be represented--archaeobiology, archaeological field technicians, curation, Europeanists, fiber perishable research, geoarchaeology, rock art, and technology in archaeology. The list of local beers to choose from will be as diverse as the topics, so do stop by.

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SAAweb--SAA's ability to deliver information to members and the public has been wonderfully expanded and enriched with the inauguration of SAAweb. This site on the Internet's World Wide Web can be reached by pointing your browser to http://www.saa.org. We will continue to add content so the site will remain a lively and informative place to visit. Your thoughts and comments are invited, and will ensure that SAAweb contains material that is valuable to you.

The site was made possible by a commitment from SAA's leadership, insight from the Task Force on Information Technology (chaired by Mark Aldenderfer), and the sustained efforts of Jonathan Lizee. Jon, along with Tom Plunkett, is the creator of ArchNet--which is hosted by the University of Connecticut library and provides original content data from UConn and links to all known archaeological resources on the Internet. Without Jon, SAAweb would not be a reality. His technical competence, design sense, diligence, patience, and good humor have been critical in developing and delivering SAAweb. On behalf of SAA, I extend hearty thanks and deep appreciation to Jonathan Lizee.

Pilot Project--As noted in my November 1995 Briefings, SAA has launched an exciting new initiative in archaeology public education. A request for proposals was released in October to identify a state interested in receiving a grant to support an Archaeology Education Coordinator who would focus on precollegiate archaeology public education. The grant is for a one-year pilot project to assess the potential activities and cost for a nationwide network of coordinators. In response to the request, 19 proposals were received from states across the country (only U.S. states and territories were eligible since funding has been provided by federal agencies). The applicants reflected the range of situations in which American archaeology is undertaken today. The variety of organizations sponsoring the proposals also reflects American archaeology's institutional diversity--state historic preservation officers were represented, as were private, not-for-profit archaeology centers, public and private museums, and both university related and independent research institutes.

Based on evaluations conducted by a six-member review panel, $20,000 has been committed to the Pennsylvania State Historical and Museum Commission to support archaeology education activities across the state. The grant will allow archaeologist Beverly Mitchum to devote 15 percent of her time to coordinating archaeology education initiatives in Pennsylvania. Working with a consortium of archaeologists and the state's teacher-training universities she will facilitate the introduction of the Bureau of Land Management's model curriculum, Project Archaeology, into the state, and expand the network of Pennsylvania's teachers and archaeologists involved in such projects as the annual student archaeology essay contest and the development of locally specific archaeology education materials and exhibits. The grant also enables the team to adapt the archaeological curriculum to the state museum's interactive video project for outreach to isolated and remote communities.

Congratulations to the Pennsylvania team, thanks to the review panel (whose difficult task was to choose only one of 19 excellent proposals), and thanks to the partners who have provided guidance and funding for the project. If you would like details on the project and the lessons learned from the first proposal process, contact me for a copy of the report.

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Membership Record--I am delighted to announce that SAA membership reached an all-time high in 1995, with 5,730 members on record as of December 31. This represents a 9 percent growth rate for the year, which is excellent. With nearly 600 new members for 1996 already processed but not included in the December total, another record may well be established in 1996. These are encouraging trends that serve as a challenge to SAA to continue developing programs, services, resources, networks, and educational offerings that serve archaeologists and the many publics of archaeology. Thank you for your continued support to the preeminent international organization dedicated to the research, interpretation, and protection of the archaeological heritage of the Americas.

The Final Word--As you may have noticed in your ballot mailing, I have resigned my position at SAA effective April 30. My decision was precipitated by an unexpected and unsolicited offer to become president of a 43-employee publishing enterprise headquartered in Santa Fe, New Mexico. The allure of returning to New Mexico and having easier access to my family, combined with economic factors, was too strong to resist. While I look forward eagerly to these changes, I depart not with sadness, but with an immense satisfaction with the accomplishments we have made together.

I extend deep appreciation for the opportunities you've made available to me, for your receptiveness to ideas and suggestions offered, for your support while a team of staff associates was assembled, and for entrusting me with responsibilities that fully engaged and challenged me. SAA is a wonderful organization, filled with members who are passionate about the archaeological record and the practice of archaeology. The society benefits from sensational elected and volunteer leadership, and I immensely appreciate their dedicated efforts, tireless energy, and unbounded enthusiasm. Thanks for the opportunity to contribute and for an extremely satisfying three years. Saludos.

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Exchanges -- Interamerican Dialogue

Archaeology of the Desaparecidos

Christina Bellelli and Jeffrey Tobin

May 1985. In the grand courthouse of Buenos Aires the three military juntas that had written the most tragic chapter in the history of Argentina were put on trial by the recently restored democratic government. Photographs of human bones were projected onto the screen installed in the courtroom. The witness who explained the significance of the photos was Clyde Snow, a North American forensic anthropologist. The bones were the remains of *desaparecidos:* people who had been "disappeared" during the military dictatorship of 1976-1983. As Ernesto Sábato--the director of Argentina's National Commission on the Disappearance of People--noted, it is the "sad privilege" of Argentina to have invented *desaparecido,* a word that has passed untranslated into languages around the world. In Argentina there are approximately 30,000 such cases: people who were kidnapped by paramilitary squads, were held and tortured in clandestine concentration camps, were murdered, and were disposed of in unmarked graves or in the murky waters of the Río de la Plata. The bones that Snow presented to the court were disinterred with modern archaeological techniques from mass burial sites in which the state-sponsored assassins had hidden them. The meticulous gathering of this tragic archaeological "evidence" and its subsequent forensic anthropological analysis made it possible to reverse some of the process of disappearance by confirming who some of the individual victims were and how they died.

December 1995. In an old apartment in downtown Buenos Aires, a spotlight illuminates a large photograph showing a group of smiling, vital students hugging Snow. Beneath the photograph, four of the young scientists who appear in it sit and discuss their work. These were some of the students of anthropology and medicine who participated in a course given by Snow and other forensic anthropologists in Argentina in 1985. The purpose of the course was to prepare a local group of scientists for the profound task of identifying the remains that were then beginning to appear in individual and collective graves all over Argentina. That course laid the foundation for the Equipo Argentino de Antropología Forense (EAAF--Argentine Forensic Anthropology Team), which in Snow's words is "the most experienced team in the world, having made more exhumations and having examined more human remains than specialists from anywhere else."

Forensic anthropology is primarily a specialty within physical anthropology, the branch of anthropology that contributes the techniques that make it possible to identify the person to whom specific remains belong. Thus, the EAAF includes physical anthropologists among its members, but it also counts on the participation of archaeologists. Archaeological techniques are required to "recover evidence" (that is to say, to exhume bodies), but unlike traditional archaeologists and physical anthropologists, EAAF researchers depend on information about the bodily histories of the individuals whose remains they disinter. As EAAF members Anahí Ginarte and Darío Olmo explain, "In the rest of the world there are many people who do this sort of work, but one of the peculiarities of the EAAF is that we are the only group in the world that brings together all the necessary

professionals in the same team. Also, unlike other groups, we do an investigation prior to the disinterment." Thus, members of the EAAF interview the relatives, fellow captives, doctors, and dentists of *desaparecidos* to compile a database pertaining to the age, sex, height, build, childbearing history, and pathologies of the individuals whose remains they believe may be at a specific site.

Patricia Bernardi and Luis Fondebrider were anthropology students in 1985. They explain that Argentine judges had to be convinced of the merits of archaeology. "At first it was difficult to make the courts understand that it was necessary to change the job of exhuming the bodies from shoveling or even bulldozing the graves to using quadrants, survey equipment, and brushes, and that it was necessary to plot the site and to label each specimen." Bernardi and Fondebrider became permanent members of the EAAF in 1986. Since then they have helped to shed light on many court cases. They have worked as technical collaborators and as expert witnesses at the request of the judiciary, of human rights organizations, and of victims' families. In nine years of work in Argentina they have participated in over 500 disinterments. In 90% of these cases they determined that the cause of death was a bullet wound to the head and that the bullet entered from the back and went out the front.

One of the EAAF's most important efforts has been at the cemetery in Avellaneda, an industrial city near Buenos Aires. In a 300 m^2 area, cemetery and police records indicate there may be as many as 19 common graves, each containing between nine and 28 corpses and 18 individual graves. The EAAF began its work at Avellaneda in 1986 and finished major work there in March 1992 having recovered 342 bodies. The excavation at Avellaneda is the first archaeological excavation of a mass grave site (excluding the nonarchaeological disinterments performed in Germany). Thus, the EAAF is, of necessity, a pioneer in the development of techniques suitable to this sort of task. For security reasons, the team focused their efforts on recovering all of the bodies buried there before proceeding to the task of identification. However, very unusual osteological characteristics, combined with very clear information from the families concerned led to the identification and return of eight bodies to families for reburial. The team members have written *Tumbas anónimas: Informe de la represión ilegal en Argentina* (Anonymous Graves: Report on Illegal Repression in Argentina), a book in which they share the experiences they accumulated in the course of this impressive investigation.

In addition to Ginarte, Olmo, Bernardi, and Fondebrider (all of whom are anthropologists), the team includes Mercedes Doretti and Silvana Turner (also in anthropology), Alejandro Incháurregui (medicine), Carlos Somigliana (law), and Daniel Bustamante and Rafael Mazella (computer science).

Because of parallels in the recent histories of military dictatorships throughout Latin America, the expertise of the EAAF is valued beyond the borders of Argentina. Since 1986 the EAAF has participated in disinterments and osteological analyses all over the region at the request of human rights organizations and courts. For example, in Chile it was called in to examine a collective tomb, which was thought to contain victims of the Pinochet dictatorship. The EAAF determined that the burial site contained the remains of between 19 and 30 individuals belonging to a local indigenous population dating to prehistoric or early historic times. At the outset of this work, team members offered a course designed to train Chilean professionals in forensic anthropology so that they could carry on the search for their own *desaparecidos.* The EAAF has given such courses in most of the countries of Latin America and in the Philippines. The team has also collaborated with Snow and others on excavations and identifications in the United States, Nicaragua, Honduras, Venezuela, Bolivia, El Salvador, Guatemala, Brazil, the Philippines, Kurdistan, Ethiopia, Romania, and Croatia. Currently, EAAF members are collaborating with Cuban specialists in the disinterment of the remains of Che Guevara in Bolivia. As foreigners in these countries, members of the EAAF has been able to maintain their independence, performing disinterments and providing identifications and expert testimony that would not otherwise be possible. Local forensic specialists invariably are employed by the judiciary, the police, or state universities, and thus can be subject to external pressures. However, one external pressure that EAAF member share with local forensic specialists is placing their lives in danger. For example, threats from paramilitary groups forced the EAAF to abandon its work in Guatemala, examining bones from a 30-year-old civil war.

Christina Bellelli is a researcher at Argentina's National Council of Science and Technology (CONICET) and Argentina's National Institute of Anthropology, and she teaches method in archaeological research at

the Universidad de Buenos Aires and at the Universidad de Salta (Argentina). Jeffrey Tobin is a Ph.D. candidate in anthropology at Rice University. He is conducting ethnographic fieldwork in Buenos Aires.

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Interface--

Archaeology and Technology

The Use of Laser Tools in Archaeology

John W. Rick

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As an archaeologist, taking site measurements accurately and efficiently are staples of my fieldwork, and I am both excited by new developments in measurement technology, and frustrated by limited access to information about advances in this field. For the past few years I have been sporadically researching this type of technology, and have amassed a small, opportunistic arsenal of measurement devices and information about them. Without any pretense that I have comprehensive, or even the most up-to-date information, I'd like to share some of my findings and experiences. My goal is to describe laser-based devices that can increase our accuracy and/or decrease the amount of time we spend gathering data, all within reasonable budget limits. Most devices either allow rapid and accurate distance or angle measurement involved in traditional surveying: azimuth, declination, or radius from instrument to measured point. Here I will explore a variety of such devices, as well as those important in defining lines, planes, or orthogonal axes, but I am intentionally not covering total stations, or laser-based theodolite systems, the possible subject of a future column.

Laser Pointers

Although familiar to all of us in the context of slide lectures, the penlight-battery-powered laser pointer can also be a valuable, durable, lightweight, and inexpensive part of site measurement. Most of these pointers produce a quite small diameter, reasonably bright beam that can be visible for at least 50 m, and considerably further under low light conditions. Pointers have different degrees of beam spread at distance, so it's worth checking the size of the beam at the distance you will be working before purchasing. Some will project a fairly sizable spot, but of a consistent round or oval shape, such that the center of the beam can be consistently found, allowing considerable alignment accuracy. These pointers can be attached to a leveled tripod head, giving a horizontal line from which to take vertical or lateral measurements to objects or surfaces of interest. With a little help from a local machine shop, a mount, bearing a high-precision bubble level, can be prepared that can replicate, at much lower cost, some of the high-end laser levels mentioned below. In combination with laser distance-measuring tools (see below), a fairly rapid survey can be made of sites with moderate slope and low surface features. Within standing architecture, laser lines are much more convenient and accurate to measure from than leveled

strings, a staple of low-end architectural measurement. Laser pointers can be obtained from a wide variety of electronic and office supply companies, and prices below $50 are becoming common. Battery life for two AAA batteries seems to be on the order of 30+ hours.

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Automatic Plumb Level Square

This is perhaps the most unique instrument of those listed here, with a number of practical applications in archaeology. In essence, this device emits five visible light laser beams, all at right angles to the others: up, down, left, right, and forward (Figure 1). The manufacturer has taken one laser diode and

Figure 1: Pacific Laser System's PLS5, a device emitting orthogonal laser beams.

split the beam five times to obtain plumb, square, and level reference. There is a one-inch offset between vertical and horizontal beams. Most importantly, the device is self-leveling, as long as it is placed within 8deg. of level. Thus, when positioned in a site, the device establishes basic elements of a precision grid--three horizontal axes, and plumb lines that can be aligned to datums above or below the instrument. The PLS5, the model number of the instrument, has a standard camera 1/4-20 threaded socket, allowing it to be mounted on an inexpensive photographic tripod for rapid positioning. Its beams are visible under a variety of weather conditions, and its range is listed at about 100 ft, although bright outdoor light may limit this somewhat. Maximum error of each beam is listed as less than 3 mm at 15 m, however the manufacturer advises that the error is closer to +/- 1.5 mm at 15 m. To give anidea of this accuracy, each subsequent setup of the instrument, relying on the previous setup's base points, would have a maximum of around .02deg. angular error. In other words, considerable repositioning could be done before any significant error would accumulate, by field archaeology standards.

An obvious use of the device's orthogonal beams is to establish excavation grids or other right angle site standards. The PLS5 could also allow efficient mapping work within standing architecture. By marking the endpoint positions of the left-right laser beams, the PLS5 can be laterally displaced, realigned to the endpoints, and new lateral measurements taken. Similarly, the device could be moved through doorways, or down corridors, fairly easily, while maintaining a common horizontal alignment through the endpoint marks on walls. Wall positions can be measured laterally from the laser beams, and in combination with a portable EDM, quite rapid and accurate measurement of architecture is possible without the elaborate and slow setup procedures of theodolites, transits, or alidades. To measure wall features at different heights, the device could simply be elevated, maintaining plumb position above a floor datum, and aligned to plumbed positions above a previous wall mark.

The PLS5 is about the size of a small hand drill, weighs .77 kg with batteries, and uses three AA alkaline or rechargeable nicad cells, giving continuous use for about 15-20 hours. It will not operate if tilted out of auto-leveling range, and it is easy to check the accuracy of level and beam orthogonality. The device sells for about $1,495, and comes with magnetic wall bracket and a target for transfer of vertical positions [contact the manufacturer, PLS Pacific Laser Systems, 449 Coloma St., Sausalito, CA 94965, (800) 601-4500].

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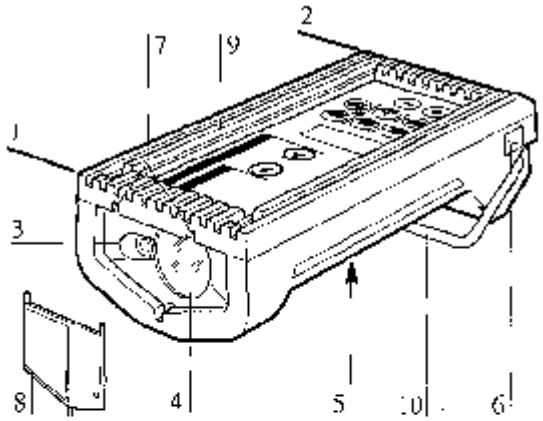
Hand-Held Electronic Distance Measuring Devices (HHEDMs)

Just now making its appearance is a highly portable, versatile device capable of measuring linear distance with considerable accuracy. Analogous to the invisible-laser-based distance measuring devices incorporated into total station theodolites, the HHEDM instead uses a visible red beam both indicating the target and measuring the distance to it. For most reasonably reflective surfaces, such as dry earth, stone, or light-colored vegetation, there is no need to place a reflector at the target. In operation, a single person can aim the HHEDM's laser, shoot the distance, and record the measurement. The distance of the shot is displayed on a LCD readout, and an advanced model can pass information to a recording device through a serial port.

The Disto (Figure 2), made by Leica, is apparently the only HHEDM yet available, retailing for $1,495 without serial port, $1,995 with serial port [contact the manufacturer for distributors at 3155 Medlock Bridge Rd.,



1 Front-edge reference
2 Rear-edge reference
3 Laser-ex t window
4 Receiver objective
5 Underside of housing, with left/right fingergrips
6 Socke: for charger cable
7 Alignment notches for front-edge reference and to secure lens cap
8 Lens cap
9 Protective rubber jacket
10 Reference bar (for measuring from corners)

Figure 2: Leica's Disto, a hand-held laser distance measuring device.

Norcross, GA 30071 (800)-367-9453]. It weighs about half a kg, measures 23.5 cm x 10.4 cm x 5.9 cm (Figure 3), and can measure distance to the target from either its front or rear edge. It can measure distances from 20 cm to 100 m with an accuracy of +/- 3 mm, but non-reflective, low angle, or other difficult surfaces beyond 30 m require the use of a white or brown target plate. I have found that very bright light conditions (such as I experience in the sierra of Peru) may make measurement difficult and limit the distance that can be measured, and, particularly, the visibility of the laser sighting dot. A bright light attachment helps solve the latter problem, but does not help too much with the former. In practical terms, it is difficult to hold the target beam

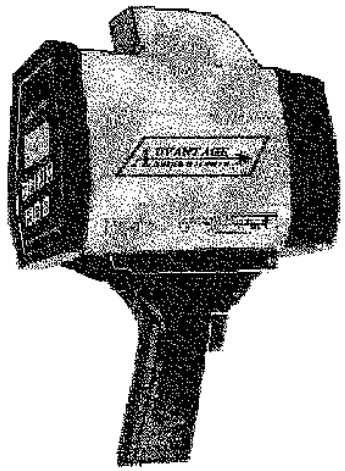


Figure 3: Laser Atlanta's Advantage, a hand-held rangefinder.

steady on small surfaces more than 30-50 m away, and if the beam wanders over a surface of varying distance, the Disto will not return a measurement. Measurement can take from two to 10 seconds, and the internal, nonremovable nicad batteries will provide about 400 measurements before recharging. It can also continuously track distance to an object, and has three memory registers that allow it to do simple addition and subtraction of distances, and calculation of simple areas and volumes based on measured distances. Recharge time is about an hour using either the 110 v line transformer or the supplied 12 v charging cord.

This device has proved very rapid and accurate, and is particularly valuable in difficult measurement situations. For instance, it excels in measuring high ceilings, long otherwise-impenetrable shafts, or distances across broken terrain. We found it indispensable for taking accurate and rapid measurements of the extensive internal galleries and ventilator shafts permeating the monumental architecture at Chavín de Huantar, Peru, parts of which cannot be entered at all. This particular model comes sheathed in a shock-absorbing rubber jacket, and our rigorous use suggests it to be very durable under field conditions, and tolerant of dust, rain, and general abuse. A HHEDM can be used very effectively in conjunction with other instruments for efficient mapping. Using one with a transit can simulate a total station, albeit with much lowered convenience and efficiency. Coupled with the PLS5 device described above, cartesian coordinate mapping can be quick, avoiding the use of sometimes confusing surveying angles. Alternatively, an HHEDM can be used with a plane table, or mounted in a protractor device to quickly produce polar coordinate measurements. This latter technique, quite practical for a single fieldworker over moderate distances, is one of the most rapid dimensional data recovery field methods, although not necessarily the most accurate.

Distantly related to HHEDMs are a number of ultrasonic distance-measuring units from a number of manufacturers such as Stanley. They typically are much less expensive, but have shorter ranges (typically 30 m or less), have limited accuracy (+/- 2 percent of the distance measured is considered good for these), and most importantly, it is difficult to know which of many possible surfaces or objects is actually being measured by the ultrasound, since a focused light beam is not involved. They might have limited application in archaeology, but caution would be advised before confidence is placed in resulting data.

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Automatic Laser Levels (ALLs)

To my knowledge these instruments have rarely been used in archaeological applications, but they might prove useful. Essentially they are relatively lightweight (5 kg), tripod-mounted devices that create a plane of light by rotating a laser-emitting prism. Usually projected as an absolutely level, horizontal plane, many such devices can be rotated 90deg. to provide a vertical plane, or even to other planes lying between horizontal and vertical. While some levels use a visible laser that can be seen on a vertical staff or other height-registering tool, both these and other invisible laser levels use a hand-held or staff-mounted detector that both visually and/or audibly

will indicate when it is in the plane of the laser. ALLs have relatively short ranges compared with total stations, varying between a working radius of about 30 m and 250 m from the device. By themselves, laser levels may have limited applicability, although they could be used to establish highly accurate depth datums in sites, or other cases where establishing an accurate plane is important. Coupled with an HHEDM, however, a laser level could be used for mapping or point proveniencing. Using the HHEDM to measure from the depth rod to two known target datums, the position of the rod base could easily be calculated. If a variety of target datums were available, a quite versatile if somewhat complex measurement system could be established, allowing measurement over standing walls and other obstructions that might defeat other measuring methodologies. The planar nature of measurement using levels may not be compatible with many archaeological situations, but they should be kept in mind as a potential tool within the archaeologist's arsenal. Many will operate for a considerable time (30-70 hours) on a single set of alkaline batteries, or on a single charge of a nicad battery pack. A wide variety of precisions and prices exist for these levels (these are made by a number of companies; the Leica line runs between $1,695 and $2,195 for level plus detector; for more information see the HHEDM address above).

Digital Levels

Hybrids of laser levels and total stations are the digital levels, which utilize a leveled, tripod-mounted, vertically fixed head that can be rotated on the horizontal plane. Rather than aiming a visible or detected beam at the rod, the device uses a bar-coded stadia rod to produce both distance to the rod and rod height above measured point. This gives two of the measures (radius, height) necessary for cylindrical coordinate measurement, but not the third, which is horizontal angle. A 360deg. dial on the base of the instrument can give an approximate azimuth reading, but would not approach the accuracy of the height (+/- 1-2 mm) or distance (+/- 0.05 percent of distance) measures. The distance-measuring capability is limited to 100 m maximum. Distance and height can be recorded on a memory module, or output to a linked computer on most models. The device generally runs on a rechargeable nicad battery that will give about eight hours of use.

The utility of this device in archaeology is not clear, since it offers no easy method of full three-dimensional measurement. In industry it is most often used for precision level measurements on known points. A number of models are available from different manufacturers; fully functioning packages from Leica run approximately in the $4,500-$6,500 range.

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Hand-Held Laser Rangefinders (HHLFs)

HHLFs offer a different mix of advantages, and approximate total stations in some respects. They essentially depend on a version of an EDM that measures distance using the time of flight of laser light to a target and back. In the models I am familiar with, the target can be most reflective surfaces or objects (for distances of two to about 750 m), but use of a reflector can extend the range to about 5,000 m. Because of the clock speed of the devices, they have more limited distance accuracy than EDMs (+/- 15 cm), but produce distance readings almost instantaneously. Higher end models can cut this error in half. The more advanced devices, such as Laser Atlanta's Advantage, can also measure horizontal and vertical angles from user to target, using an internal compass; the horizontal angle readings have an accuracy of +/- 0.5deg., while the vertical ones fall within +/- 0.2deg.. The distance and angles are displayed on a digital readout, and data can be transferred out through a serial port or a data-capturing PCMCIA card.

The Advantage is hand-held, weighs about 2 kg, and is operated by lining the target up with cross hairs in a head-up display. Running on rechargeable nicad batteries, the device can run all day, taking measurements constantly. It is priced at $2,995 for the version with both distance and angle-measuring capabilities; more information on the Advantage can be obtained from Laser Atlanta, 2827 Peterson Pl., Norcross, GA 30071, (770) 446-3866.

This is the only device in this listing that can produce, on its own, three-dimensional provenience. Given its portability, speed, and somewhat limited accuracy, this device would be best suited for survey situations where rapid, reasonably accurate measurement is needed, especially over long distances. The angular accuracy would allow point location within about +/- 1 percent of the distance to the point measured, while the distance error is more fixed, becoming relatively minor compared to the angular error at distances over 30 m. I have not had a chance to use this instrument, but care should be taken to make sure the internal compass is not affected by metallic objects or electromagnetic fields in the operating environment. Coupled with GPS devices for measuring global site location, this device could allow for rapid site documentation for many field projects.

Perspectives

For under $3,000 there is a wide variety of innovative equipment available to the field archaeologist. We are starting to see devices that take advantage of the straight-line, non-dispersing, and distance-measuring capabilities of laser beams. As with computers, but at a lesser pace, the prices of this equipment are dropping. Anyone on a limited budget should establish a working relationship with a reliable and sympathetic survey instrument dealer in their area; I have found that significant discounts are available for educational institutions. In addition to the manufacturers listed above, it would be useful to look at a variety of companies, including products from Topcon and Nikon. Used equipment may also be around, although for these smaller, recent devices it will be a rare find. Finally, contact the manufacturers, both to see if they might take an interest in innovative use of their products, and also to find out the latest information on new technology they are pursuing.

My supplier, Haselbach Instruments of San Mateo, Calif., (800) 462-8181, has been a valued consultant across many years of fieldwork and a major source of new technology and ideas about how to use it. Along with the companies listed above, their provision of much of the information included here is gratefully acknowledged.

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

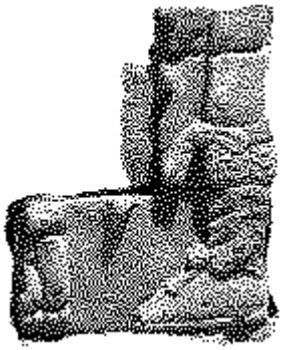
COSWA Corner

Katherine A. Spielmann

COSWA-sponsored SAA symposium--COSWA is sponsoring its first symposium at the upcoming SAA meetings in April. The topic is Women and Publishing in Archaeology. The symposium will take place Friday afternoon, April 12, and will feature papers that discuss gender issues in academic publishing in general, and in archaeology in particular. Other papers discuss strategies that women in archaeology have pursued through their careers. The session will provide an opportunity for discussion and comments from the audience.

Women's Network Reception--The annual Women in Archaeology cash bar reception at the SAA meeting will follow immediately after the Women and Publishing symposium on Friday afternoon, beginning at 4:00 p.m. This year the reception will be organized to facilitate networking among women sharing similar topical and areal interests.

COSWA Members--The COSWA committee members for 1996-1997 are: Katherine Spielmann, chair, Department of Anthropology, Arizona State University, Tempe; Paula Bienenfeld, Tetra Tech, Falls Church, Va.; Hillary Chester (student member), Department of Anthropology, Southern Methodist University, Dallas; Elizabeth Chilton, University of Massachusetts, Amherst; Margie Green, Archaeological Consulting Service, Tempe, Ariz.; Margaret Nelson, Department of Anthropology, Arizona State University, Tempe; Miriam Stark, Department of Anthropology, University of Hawaii, Honolulu; Johanna Thackston, U.S. Air Force, Fla.; Pamela Willoughby, Department of Anthropology, University of Alberta, Edmonton; and Rita Wright, Department of Anthropology, New York University, New York City. Please feel free to contact any of these women if you have an issue that you would like COSWA to address, or for further information on COSWA.



Katherine A. Spielmann is at Arizona State University.

SAA Student Affairs

Alicia Wise

Are you traveling to the annual meeting in New Orleans? Please plan to attend the Student Affairs Committee meeting on Wednesday. Be sure to check the program for place and time. Those of you who have been working on research projects or who have been active with other committees, please come and report on your work!

There are several other student-related programs that you may be interested in attending:

1. The Student and New Member Reception, which is sponsored by the Executive Board; and

2. The Student Affairs Committee Workshops on jobs in academia and government, publishing, and funding. The speakers and topics for the workshops are:

Veletta Canouts--Archeology and Heritage Preservation: Government Employment
Margaret Conkey--Academic Jobs and the "Holding Pattern"
Gary Feinman--Publication in *Latin American Antiquity*
Ed Friedman--Challenges and Benefits of Working for the Government
Lynne Goldstein--Publishing in Archaeology: Some Thoughts and Observations
Bonnie Magness-Gardiner--Funding for Archaeologists from Humanities Sources
Julie Stein--Getting the Academic Job: Cover Letters, Interviews, and Job Talks
Alicia Wise--Why a SAA Student Affairs Committee Workshop?
John Yellen--Funding for Archaeologists from NSF

If you have any questions, please contact our incoming chair, Caryn M. Berg, Department of Anthropology, Box 233, University of Colorado, Boulder, CO 80309, (303) 442-2887, email bergcm@ucsub.colorado.edu, or Alicia Wise, Department of Archaeological Sciences, University of Bradford, Bradford BD7 1DP, 44-1904-383-547, email A.L.Wise@bradford.ac.uk.

Alicia Wise is chair of SAA Student Affairs Committee.

INSIGHTS

THE MANY FACES OF CRM

Settlement Pattern Research Priorities for Pennsylvania: A Mechanism for Managing "Upland Sites"

Kurt W. Carr and Jenny Keller

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Using National Register criteria, most archaeological resources are significant in that they contain data that will enhance our understanding of past cultural behavior (Criterion *d*). During the past 15 years, state and federal historic preservation laws have resulted in the completion of nearly 2,000 Phase I, II, and III archaeological surveys in Pennsylvania. The number of prehistoric sites in the Pennsylvania Archaeological Site Survey (PASS) files has grown from 4,500 in 1974 to over 14,000 in 1995. While the database has increased greatly, the Pennsylvania Historical and Museum Commission (PHMC), Bureau for Historic Preservation (BHP),has not had the opportunity to synthesize this material and incorporate the advances in archaeological knowledge into the decision-making process. When considering the needs for archaeological survey in conjunction with state or federal construction projects, the BHP, until recently, utilized generalized models for predicting the location of prehistoric sites.

With the passage of Pennsylvania Senate Bill 879, the PHMC will be responsible for all surveys associated with state-permitted projects. While the funding has yet to be determined for them, it is certain that the PHMC will not be able to conduct the current level of Phase I surveys. In response to a changing compliance environment, the PHMC has developed a plan to prioritize archaeological survey needs in Pennsylvania. We hope this new approach hopefully will increase the effectiveness of Phase I surveys in locating prehistoric sites, which, in turn, will contribute to our understanding of past cultural behavior.

Compliance Archaeology and Settlement Pattern Recognition

Prior to the full implementation of the National Historic Preservation Act in the mid 1970s, archaeological investigations were mainly driven by archaeological research needs. Base camps in floodplains frequently stratified, with their attendant variety of spectacular features, and high artifact densities, have invariably been the focus of archaeological fieldwork since it began in eastern North America. However, it is widely recognized that this focus on riverine settings resulted in a strongly biased description of settlement patterns and cultural adaptations (C. R. Geier, M. B. Barber, and G.A. Tolley, 1983, *Upland Archaeology in the East*. Cultural Resource Report 2, U.S. Department of Agriculture, Forest Service, Southern Region). A large quantity of data was collected on prehistoric base camps in one ecological setting, but not on the more specialized sites spread over the remainder of the environment. Many have agreed such sites are frequently more sensitive indicators of the overall cultural adaptation (e.g., W. M. Gardner, 1978, *Comparison of Ridge and Valley, Blue Ridge, Piedmont and Coastal Plain Archaic Site Distribution: An Idealized Transect*. Preliminary Model. Paper delivered to the 1978 Middle Atlantic Archaeological Conference, Rehoboth Beach, Del.; C. Hay, J. Hatch, and J. Sutton, 1987, *A Management Plan for Clemson Island Archaeological Resources in the Commonwealth of Pennsylvania*. Pennsylvania Historical and Museum Commission: Harrisburg, Pa.; R. M. Stewart, 1980, *Prehistoric Settlement and Subsistence Patterns and the Testing of Predictive Site Location Models in the Great Valley of Maryland*. Ph.D. dissertation, Catholic University of America. University Microfilms, Ann Arbor).

For the past two decades, state and federal construction projects directed archaeological research. Beginning in the 1970s, archaeologists were consulted for the first time on the possible destruction of large numbers of non-floodplain, non-base camp sites. After some discussion (see W. F. Kinsey, III, 1977, One Archaeologist's Dilemma: A Personal View. *Pennsylvania Archaeologist* 47(1):42-44. Ann Arbor), their unmitigated loss was considered unacceptable by the archaeological community. This has caused archaeologists to look at ecological settings rarely examined, and it is now generally accepted that this approach has produced a far more complete definition of settlement patterns and cultural adaptations.

Although riverine settings have a very high density of prehistoric sites, the most common type of site resulting from compliance surveys is located outside these zones in what is termed the non-riverine or upland setting. Because these sites are located outside the depositional environment of the floodplain, and are often not stratified, they are often multicomponent and have usually been disturbed by plowing. Sometimes defined as "lithic scatters," they are singularly unimpressive, but they are absolutely essential building blocks for settlement pattern research. By mapping the distribution of temporally diagnostic projectile point types or pottery types from both riverine and non-riverine settings, archaeologists have identified the range of ecological zones exploited during a particular phase, and have developed a more complete description of cultural adaptations.

Using this type of data, J. F. Custer (1985, Prehistoric Archaeological Resources of Pennsylvania's Piedmont and Coastal Plain. *A Comprehensive State Plan for the Conservation of Archaeological Resources*. Historic Preservation Planning Series 1, vol. II. Pennsylvania Historical and Museum Commission, Harrisburg) and Stewart (1980) have used settlement pattern studies to dramatically illustrate basic changes in prehistoric cultural adaptations. These studies have been the major contribution of compliance archaeology and characterize modern archaeological research in the region. However, with some exceptions (i.e., quarry sites, rock shelters, Late Woodland villages or other sites with large numbers of subsurface features), upland sites have limited research potential beyond settlement pattern studies.

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Definition of Research Priorities

In the past, many archaeologists assumed that it was necessary to collect all sites from a given region, so as not to miss a single functional site type or to provide a ready replacement to the database should one be destroyed. It has also been suggested that there is a need to at least identify all sites to ensure that as-yet-unidentified site types are included in the general sample. This is a good, but costly, strategy. In the current socioeconomic and political environment, where archaeological dollars are increasingly limited, it is no longer feasible, and it is time to prioritize explicitly settlement pattern survey needs. The recent overwhelming support for anti-archaeology legislation in Pennsylvania (i.e., House Bill 1730 and Senate Bill 879) suggests an urgent need for more public education. The BHP and archaeology, in general, need to develop a better balance between working with the review/compliance process and working to increase public awareness.

We seem to have reached a plateau in our ability to predict the location of significant sites. Improved predictive modeling using systematically traversed transects (Stewart 1980) or satellite imagery (J. F. Custer, and D. C. Kellogg, 1990, *Development of a LANDSAT-based Predictive Model for Prehistoric Archaeological Sites in the Upper Conestoga Drainage, Lancaster County, Pennsylvania*. Bureau of Historic Preservation, Pennsylvania Historical and Museum Commission, Harrisburg) has met with some success but would require an enormous amount of time and money to implement these strategies widely. A number of regional models have been developed (J. Herbstritt and R. Michael, 1980, *Prehistoric Archaeological Site Survey--Pennsylvania Region II*. Pennsylvania Historical and Museum Commission, Harrisburg; Custer 1985; Stewart 1980; S. W. Neusius and R. E. Watson, 1991, *Testing the Crooked Creek Upland Settlement Predictive Model: 1990-1991*. Pennsylvania Historical and Museum Commission, Harrisburg), but they usually require field confirmation of the main variables used for predicting site locations, making them impractical to a State Historic Preservation Office staff reviewing thousands of projects annually using USGS maps.

Sampling the database is an inherent methodology of archaeological research, and it seems appropriate to the resolution of this situation. Given that fewer surveys will be conducted in the future, how will decisions be made as to the location of these surveys? We do not feel that a sampling design is appropriate for sites in riverine settings; a modified sampling procedure is appropriate, however, for upland prehistoric sites.

The PHMC Plan

Pennsylvania has developed an explicit set of archaeological survey priorities for the statewide management for upland archaeological sites, as defined above. Basically, we will focus surveys in regions where there is little information on upland prehistoric sites as opposed to regions where there is a great deal of data relating to upland sites. These priorities will be incorporated into the BHP review process and they will result in a more effective use of archaeological dollars.

To identify regions with high-quality data on upland sites, the following variables were considered:

- site densities;
- the ratio of upland to riverine sites;
- upland sites representing all expected time periods and cultural phases;
- upland sites that contain data on lithic utilization;
- upland sites with features;
- regions sampled by Phase I level surveys; and
- regions with a sample of controlled surface collections from upland sites.

The analysis of these seven variables was conducted by using physiographic zones and watersheds as the geographical sampling units. We focused on identifying the watersheds with the highest values for each variable. Regional averages were established by examining the physiographic zones and, using the watersheds, identifying an acceptable range around the regional average. The regional averages set base-line standards, and these sheds that were significantly below the regional average for a particular variable were not considered to be representative for the phenomena under consideration.

The analysis began by identifying a list of watersheds with relatively high densities of all sites. The site density list was refined to include only regions that included a sample of both upland and riverine sites. From this list we examined each watershed to ensure that it contained a sample of all chronological components. The chronological component list was further refined by examining each watershed for data on patterns of lithic utilization. Finally, we examined each watershed to develop an index of prior systematic surveys. This guaranteed that each watershed had some data derived from actual excavation, systematic surveys, and controlled surface collections.

Thus far, 19 watersheds out of a total of 104 for the state have been identified as having high-quality data on upland prehistoric site locations. Each watershed has an average 280 sites (1 site/4.2 km2) of which approximately 150 are datable. We recognize that the data in the PASS files is biased in a variety of ways and the process outlined above did *not* result in a "representative sample" of upland sites. We have simply identified the watersheds with the best existing databases on upland settlement patterns. We also recognize that these are representative samples of the existing database and not necessarily representative samples of prehistoric site distributions. However, we assume that in areas of high site densities and high-quality data, there is some redundancy in the database, and this has resulted in the best available approximation of prehistoric reality.

The approach to the development of research priorities described above offers significant advantages over the current use of more generalized predictive models. It represents an explicit statement of upland survey priorities based on survey needs. It will focus surveys in areas where there are few recorded upland sites and/or upland sites with poor-quality data. In regions that have high values for all of the above criteria, the collection and/or survey of additional upland sites will be a low priority, and the BHP will not recommend that Phase I surveys be conducted in upland zones in compliance with historic preservation laws.

The BHP will continue to protect known and significant sites in these regions regardless of their topographic setting, but Phase I surveys will only be recommended for riverine settings where large habitation sites with features and/or stratified sites are expected. In addition, existing models suggest that sites that could contribute to a wide variety of research problems exist in several regions. Such sites, which will be protected, are characterized by an archaeological context offering additional research potential compared to most upland sites. Rock shelters and quarry sites are another site type requiring protection, and these could be located by geologic formation. The BHP will continue to protect and manage the database in these settings even if they otherwise have high levels of upland surveys.

The BHP initiated this program at the end of January, and it is being applied to both state and federal projects. Obviously, at this date, there are no "results" to report. Over the past year we have had several discussions with the archeological community and other state agencies about this project. The latter have universally felt this was a logical idea; i.e., to stop looking in regions where we had high-quality data and save our money for the "really important sites." They also felt this program would reduce the number of confrontations we all had with the private development community. The response from the archaeological community has ranged from "it is about time" to "you do what you have to do" to "this is not logical, it will not appease the developers and it will ruin archaeology in Pennsylvania." There was a widespread concern that this policy hurt historic archaeology because many historic sites are found while looking for prehistoric sites. In response, we will continue to review our historic files for projects in the 19 high-quality watersheds, and we are initiating a program to develop improved models for historic archaeology, especially in these regions, but also statewide.

As a consequence of the reduced level of effort, expenditures of public money for archaeological surveys will decrease. Future archaeological surveys will be directed at filling in crucial gaps in the statewide archaeological database. The ultimate result of this change in approach will be a federal and state program of identification-level compliance surveys that are more cost effective, and will produce more important information given the limited dollars at hand.

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Working Together

Native American Oral Traditions and Archaeology

Roger Anyon, T.J. Ferguson, Loretta Jackson, and Lillie Lane

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Editor's Note: *This article represents one of three position papers that are a product of a workshop, entitled Native Americans and Archaeology, sponsored by the Arizona Archaeological Council, and held on November 9-10, 1994 in Flagstaff, Ariz. The workshop was funded by the National Center for Preservation Technology and Training, a division of the National Park Service. The workshop participants were professional archaeologists from federal, state, and local agencies, academia, and the private contracting community, and Native American representatives from the Hopi, Zuni, and Hualapai tribes, and the Navajo Nation. The purpose of the workshop was to bring together a diverse group of archaeologists and Native Americans to share in a dialogue concerning three specific issues: (1) consultation between Native Americans and federal agencies, (2) oral tradition and archaeology, and (3) Native Americans' role in archaeology. For more information regarding this workshop and the other two position papers, please contact me at (520) 734-6636, or write c/o Cultural Preservation Office, The Hopi Tribe, P.O. Box 123, Kykotsmovi, AZ 86039. Kurt Dongoske.*

The purpose of this position paper is to present ideas to the Arizona Archaeological Council membership on the appropriate use of oral traditions in archaeological research. It provides a basis for continuing a dialogue between Native Americans and archaeologists about how and why archaeology is conducted in Arizona.

Historical Perspective on the Use of Oral Traditions in Archaeology

The first archaeologists to work in the Southwest had a keen interest in the relationship between Native American oral traditions and the archaeological record. Archaeologists such as Victor Mindeleff, Frank Hamilton Cushing, Cosmos Mindeleff, and Jesse Walter Fewkes (1900, Tusayan Migration Traditions. In

Nineteenth Annual Report of the Bureau of American Ethnology for the Years 1897-1898, Part. 2, pp. 573-634. Government Printing Office: Washington, D.C.) routinely collected information about Native American oral traditions and used it in their research to help interpret the chronology, function, and cultural affiliation of the archaeological sites they investigated. During this period, Fewkes (1900:579) astutely observed that "This work...can best be done under guidance of the Indians by an ethno-archaeologist, who can bring as a preparation for his work an intimate knowledge of the present life of the Hopi villagers."

In the early 20th century, however, many cultural anthropologists began to discount the historical value of Native American oral traditions. Writing about the Zuni, for instance, A. L. Kroeber (1917, *Zuñi Kin and Clan.* Anthropological Papers of the American Museum of Natural History, 18(2):39-204) noted, "The habitual attitude of the Zuñi, then, is unhistorical...That now and then he may preserve fragments of a knowledge of the past that approximate what we consider history, is not to be doubted. But it is equally certain that such recollection is casual and contrary to the usual temper of his mind." Similarly, Robert H. Lowie said, "I cannot attach to oral traditions any historical value under any conditions whatsoever" (quoted in F. Eggan, 1967, From History to Myth: A Hopi Example. In *Studies in Southwestern Ethnolinguistics,* edited by D. Hymes, pp. 33-53. Mouton: The Hague). Archaeologists were influenced by the attitudes of cultural anthropologists, and for many decades, oral traditions were generally ignored in archaeological research.

Recently, there has been a renewal of interest in the historicity of Native American oral traditions (e.g., A. Wiget, 1982, Truth and the Hopi: An Historiographic Study of Documented Oral Tradition Concerning the Coming of the Spanish. *Ethnohistory* 29:181-199; L. S. Teague, 1993, Prehistory and the Traditions of the O'Odham and Hopi. *Kiva* 58:435-454; D. M. Bahr, J, Smith, W. S. Allison, and J. Hayden, 1994, *The Short, Swift Time of Gods on Earth: The Hohokam Chronicles.* University of California Press: Berkeley). Indicative of this work is Teague's analysis of the oral traditions of the O'Odham and Hopi, oriented toward increasing our understanding of the cultural events and processes of the period before documentary history in southern Arizona. Teague (1993:436) concluded that, "oral histories can be shown to conform to...archaeological evidence to an extent not easily attributed to the construction of an after-the-fact explanation for the presence of numerous ruins throughout the region. These histories reflect direct knowledge of events in prehistoric Arizona." Her article represents the renewed respect archaeologists are beginning to afford native accounts of traditional history.

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The Nature of Knowledge in Oral Traditions and Archaeology

As archaeologists begin once again to incorporate Native American oral traditions into archaeological research, it is important to recognize that oral traditions and archaeology represent two separate, but overlapping, ways of knowing the past. Because they are qualitatively distinct, different standards apply in the way that information is collected, evaluated, and used to understand the past. These sources of knowledge converge in a broad sense on certain issues and themes, however, such as migrations, warfare, residential mobility, land use, and ethnic coresidence. Both sources can therefore be used productively to investigate these issues, among others.

There is no doubt that a real history is embedded in Native American oral traditions, and that this is the same history that archaeologists study. Oral traditions contain cultural information about the past carefully preserved and handed down from generation to generation within a tribe. The archaeological record contains material remains of past human behavior that provide physical evidence for many of the same events and processes referred to in oral traditions. Since oral traditions and archaeology have inherent limitations, combining them in research can create knowledge that goes beyond what is possible using either source by itself.

Tessie Naranjo (1995, Thoughts on Migration by Santa Clara Pueblo. *Journal of Anthropological Archaeology* 14:247-250) recently pointed out that Native American oral traditions are often axiomatic rather than hypothetical. Whereas scientists search for exclusive and universal truth, Native Americans use their oral traditions to attain a multiversal understanding of the past that simultaneously operates on many different levels of meaning.

In this regard, it needs to be understood that oral traditions and archaeology are both palimpsests of history. Oral traditions incorporate the cultural knowledge of many ancestors at multiple levels of signification. Similarly, archaeological sites incorporate a complex record of past human behavior embedded in artifacts and archaeological deposits. Both oral traditions and archaeology thus constitute sources of knowledge that have intricate structures that must be systematically and carefully analyzed in terms of their own internal logic in order to use them in scholarly research.

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Methodologies for Using Oral Traditions in Scholarly Research

Studies by David Pendergast and Clement Meighan [1959, Folk Traditions as Historical Fact: A Paiute Example. *Journal of American Folklore* 72(284):128-133], Eggan (1967), and Wiget (1982) have unequivocally demonstrated that a real history is embedded in Native American oral traditions. As Eggan (1967) pointed out, anthropologists now have more data and better historical controls than earlier generations of anthropologists, and consequently, we should be able to analyze social and cultural data in a more sophisticated manner so as to develop the means to segregate history from other aspects of oral traditions. Jan Vansina (1985, *Oral Tradition as History.* University of Wisconsin Press: Madison) presents a rigorous methodology for incorporating oral traditions in historical research. These methodologies need to be incorporated into archaeological method and theory to establish the scholarly basis for using oral traditions in historical research.

Good scientific research uses a methodology based on the falsification of hypotheses. In essence, archaeologists disprove what they can, and then create theories to explain the residual hypotheses. This scientific methodology may not always be appropriate for the research of oral traditions, where a more humanistic and qualitative approach is sometimes warranted. Applying a humanistic rather than a scientific methodology in the use of oral traditions should be done in a manner that meets high scholarly standards.

Uses of Oral Tradition and Archaeological Research

Archaeologists are interested in learning about the past. Native Americans are interested in maintaining the cultural traditions they inherited from their ancestors who lived in the past. For Native American tribes with strong oral traditions, the primary sense of history comes from the narratives, stories, and accounts told by tribal elders. In this context, archaeology constitutes a secondary source of supplemental information about tribal heritage. Some, but not all, tribal members may find this supplemental information useful in the transmission of family values.

Archaeology can also be used by tribes to achieve their own political and legal goals in relation to the larger society. Archaeological data can be used to help document land claims and water rights, and manage tribal cultural resources on lands managed by state and federal agencies. A small but increasing number of Native Americans are realizing that archaeology can be used constructively to validate tribal history.

In recent years, archaeologists have been called upon to expand their professional activities with respect to historic preservation by collecting information about traditional cultural properties and sacred places, as well as historic archaeological sites of interest to particular tribes. Native American oral traditions contain essential information about cultural values and beliefs pertaining to traditional cultural places, natural features, specific sites, and landscapes that are important cultural resources for Native Americans (e.g., K. B. Kelley, and H. Francis, 1994, *Navajo Sacred Places.* Indiana University Press: Bloomington). In order to successfully meet the mandate for historic preservation, contemporary archaeologists must either work with oral traditions or coordinate their work with other researchers who are working with this source of information. This creates an ethical and methodological imperative for archaeologists to work closely with Native Americans so that the information needed to properly manage tribal cultural resources can be collected and reported in an appropriate manner.

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The Need for Respect in the Research of Oral Traditions

Indiscriminate references to oral traditions as "myths and legends" is demeaning to Native Americans. It perpetuates a false dichotomy that implies that oral traditions are less valid than scientifically based knowledge. Oral traditions and scientific knowledge both have validity in their own cultural context. Scientific knowledge does not constitute a privileged view of the past that in and of itself makes it better than oral traditions. It is simply another way of knowing the past.

Archaeologists need to have respect for sources of knowledge about the past that are unique to Native Americans. Even in situations where oral traditions are not used in archaeological research, archaeologists should be sensitive to both the inherent limitations of scientific knowledge and to the ways that oral traditions can transcend scientific knowledge with respect to cultural heritage.

Sometimes archaeologists publish findings that contradict Native American oral traditions. This need not be done in a belligerent manner that directly challenges these traditions, and archaeologists should strive to place their conclusions in a cultural and intellectual context to help Native Americans understand the nature of scientific knowledge and other archaeologists understand the nature of oral traditions. By respecting the values of Native American oral traditions, archaeologists will lay a foundation for Native Americans to respect the values of scientific knowledge, and for scientists to respect the values of oral traditions.

Sensitive Issues in the Use of Oral Traditions

Oral traditions are intimately connected with Native American religious beliefs and knowledge, much of which is esoteric in nature. For this reason, it is essential for archaeologists to collaborate with tribal cultural advisors regarding the use of oral traditions in archaeological research. These advisors are needed to determine what aspects of oral traditions are appropriate for use in scholarly research, to help interpret the results of research, and to guide decisions about publication.

Reducing oral traditions to a written form has a cultural impact that needs to be considered in research. As Whiteley (1988:xvi) has observed, written texts turn oral traditions into fixed literary images widely disseminated in the larger American society in a manner that Native Americans cannot control. This is a critical concern when sacred knowledge is misappropriated for scholarly research, and a dynamic oral tradition is reduced to a static point of reference.

The preferences of each tribe regarding the use of oral traditions in archaeological research should be respected. Some tribes--such as the Hopi--encourage the use of oral traditions in archaeological research, especially when this research is done by researchers working in collaboration with Hopi cultural advisors (K. Dongoske, T. J. Ferguson, and L. Jenkins, 1993, Understanding the Past through Hopi Oral *History. Native Peoples Magazine* 6(2):24-31). These advisors are the best judges of what aspects of oral traditions constitute historical information and what aspects constitute esoteric religious knowledge that should remain confidential.

The Navajo people have an abundance of oral traditions that coincide with and complement contemporary archaeological research. The store of Navajo traditional knowledge can enhance archaeology and the Navajo Nation by furthering our understanding of the past. Many Navajo people are fascinated by the oral traditions that ground historical stories in the context of places that can still be seen in contemporary landscapes. An important part of the physical counterpart of stories are the ruins studied by archaeologists. The Navajo Nation therefore recommends that archaeologists augment their scientific conclusions with Navajo oral traditions. To facilitate this approach, the Navajo Nation Historic Preservation Department is developing ways for the Navajo people to interact with the science of archaeology.

The Hualapai Tribe places a great value on the oral traditions of its elders, and these traditions are an important part of the cultural heritage of the Hualapai people. When Hualapai culture is the subject of research, it is the Hualapai people who are the cultural experts. Consequently, the Hualapai Tribe prefers that research using oral traditions be conducted by tribal members so that sensitive information can be controlled and the tribe can be sure it is used for appropriate purposes.

Some tribes, like the Pueblo of Zuni, are reticent about the use of oral traditions in scholarly research. At present, the Pueblo of Zuni does not encourage the use of oral traditions in scholarly research, except in a very limited fashion by researchers employed directly by the tribe. This makes it imperative for scholars researching Zuni oral traditions to consult with the tribe.

Some Native Americans think that in the past archaeologists have "mined" archaeological sites to collect the artifacts that form the basis of archaeological research. There is an increasing concern that archaeologists now want to "mine" oral traditions to interpret the archaeological record. There is a growing anxiety that unless tribal members fully collaborate in the research process, this approach will result in the continuation of cultural exploitation.

Recommendations for Use of Oral Traditions

- By asking tribal officials, determine whether or not a tribe wants its oral traditions used in archaeological research.
- If tribes want oral traditions to be used in archaeological research, then establish at the outset the parameters of that use with Native American cultural advisors and tribal officials.
- Compensate subject specialists such as tribal cultural advisors for their time (like other professional researchers) on funded cultural resources projects.
- If tribes do not want oral traditions used in archaeological research, then state this in reports. These reports should acknowledge that the review of culture history and the scientific findings do not include oral traditions at the request of the tribe.
- Encourage tribal review of archaeological research, especially if it uses oral traditions.

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Archaeological Contributions to Ecosystem Management

A Policy Rationale from the Integrated Resources Management Workshop at the SAA "Save the Past for the Future" Conference

James P. Barker

The federal government has decided to manage federal lands on the basis of the ecosystem concept. If this decision is fully implemented, it will entail significant changes in federal land management policy and restructuring of the relationship between cultural resources management programs and other resource programs in federal agencies. In a schizophrenic legal environment, the government is charged with both maximizing the short-term economic use of federal lands while maximizing long-term environmental protection. Historically, the federal land management system has been divided into two competing camps: commodity production vs. environmental protection, with cultural resources falling into the environmental camp. The system has dealt with this opposition by fragmenting land-use planning to concentrate on individual land-use proposals and their environmental effects in isolation from larger systems. As a consequence, most federal cultural resources management activities deal with mitigating the negative effects of individual land uses on individual archaeological and historic sites.

Under the umbrella of ecosystem management, agencies should move to a more holistic and inclusive management approach. For example, the Bureau of Land Management (BLM) defines ecosystem management as "the integration of ecological, economic, and social principles to manage biological and physical systems in a manner that safe guards the long-term ecological sustainability, natural diversity, and productivity of the landscape." The federal commitment to ecosystem management represents a significant departure from traditional public lands management. Since 1976, BLM has managed the land for multiple use and maximum sustainable yield. In practice, this has meant land management for commodity production and commercial land uses at the expense of non-monetized resource values. Short-term management objectives were developed to expedite the development, extraction, and production of commodity resources on public lands. There were no long-term objectives. Non-commodity resources, such as wildlife, recreation, wilderness, and cultural resources were managed so as not to impede commodity production objectives. Over time, non-commodity resources came to be viewed as impediments to managing commodity resources and experts in non-commodity resource management were excluded from primary roles in land-use planning.

With ecosystem management this could change so that archaeologists (cultural resource management specialists) are included in initial land-use planning and considered as full partners in regional land management. Ecosystem management potentially allows archaeologists to make direct managment contributions by providing historical data. Unfortunately, in the initial development of ecosystem management, archaeologists have been excluded from the process, and ecosystems have been defined in purely biological and physical terms. This reflects, in part, the fragmentation of the federal land managing system. More importantly, it reflects the American notion that humans are free from the constraints of ecosystem dynamics and can thus use ecosystems in any way desired without suffering long-term consequences.

If archaeologists and other cultural resources managers are to realize the potential for direct and meaningful participation in land management inherent in the ecosystem concept, they and their supporters, such as the

Society for American Archaeology (SAA), must develop and implement policies that convince land managers and the general public that they should be included in ecosystem management teams. Whatever policy is adopted, it will not succeed unless it addresses three problems: 1) the cultural separation of humanity from nature, 2) the assumption that ecosystems are not historically constituted, and 3) the perception that archaeology focuses on individual archaeological and historic sites.

The first problem is the most difficult because it involves altering the rooted belief that people are in a privileged position relative to other components of the ecosystem. In contrast to many others, European American culture developed a conceptual dichotomy between humanity and the environment through an artificial separation between the human and natural worlds, whereby humanity is considered superior to nature and not bound by ecological limits. While this separation can be traced to biblical and classical Greek references, it became a dominant theme during the Enlightenment and subsequent Industrial Revolution. The elaboration of this theme created the conceptual problem of maintaining human progress while, at the same time, maintaining the natural environment (J. B. Hagen, 1992, *An Entangled Bank: The Origins of Ecosystem Ecology.* Rutgers University Press: New Brunswick, N.J.). This tension is best exemplified by Rousseau's concept of the "natural man" uncorrupted by the effects of civilization opposed to Bacon's concept of the human right to exploit nature in the name of progress.

Through time, this opposition was exaggerated by the expansion of Western culture throughout the New World, during which it was politically and economically expedient for European Americans to deny the validity of indigenous cultures and to focus on the short-term utility of the environment as a cradle for expansion (P. Shabecoff, 1993, *A Fierce Green Fire: The American Environmental Movement.* Hill and Wang: New York). The concept of "highest and best" use was developed to legally remove indigenous populations from their traditional lands and to appropriate natural resources. Under this concept, if there was no significant resource use before 1492, then European Americans were free to use the environment in any way. As long as they could maximize the immediate resource productivity, relative to indigenous land use, European Americans claimed to have a natural right to displace indigenous peoples and use their resources.

Although this thinking was developed as a rationale for expansion, it has remained a vital element in our environmental thinking. On the one hand, contemporary American environmental thought notes that humans play a negative role by disturbing an essentially pristine and static ecology (D. B. Botkin, 1990, *Discordant Harmonies: A New Ecology for the Twenty-First Century.* Oxford University Press: New York; Shabecoff 1993). On the other hand, commodity-based land management focuses on short-term production and managment for the highest and best economic use of the land. This translates into commodity production and short-term analysis (Shabecoff 1993). It is clear from the way in which ecosystems thinking was developed that ecologists are focused on synchronic studies over limited areas. As long as this attitude persists, it will be impossible to develop an ecosystems management that meets the intent of the BLM definition (Botkin 1990).

Given this history, it is not surprising that most Americans believe there has always been a separation between the human and natural worlds. In the popular mind, once humans were created, they have existed free from environmental constraints and, through technological and social innovations, could expect unlimited progress (T. C. Patterson, 1994, Toward a Properly Historical Ecology. In C. Crumley, ed., *Historical Ecology: Cultural Knowledge and Changing Landscapes.* School of American Research Press: Santa Fe). Americans also believe that people in other cultures live "in harmony" with nature and have not significantly affected the natural world (Shabecoff 1993).

The effects of the false separation of humanity from the environment have been minimized in American archaeology. That is, from its beginning American archaeology has focused on investigating indigenous cultures in an environmental context. This trend was reinforced in the 1930s by Julian Steward, who attempted to place human society in an environmental context by developing an explicitly ecological model for understanding the long-term relationship between native cultures and environmental change (C. L. Crumley, 1994, Historical Ecology: A Multidimensional Ecological Orientation. In C. Crumley, ed., *Historical Ecology: Cultural Knowledge and Changing Landscapes.* School of American Research Press: Santa Fe). Following Steward, American archaeologists in the 1950s began turning away from the investigation of single sites and artifact classes in favor of investigation of settlement systems in a regional context, based on the assumption that

settlement systems provided direct evidence of past human behavior in their geographic setting. The focus of American archaeology shifted again in the 1960s and 1970s when Lewis Binford and others developed processual archaeology to explain underlying processes of behavior. As practiced, processual archaeology incorporated systems and cybernetic concepts to develop models of human behavior in an explicitly ecosystems context.

Coincident with the development of ecological thinking, archaeologists adopted a regional approach to understanding prehistoric settlement and subsistence systems. This orientation is especially amenable to ecosystem thinking and should have placed archaeologists in the vanguard of ecosystem management. However, while the theoretical orientation shifted to regional models, archaeological input in land management remained focused on single sites. That is, at least in federal land management, archaeologists have primarily been used as compliance specialists who manage the Section 106 process, so that proposed land uses are not unduly hampered by cultural resource concerns. The goal has been to meet NHPA requirements in order to maximize commodity production while avoiding threats of legal entanglements. This limited role is fostered by the way in which archaeologists have allowed the Section 106 process to be defined, and also by the legal parameters of the process itself. The result is a land management system in which individual land-use proposals command the attention of land managers to the exclusion of long-term or regional management concerns. Once the individual project has been approved, management attention shifts to the next individual project. Over time there is no synthesis or evolution of our understanding of the natural world and our place in it. There is no perception among managers that archaeologists can and should be involved directly in ecosystem management.

Ecological thinking is a relatively recent addition to Western thought, developed largely by biologists who implicitly held to the false dichotomy between human and natural worlds (Hagen 1992). In 1864 George Perkins Marsh set the stage for the contemporary environmental movement by fostering the idea that nature was orderly unless disturbed by human activities (Botkin 1990). This was followed in the late 1880s by Stephen Forbes's concept of plant and animal communities tending to equilibrium in an environment through natural selection. In the 1920s Frederic Clements developed an organismic analogy for describing plant communities and argued for the concept of succession to a climax community as the way in which communities tend toward equilibrium. At about the same time, Charles Elton contributed the concept of trophic levels in a food chain as the basic structure in a community. Finally, in the 1930s, Arthur Tinsley replaced the organismic analogy with the ecosystem concept: the ecosystem was a flexible abstraction for describing very large-scale relationships between living and non-living environmental components. In its early form, the ecosystem concept was used as a heuristic and didactic tool that was not applicable to single site studies or even to regional analyses. Tinsley's concept went beyond a population or organismic community focus, and had the advantage of incorporating both biological and physical factors into a single conceptual system. The ecosystem concept was expanded in the 1940s with Raymond Lindeman's focus on empirically tracking energy and materials flowing through trophic levels and, again, in the 1950s when Evelyn Hutchinson introduced cybernetics to ecosystem thinking. The advantages of the concept were fully realized in the 1960s when Eugene Odum and Howard Odum developed the ecological concept of homeostasis in an integrated trophic system. The Odums also proposed the ecosystem as the basic unit of ecological analysis because it embodied a comprehensive analytical system in which local environments could be bounded, equilibrated, and structured in manageable units apparently based on actual natural relationships (Hagen 1992).

In addition to the ecosystem becoming the basis for many ecological investigations, it has now become the basis for public land management in the federal government. Federal land managers now need to be aware of ecosystem concept limitations in order to devise and implement viable management plans (Botkin 1990). Archaeologists can assist managers in dealing with the two most significant limitations by providing information on the historical nature of ecosystems and on the human dimensions of ecosystem management.

The ecosystem concept was based on synchronic investigations of well-bounded environments, such as lakes and plant communities, that focused on short-term environmental interactions (Patterson 1994). This research domain limited ecological thinking by creating the illusion that ecosystems could be bounded, equilibrated, and structured in ways that highlighted the balance of nature through systemic relationships. It also fostered the illusion that ecosystems could be understood without accounting for the history that created the apparent system

at a given place and time (Patterson 1994). We now know that ecosystems function more like living systems, in which history determines current conditions, than like physical systems, in which history is not a factor in current function (Botkin 1990; Patterson 1994). The ecosystem concept has suffered from two problems created by the synchronic focus of most studies: (1) the difficulty in specifying the boundaries and content of the system and (2) defining processual parameters within the system (R. A. Rappaport, 1990, Ecosystems, Populations and People. In E. Moran, ed., *The Ecosystems Approach in Anthropology: From Concept to Practice.* University of Michigan Press: Ann Arbor).

Both of these problems stem from the historical nature of ecosystems. In any study at a specific place and time, ecosystem boundaries can be determined and the trophic and structural content of the system specified. Further, it can be empirically argued that the system is either at--or tending toward--climax conditions (equilibrium). However, due to the effects of evolutionary processes and long-term biogeographic and geomorphological dynamics, none of this is possible (R. Levins and R. Lewontin, 1985, *The Dialectical Ecologist.* Harvard University Press: Cambridge). That is, (1) through time ecosystems do not appear to be tending toward equilibrium and are probably not tending anywhere, (2) the species composition and structure of ecosystem systems change through time and across space so that the living components of the system cannot be specified, and (3) geomorphological processes alter the non-living environment through time so that niches cannot be reliably specified.

Ecologists have become aware of historicity in ecosystem development and are moving away from their characterization as cybernetic, homeostatic systems (Hagen 1992). Some ecologists recognize that succession is routinely disturbed by endogenous and exogenous factors in ways that make it more useful to consider ecosystems as historically derived statistical patterns rather than balanced cybernetic entities (Botkin 1990). If the organismic cybernetic community model is to be replaced by the concept of an ecosystem as dynamic, then historical development has to be considered crucial in understanding an ecosystem at any point in time and space (Levins and Lewontin 1985).

Since archaeologists have been gathering data on environmental changes through time, it would seem reasonable for them to be included in a land management system that values developmental history. However, archaeologists have not yet been included in the mix of specialties considered necessary for ecosystem In addition to providing data and insights on the human dimension of ecosystems, archaeologists can provide managers with data that is directly relevant to plant and animal managment. For example, current renewable resource inventory techniques identify potential or desired plant communities from "relic sites," which may not be indicative of an area's capability to sustain them over a long period of time. Archaeologists have extensive documentation of plant and animal distributions across geographic areas throughout the Holocene and, in some cases, well into the Pleistocene. Archaeologists can provide the baseline information necessary for establishing achievable goals for both desired plant communities and wildlife populations within an ecosystem management concept.

Archaeologists can also (1) track the ecological status of biotic communities through time and across the landscape to aid wildlife or range managers in defining critical habitat, (2) relate changes in the physical environment and climate to changes in biotic communities and define the "natural" environment, given that human alterations began at the end of the Pleistocene, (3) document the ecological effects of human land use in both prehistoric and historic periods, (4) determine the historic limits of change in biotic communities, (5) dispel popular myths that the arid west was a "wasteland" until European American occupation and development, (6) use historic data on abandoned homesteads to determine recent biotic recovery processes and rates, (7) use cadastral survey notes to develop detailed biotic characterizations through time in specific geographic areas, (8) identify the historical presence of wildlife species to determine which are historically exotic in an area, and (9) work with traditional cultural groups to better understand their land use.

Given the wealth of data in hand, and the expertise to gather additional data, archaeologists can and should contribute directly to developing ecosystem-based land management. Rather than simply consider cultural resources as a hindrance to managing real resources, land managers should use all available data to enhance management efficiency, acknowledging archaeologists as necessary and active partners in ecosystem management. Better ecosystem management can be fostered by collapsing the false conceptual dichotomy

between humanity and nature and by developing historically justified ecosystem management plans (Patterson 1994). Archaeologists have always collapsed the human/nature dichotomy and taken a long-term perspective toward human environmental interactions. With this orientation, archaeologists and archaeological data should be instrumental in developing effective ecosystem management.

SAA can assist in making archaeology an integral part of ecosystem management by working to change the public perception of the role of archaeologists and archaeological information in land management. To do this, SAA needs to adopt policies and action plans that foster and work toward (1) collapsing the false conceptual dichotomy between humanity and nature, (2) positioning archaeologists as experts in the human dimensions of ecosystem management, (3) positioning archaeologists as useful in direct ecosystem management by providing land-use managers with diachronic environmental insights, and (4) dispelling the perception that sites and artifacts are the basic unit of analysis in archaeological research.

James P. Barker is at the Bureau of Land Management, Reno, Nevada.

Society for American Archaeology

Fiscal Year 1995--Financial Statement

REVENUE

Member Programs and Services	
Task Force on Latin America	$.00
Task Force on Curation	5,867.78
Bankcard Program	985.36
Air Express Program	.00
Merchandise	5,424.49
Site Discovery and Evaluation Workshops	14,117.04
Total Member Programs and Services	$26,394.69
Public Programs and Services	
Public Education Committee	$11,713.94
Public Education Program	.00
Save the Past for the Future II Conference	59,369.53
Foundation for American Archaeology	6,274.86
Government Affairs Program	.00
CEHP (Government Affairs Consultant)	10,000.00
National Historic Landmarks Committee	4,429.02
Council of Affiliated Societies	.00
Total Public Programs and Services	$91,787.35
Publications	
American Antiquity	$143,464.49
Latin American Antiquity	48,348.69
SAA Bulletin	4,696.20
Archaeologists of the Americas	6,979.90
Other Publications	17,782.92
Total Publications	$221,267.20
Annual Meeting	
General	$174,718.08
Program Book	8,559.00
Abstracts Book	15,692.00
Exhibits	31,837.50
Total Annual Meeting	$230,806.58
Awards	
Fryxell Award Fund	$970.48
Crabtree Award Fund	44.84
Total Awards	$1,015.32
Membership	
Membership Support	$343,533.15
Mailing List	9,105.91
Total Membership	$352,639.06
Organization and Administration	
General Office	$52,208.23
Total Organization and Administration	$52,208.23
TOTAL REVENUE	$976,118.43

EXPENSE

Governance	
President	$12.19
President-elect	940.88
Secretary	9.61
Secretary-elect	.00
Treasurer	20.90
Treasurer-elect	.00
Executive Board	12,155.93
Finance Committee	109.26
Budget and Planning Committee	1,907.41
Nominating Committee	.00
Bylaws Committee	.00
Fundraising Committee	2.24
Strategic Planning Task Force	.00
Elections	3,977.72
Bylaws	6.02
Legal	23.98
Division Overhead	7,386.56
Division Salaries and Benefits	23,621.33
Total Governance	$30,174.03
Member Programs and Services	
History of Archaeology Committee	$.00
Ethics in Archaeology Committee	.61
Ethics in Archaeology Conference	.00
Certification Program	5,715.17
Committee on the Status of Women in Archaeology	80.58
Task Force on Latin America	2,002.46
Student Affairs Committee	88.35
Task Force on Curation	5,867.78
Task Force on Consulting Archaeology	1,066.30
Task Force on Information Technology	6.00
Online Services	.00
Bankcard Program	.00
Air Express Program	16.82
Merchandise	3,033.37
Site Discovery and Evaluation Workshops	13,244.07
Division Overhead	5,154.05
Division Salaries and Benefits	17,747.64
Total Member Programs and Services	$54,023.40
Membership	
Membership Committee	$13.13
Membership Support	13,854.70
Membership Development	2,976.22
Membership Database Maintenance	.44
Mailing List Rentals	190.03
Membership Surveys	.00
Division Overhead	13,949.49
Division Salaries and Benefits	48,209.60
Total Membership	$79,193.61

Expenses continued...

Public Programs and Services	
Public Education Committee	$15,962.25
Public Education Program	190.20
Archaeology and Public Education	.00
Public Education Publications	.00
AECN Pilot Program	.00
Save the Past for the Future II Conference	59,369.53
Career Information	152.72
Foundation for American Archaeology	6,274.86
Public Relations Committee	79.73
Public Relations Program	2,673.12
Government Affairs Program	4,006.71
Government Affairs Committee	2,900.99
COPA	.00
CEHP (Government Affairs Consultant)	17,241.39
Task Force on Restructuring Archaeology	.00
Task Force on Repatriation	661.47
National Historic Landmarks Committee	4,429.02
Professional Relations	.00
Task Force on Native American Relations	9.93
Council of Affiliated Societies	828.98
Allied Organizations	13.34
Division Overhead	15,055.29
Division Salaries and Benefits	72,821.61
Total Public Programs and Services	$202,671.14

Publications	
Publications Committee	$3.46
Publishing Program	391.96
American Antiquity	89,738.87
Latin American Antiquity	30,109.67
SAA Bulletin	31,540.52
Archaeology and Public Education	6,333.22
Archaeology and You	6.00
Archaeologists of the Americas	14,376.59
Other Publications	16,165.25
Copyright	2.02
Advertising Promotion	2,644.70
Publications Promotion	1,876.25
Subscriber Services	611.29
Claims Processing	948.60
Division Overhead	16,845.79
Division Salaries and Benefits	65,304.09
Total Publications	$276,898.28

Annual Meeting	
Meetings Development Task Force	$20.64
General	88,232.70
Local Advisory Committee	6.99
Program Committee	4,168.37
Call for Submissions	2,671.31
Preliminary Program	9,069.37
Program Book	4,659.99
Abstracts Book	4,286.56
Exhibits	8,049.26
Mid-year Meeting	.00
Division Overhead	16,245.64
Division Salaries and Benefits	74,239.05
Total Annual Meeting	$211,649.88

Awards	
Awards Program	$228.56
Awards Coordinator	.97
Fryxell Award Committee	.44
Fryxell Award	970.48
Distinguished Service Award Committee	.00
Distinguished Service Award	32.09
Dissertation Service Award	32.09
Dissertation Award	44.84
Crabtree Award Committee	.00
Crabtree Award	44.84
Book Award Committee	.00
Book Award	.00
Public Service Award Committee	311.21
Fred Plog Award	.00
CRM Award Committee	.00
CRM Award	141.11
Ceramic Studies Award Committee	.00
Ceramic Studies Award	76.92
Lithic Studies Award Committee	.00
Lithic Studies Award	76.93
Poster Award Committee	119.60
Poster Award	76.50
Gene S. Stuart Award Committee	.00
Gene S. Stuart Award	44.84
Presidential Recognition Award	217.75
Division Overhead	1,351.99
Division Salaries and Benefits	4,259.00
Total Awards	$7,998.07

Organization and Administration	
General Office	$27,283.13
Accounting	1,020.93
Division Overhead	16,817.61
Division Salaries and Benefits	56,337.04
Total Organization and Administration	$101,458.71
TOTAL EXPENSES	$984,067.12
NET EXCESS (DEFICIT)	$(7,948.69)

1997–1998 Fulbright Awards for U.S. Faculty and Professionals

Opportunities for lecturing or advanced research in over 135 countries are available to college and university faculty and professionals outside academe. U.S. citizenship and the Ph.D. or comparable professional qualifications required. For lecturing awards, university or college teaching experience is expected. Foreign language skills are needed for some countries, but most lecturing assignments are in English. The deadline for lecturing or research grants for 1997–1998 is August 1, 1996. Other deadlines are in place for special programs: distinguished Fulbright chairs in Western Europe and Canada (May 1) and Fulbright seminars for international education and academic administrator (November 1). Contact the USIA Fulbright Senior Scholar Program, Council for International Exchange of Scholars, 3007 Tilden St., N.W., Suite 5M, Box GNEWS, Washington, D.C. 20008-3009, (202) 686-7877. Web Page (on-line materials) http://www.cies.org/, email cies1@ciesnet.cies.org (requests for mailing of application materials only).

NEWS AND NOTES

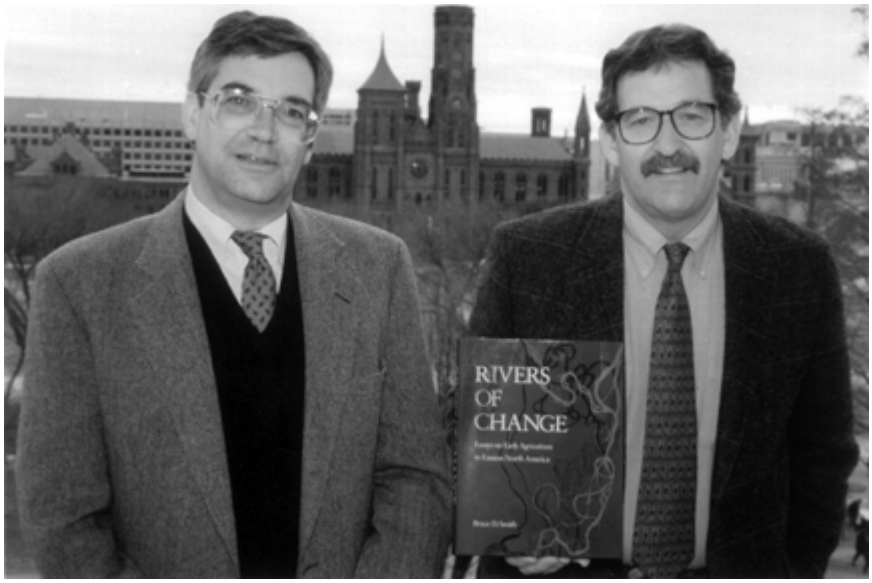
The Ohio Academy of Science has published "Science on a Deep-Ocean Shipwreck," a 224-page, color-illustrated article in *The Ohio Journal of Science.* The article describes a five-year scientific investigation of the site of the *S.S. Central America,* a 19th-century steamship carrying passengers and California gold en route from Panama to New York City. The ship sank in the heavy seas of a 1857 hurricane off the coast of North Carolina. The studies were conducted and reviewed by 130 researchers associated with the Adjunct Scientists Program of the Columbus-America Discovery Group. The research reported in the article is significant for deep-ocean work because it spans a five-year period (1987-1991) at a single site. The article was developed and written by Charles E. Herdendorf (Ohio State University) in cooperation with Thomas B. Thompson and Robert D. Evans (Columbus-America Discovery Group). Activities in the disciplines of oceanography, marine geology, marine biology, materials science, and undersea archaeology were undertaken with the teledirected submersible robot, NEMO. The study included field observations at the site recorded by videotape and still photographs, examination of hundreds of deep-ocean specimens and artifacts, and analysis of several experiments deployed on the sea floor. This project demonstrated that a holistic approach to a deep-ocean site of historic importance can help researchers understand the interrelated processes that affect cultural artifacts on the abyssal sea floor and the marine life that they foster. Copies of the article are available from the Ohio Academy of Science, 1500 W. Third Ave., Suite 223, Columbus, OH 43212-2817, (614) 488-2228, email oas@iwaynet.net.

Under the auspices of the Archaeological Geology Division of the Geological Society of America, family, friends, and close associates of Claude C. Albritton, Jr., have formed a memorial fund in his honor. The Albritton Fund provides scholarships and fellowships for graduate students in the earth sciences and archaeology. Recipients of these awards are students who have 1) an interest in achieving the M.S. or Ph.D. degree in earth sciences or archaeology; 2) an interest in applying earth science methods to archaeological research; and 3) an interest in a career in teaching and academic research. Awards in the amount of $500 will be given in support of thesis or dissertation research, with emphasis on the field and/or laboratory parts of this research. Those desiring further information about these scholarships should contact Reid Ferring, Institute for Applied Sciences, P. O. Box 13078, University of North Texas, Denton, TX 76203, (817) 565-2993.

The Grupo de Zooarqueología de Camélidos announces its new publication *Zooarqueología de Camélidos,* which is directed toward the multidisciplinary investigation of the history and evolution of wild and domesticated camelids from both archaeological and anthropological perspectives. The articles published in this first volume are in Spanish and English and represent some of the presentations made at the workshop "Theoretical and Methodological Perspectives for the Archaeological Study of Camelids in the Andes" held at the Instituto Interdisciplinario de Tilcara in Jujuy, Argentina, April 1994. The remaining presentations will be published in the next volume. Copies of the journal can be obtained from Mark Aldenderfer (805) 893-8604, fax (805) 893-8707, email aldender@sscf.ucsb.edu.

The North Carolina Archaeological Council has recently published the *Mountain Potters of Buncombe County, North Carolina: An Archaeological and Historical Study* by Linda F. Carnes-McNaughton. North Carolina Archaeological Council Publication No. 26. This report summarizes archaeological and historical surveys of 10 traditional pottery manufacturing sites, of which eight were selected for archaeological investigation. Subsurface remains of kilns were documented at three of the sites. Over 11,000 artifacts were recovered and analyzed, providing insights into a century of pottery manufacturing activities, beginning in the mid-1800s. Copies of the report can be ordered from N. C. Archaeological Council Publications, c/o Loretta Lautzenheiser, Secretary/Treasurer, 310 Baker St. Tarboro, NC 27886.

Bruce D. Smith of the Smithsonian Institution received the James Henry Breasted Prize for 1995 from the American Historical Association at its Annual Meeting in Atlanta. Named for the pioneer in ancient Egyptian and Near Eastern history and president of the AHA in 1928, the Breasted Prize is awarded annually for the best book on any field of history before the year A.D. 1000. Smith's book *Rivers of Change: Essays on Early Agriculture in Eastern North America* (1992, Smithsonian Institution Press) was cited by the selection committee as firmly establishing eastern North America as a sixth independent center of plant domestication and agricultural origins and as a landmark contribution that significantly alters the contours of world history and the place of North America within it. The prize, which has gone to scholars from Harvard, Princeton, Berkeley, Cambridge, and Occidental College in recent years, carries a cash award of $1,000. Smith is a senior research scientist and Director of the Archaeobiology Program in the Department of Anthropology at the National Museum of Natural History, and is a past president of SAA.



Daniel Goodwin, acting director of the Smithsonian Institution Press, and Bruce Smith, director of achaeology, National Museum of Natural History.

The Archaeological Geology Division of the Geological Society of America (GSA) announces a $500 travel grant for a student to attend the annual meeting of GSA in Denver, October 28-31, 1996. The grant is competitive and will be awarded based on the evaluation of an abstract and 1,500-2,000-word summary paper prepared by a student for presentation in the division's technical session at the meeting. The summary paper may include one figure and must be by a single author. The awards committee must receive the abstract and summary paper by June 24, 1996. These items should be sent to Michael R. Waters, Award Committee Chair, Department of Anthropology, Texas A&M University, College Station, TX 77843, (409) 845-5246.

The Archaeological Institute of America is pleased to announce some of the 1995 awards presented at the 97th Annual Meeting in San Diego. **Andrew Wallace-Hadrill** of the British School at Rome was presented the 7th annual James R. Wiseman Book Award for his text *Houses and Society in Pompeii and Herculaneum.* **R. Ross Holloway** of Brown University was presented with the 31st annual Gold Medal Award for Distinguished Archaeological Achievement. **Norman Herz** of the University of Georgia was presented the 15th annual Pomerance Award for Scientific Contributions to Archaeology.

The Foundation for the Advancement of Mesoamerican Studies, was formed in 1993 to foster increased understanding of ancient Mesoamerican cultures. The foundation aims to assist and promote scholars who might otherwise be unable to complete their programs of research and synthesis by hosting an annual grant competition. The foundation grants are awarded to the most well-qualified scholar, regardless of degree level. However, preference is for nonacademic professionals, recent graduates, and degree candidates who are currently involved in fully developed programs of study and/or research. Other qualifications being equal, preference is given to candidates who have not had extensive prior opportunity for grant-support research of ancient Mesoamerican cultures, and to candidates whose projects have the most likelihood of achieving new understandings and/or wide institutional and geographic interest. The new application deadline is September 30, 1996. Please send inquiries to Foundation for the Advancement of Mesoamerican Studies, 268 S. Suncoast Blvd., Crystal River, FL 34429, fax (352) 795-1970, email famsifl@aol.com.

The Russian Archaeological Society (RAS) welcomes the registration of international members. The society was formed to financially support archaeological excavations and explorations, and to provide for the protection of archaeological sites. It was originally organized in 1846, with local chapters appearing in various Russian towns. They served as a forum for the publication of research results and articles until 1917, at which time all were cancelled. The restoration of the RAS began about 25 years ago by scholars whose aim was to assist archaeologists who were working on problems neglected by the government. Conferences on the origin of man and the role of cosmos in the evolution of living organisms were held in 1974, and numerous lectures on these topics were organized between 1980 and 1985. *The Cradle of History* and *Antiquities* are two series published by the society. In 1991 the RAS was acknowledged and registered by the government. International members will receive personal and professional hospitality when in Russia, ample consultation on archaeological matters, and RAS publications. The RAS also welcomes submissions for publication, to be sent to Editor, Lengory, MGU, Bldg. L, a.11, Moscow, 117234, Russia.

The 1995 Awards Committees of the American Society for Ethnohistory are pleased to announce the recipients of the society's Erminie Wheeler-Voegelin and Robert F. Heizer awards. For the best book-length work in ethnohistory, the Erminie Wheeler-Veogelin Prize was awarded to **Frank James Tester** (University of British Columbia) and **Peter Kulchyski** (Trent University), for their book, *Tammarniit (Mistakes): Inuit Relocation in the Eastern Arctic, 1939-1963,* published by the University of British Columbia Press, Vancouver, in 1994. For the best article in the field of ethnohistory, the Robert F. Heizer Prize was awarded to **Julie Cruikshank** (University of British Columbia) for her 1994 article, "Claiming Legitimacy: Prophecy Narratives from Northern Aboriginal Women" published in *American Indian Quarterly* 18:147-167.

The American Society for Ethnohistory is calling for papers for the 1996 Annual Meeting, to be held in Portland, Ore., November 7-10, 1996. Papers, organized sessions, special events, and speakers that treat any world area are encouraged. Abstracts of 50-100 words on appropriate submission forms and preregistration fees of $45 (non-members), $35 (members) $15 (students/retired) are due by May 31, 1995. Write for submission forms and return to Jacqueline Peterson, ASE 1996 Meeting Chair, Department of History, Washington State University, 1812 E. McLoughlin Blvd., Vancouver, WA 98663, (360) 737-2179. Limited travel funds will be available on a competitive basis for students presenting papers. More detailed abstracts will be required.

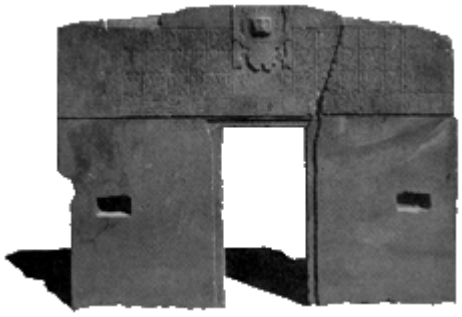
The Hermitage will host its eighth year of internships in historical archaeology during the summer of 1996. Interested students may apply for either five-week or two-week sessions. Fieldwork in 1996 will continue investigations of Hermitage dwelling sites occupied by African American slaves. Interns will participate in all phases of field excavation and laboratory processing of finds. The five-week sessions are intended for students with some field training in archaeology who are looking for more experience in a research-oriented setting. The program provides room, board, and a $1,000 stipend. The two-week sessions are intended for students who are interested in gaining exposure to the archaeological study of the recent past in such fields as history, African American studies, American studies, folklore, and geography. No archaeological experience is necessary. They will receive room, board, and a $400 stipend. Sessions run June through mid-August. The program is designed for advanced undergraduate and graduate students. Application is by letter, which should include a summary of education and research experience and a statement detailing your specific interest in the program. Be sure to indicate if you are applying for the two- or five-week internship. Applicants must have a letter of

recommendation sent under separate cover. If you would like to be notified once your application is complete, please enclose a self-addressed, stamped postcard. Letters and inquiries should be sent to Larry McKee, The Hermitage, 4580 Rachel's Lane, Hermitage, TN 37076. All application materials must be received by April 10, and selection decisions will be made by May 1.

The 4th Gender and Archaeology Conference will be held at Michigan State University, October 18 and 19, 1996. This year the conference will focus on recent research among anthropological archaeologists and also classical archaeologists, particularly regarding issues that would be of mutual interest. Papers dealing with theoretical aspects and/or case studies of a topic related to gender in any region or time period are invited. Studies dealing with non-state societies are also welcome. Deadline for abstracts is July 1, 1996. Authors will be notified of acceptance by August. Conference proceedings will be edited for publication. For additional information, or to discuss potential topics, please contact Alison Rautman, Department of Anthropology, Michigan State University, East Lansing, MI 48824, (517) 351-4913, email rauk@pilot.msu.edu.

The 3rd Biennial Rocky Mountain Anthropological Conference will be held September 18-21, 1997, in Bozeman, Montana. Interested individuals are encouraged to organize forums as a possible alternative to symposia, to enable thoughtful, focused, and more open discussion of carefully delineated themes/topics. Please contact the conference organizers for information about organizing a forum. The organizers of the conference encourage participation of individual researchers from all areas of anthropological study pertaining to the Rocky Mountains. Researchers in related fields addressing issues of past environmental conditions are also welcome. Deadline for symposium or forum proposals is March 15, 1997. Other deadlines and information will be announced in future communications. For additional information, please contact Ken Cannon, NPS, Midwest Archaeological Center, Federal Bldg., Room 474, 100 Centennial Mall N., Lincoln, NE 68508-3873, (402) 437-5392 ext. 139, 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.

The Southeastern Archaeological Conference announces a program of small grants to finance public outreach projects and invites applications for 1996. Projects proposed should promote public awareness of archaeology in the Southeast. Most grants will be for activities held in conjunction with the SEAC annual meeting. Grants for teacher workshops, public symposia, field trips for the public to archaeological sites, printed material for public consumption, or Native American outreach programs are encouraged. Grants cannot be used for receptions, food, or entertainment, and will not exceed a total of $1,000. Proposals should consist of a short (3-page maximum) statement of purpose, a list of potential supplementary funding sources, and a budget specifying the proposed expenditures. Three copies of the proposal must be submitted. Grants will be reviewed by a three-member standing SEAC committee, and approved by the SEAC Board. Successful applicants should acknowledge SEAC in any printed material they produce through the grant and in announcements at any public meetings associated with grant-funded activities. Submission deadline is June 1, 1996, to Dick Jefferies, Department of Anthropology, 211 Lafferty Hall, University of Kentucky, Lexington, KY 40506, fax (606) 323-1959. Awards notification will be done by August 1, 1996.



POSITIONS OPEN

Science Applications International Corporation (SAIC) in Boise, Idaho, is looking for a prehistoric or historic archaeologist for a full-time, permanent position as a principal investigator/project manager in Idaho and neighboring states. Responsibilities include: all aspects of project management, including budget tracking; directing surveys, excavation, and other studies; writing reports, proposals, environmental assessments, and environmental impact statements; working closely with Native American groups ; and interacting with state and federal agencies. The successful candidate will have a M.A. or Ph.D. in anthropology or a closely related field, excellent research and writing skills, and familiarity with the application of NHPA, including resource evaluation. Previous experience in the archaeology of the Northwest/Great Basin and the southwestern United States is a plus. The candidate must be willing to relocate to Boise, Idaho, and be able and willing to travel. Starting salary will range between $30,000 and $40,000 plus benefits, depending on experience. Send résumés, including the names and phone numbers of at least three references, to SAIC, 405 S. 8th St., Suite 201, Boise ID 83702, fax (208) 344-5123. SAIC is an employee-owned, high technology firm with over 20,000 employees nationwide, including over 2,500 environmental professionals. SAIC complies with all equal employment opportunity and civil rights laws.

The Zuni Cultural Resource Enterprise seeks applicants for the position of Business Manager. A Masters in Business Administration plus a minimum of two years demonstrated experience in financial management is required. Strong knowledge of general accounting procedures and experience in a supervisory capacity is required. Knowledge of archaeology/cultural resource management a plus. The position will remain open until filled. For more information, contact Jeanette Quintero at (505) 782-4814. Submit your letter of interest, vitae, and names of three references to Susan Pacek, Projects Manager, ZCRE, P.O. Box 339, Zuni, NM 87327.

The Anthropological Survey of the New York State Museum, State Education Department in Albany, anticipates filling a number of positions in its Cultural Resource Survey Program including project directors and field technicians. Minimal qualifications for project directors include an M.A. in anthropology or archaeology and experience in directing cultural resource management projects in the eastern United States, analysis of prehistoric and/or historic archaeological sites, and report writing, as well as familiarity with the 106 process. Field technicians must have a B.A. in anthropology or closely related field and demonstrated field experience in cultural resource management projects in the eastern United States. Positions will be filled in the spring dependent on funding. Send letter of interest, vita, and names and addresses of three professional references to John P. Hart, Director, Cultural Resource Survey Program, Anthropological Survey, New York State Museum, 3122 Cultural Education Center, Albany, New York 12230.

Computer Support Specialist, University of Pennsylvania Museum of Archaeology and Anthropology. Administer a major database. Install, configure, troubleshoot hardware and software. Set up and manage network fileservers and clients. Train users, write documentation. Some programming. B.A./B.S. or related degree, two years supporting end users. Thorough understanding of relational databases, broad knowledge of Windows required. MacIntosh, Unix experience desirable. Position funded for three years, approximately $25,000 plus benefits. Send letter, résumé, and names of referees to Philip Chase, University Museum, University of Pennsylvania, Philadelphia, PA 19104-6327, fax (215) 898-0657, email pchase@mail.sas.upenn.edu. Full job description is available. The University of Pennsylvania is an EOE.

CALENDAR

April 1, 1996
is 1,865,890 days since
the Maya zero date

April 1 - 10, 1996
THE RUSSIAN ARCHAEOLOGICAL SOCIETY WILL CELEBRATE ITS 150TH ANNIVERSARY BY HOLDING A CONFERENCE entitled Ecological Crises and the Establishment of Food-Production Economy in Europe. The conference will be held at the Moscow Museum of Archaeology, and will include excursions to Stone Age and chalcolithic sites in the southern Urals. The official languages for the conference will be Russian and English. For additional information, please contact RAS, Lengory, MGU, bild. L,a. 11, Moscow, 117234, Russia, tel/fax 07-095-939-05-76

April 10 - 14, 1996
THE 61ST ANNUAL MEETING OF THE SOCIETY FOR AMERICAN ARCHAEOLOGY will be held at the Marriott Hotel in New Orleans.

April 15, 1996
HISTORY AND PREHISTORY OF CERAMIC KILNS SYMPOSIUM will be held in Indianapolis, at the annual meeting of the American Ceramic Society, sponsored by the Committee on Ceramic History. The focus will be on kiln and kiln-firing technologies across a wide cultural area and span of time. For further information, contact Prudence M. Rice, Department of Anthropology, Mailcode 4502, Southern Illinois University, Carbondale, IL 62901, or W. David Kingery, MSE-338E Mines Bldg, No. 12, University of Arizona, Tucson, AZ 85721.

May 1 - 5, 1996
THE 29TH ANNUAL CONFERENCE OF THE CANADIAN ARCHAEOLOGICAL ASSOCIATION will be held at the Delta Barrington Hotel, Halifax, Nova Scotia. The theme will be communication, including the dissemination of knowledge to the public and the development of collaborative programs with the communities we serve. Papers will be scheduled for May 2-4, with special events and workshops May 1 and 5. For further information, contact Stephen Davis, Conference Coordinator, Department of Anthropology, St. Mary's University, Halifax, Nova Scotia, Canada B3H 3C3, (902) 420-5631, or Rob Ferguson, Program Coordinator, Parks Canada, Historic Properties, Halifax, Nova Scotia, Canada B3J 1S9, (902) 426-9509, email rob_ferguson@pch.gc.ca.

May 20 - 22, 1996
THE AMERICAN QUATERNARY ASSOCIATION (AMQUA) 14TH BIENNIAL MEETING will be held in Flagstaff, Ariz. For more information, contact Jim I. Mead, Department of Geology, Northern Arizona University, Flagstaff, AZ 86011-4099, fax (520) 523-9220, email jim@vishnu.glg.nau.edu.

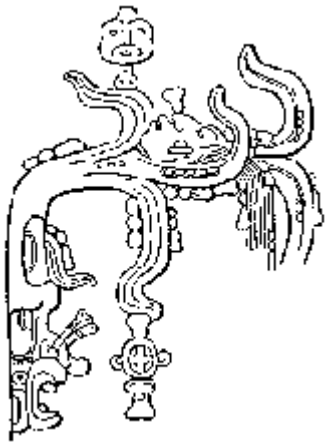
May 20 - 24, 1996
THE INTERNATIONAL SYMPOSIUM ON ARCHAEOMETRY will be held at the University of Illinois at Urbana-Champaign. For further information, contact Sarah Wisseman, ATAM Program, University of Illinois, 116 Observatory, 901 S. Mathews, Urbana, IL 61801, (217) 333-6629, fax (217) 244-0466, email wisarc@ux1.cso.uiuc.edu.

May 24 - 26, 1996
THE 3RD EASTERN STATES ROCK ART CONFERENCE will be held at the University of Maine at Machias. The conference will include participants from eastern and central United States and from Canada. Guided tours of prehistoric Algonkian petroglyph sites on Machias Bay are planned for Friday afternoon, May 24, and for Sunday morning, May 26. Saturday, May 25, will be given to presentations on rock art research with informal meetings and discussions Friday and Saturday evenings. For further information, contact Mark Hedden, Maine Historic Preservation Commission, 55 Capitol St., Augusta, ME 04333.

June 5 - 7, 1996
THE U.S. DEPARTMENT OF THE INTERIOR AND THE PHOEBE A. HEARST MUSEUM OF ANTHROPOLOGY, UC-BERKELEY, ARE SPONSORING A CONFERENCE to provide a forum for non-federal and federal participants to address major issues related to the long-term management of federally associated collections. The goals of the conference are to foster communication and cooperation, build new strategies of action, create new and revive old partnerships, and improve technical expertise related to managing federally associated collections of all kinds. For more information, send your name, address, institutional affiliation, phone number, FAX number, and e-mail address to Fritz Stern, University of California, Berkeley, Phoebe Hearst Museum of Anthropology, 103 Kroeber Hall #3712, Berkeley, CA 94720-3712, fax (510) 642-6271, email fstern@uclink3.berkeley.edu.

June 12 - 15, 1996
THE ANNUAL MEETING OF THE AMERICAN INSTITUTE FOR CONSERVATION OF HISTORIC AND ARTISTIC WORKS will address the topic of "Collaboration in the Visual Arts" in its general session. For information, contact Jay Krueger, AIC vice-president and program chair, National Gallery of Art, DCL, 6th St. and Constitution Ave. N.W., Washington, D.C. 20005, (202) 452-9545, fax (202) 452-9545.

June 29 - 30, 1996
THE 17TH MEETING OF THE MID-SOUTH ARCHAEOLOGICAL CONFERENCE will be held at Ellis Auditorium, University of Memphis, Tenn. Program organizers and sponsors are: Charles McNutt, Department of Anthropology, University of Memphis, Memphis, TN 38152, (901) 678-2618, email mcnuttch@cc.memphis.edu; Mitchell Childress, Garrow and Associates, 510 S. Main, Memphis, TN 38103, (901) 526-8008; and Rick Walling, Panamerican Consultants, 15 S. Idlewild, Memphis, TN 38104, (901) 274-4244, email panamrcn@south.icerve.net. The theme of this year's meeting is "Results of Recent Investigations in the Greater Mid-South." Presentations will be limited to 20-30 minutes. Titles and abstracts must be received by Rick Walling by May 15. Papers will be published if provided in publication-ready form at meetings. For further information, contact any of the above sponsors.



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August 3 - 9, 1996
THE CULTURAL ASPECTS OF ASTRONOMY: AN INTERSECTION OF DISCIPLINES, an international meeting to study the importance of astronomical phenomena in human culture, will be held at St. John's College in Santa Fe, N.M. This will be the fifth in a series of triennial "Oxford Conferences in Archaeoastronomy" that have focused on the role that astronomical phenomena have played in human societies. "Oxford V" will serve as a meetingplace for those working in a number of disciplines who share a common interest in the reaction of traditional societies of the past and present to these phenomena. For further information, http://www.phys.unm.edu/~zeilik/oxfordV, or from Rolf Sinclair, Program Director for Special Programs, Division of Physics, National Science Foundation, 4201 Wilson Blvd., Arlington, VA 22230, (703) 306-1809, fax (703) 306-0566, email rsinclai@nsf.gov.

August 4 - 11, 1996
THE XXIV MEETING OF THE MEXICAN SOCIETY OF ANTHROPOLOGY will be held in Tepic, Nayarit, Mexico. The theme will be "Anthropology and History of Western Mexico." For further information, please contact Linda Manzanilla, Instituto de Investigaciones Antropológicas, UNAM-Ciudad Universitaria, 04510 Mexico D.F., Mexico, fax (525) 622-9651, email lmanza@servidor.unam.mx.

August 15 - 18, 1996
THE 69TH ANNIVERSARY PECOS CONFERENCE will be held in Flagstaff, Ariz. For more information, please contact David R. Wilcox, Museum of Northern Arizona, Route 4, Box 720, 3001 Fort Valley Rd., Flagstaff, AZ 86001, (520) 774-5213. If you plan to give a presentation at the Pecos Conference, send your abstract to Wilcox, and after coordinating with him, send a copy of your informal presentation, your formal abstract, or your paper to <http://seamonkey.ed.asu.edu/swa/pecos.html>; for free Internet publication of your paper prior to, or after the conference.

September 8 - 14, 1996
THE XIII INTERNATIONAL CONGRESS OF THE UNION OF PREHISTORIC AND PROTOHISTORIC SCIENCES will take place in Forli, Italy. For more information, please contact Sarah Milliken, c/o Segreteria XIII Congresso U.I.S.P.P., Via Marchesi, 1, 47100 Forli, Italy, fax 39-543-35805.

October 18 - 19, 1996
GENDER AND ARCHAEOLOGY: DIVERSE APPROACHES will be held at Michigan State University. For more information, or to discuss potential topics, please contact Alison Rautman, Department of Antrhopology, Michigan State University, East Lansing, MI 48824, (517) 351-4913, email rauk@pilot.msu.edu.

November 7 - 10, 1996
THE AMERICAN SOCIETY FOR ETHNOHISTORY WILL HOLD THE 1996 ANNUAL MEETING in Portland, Ore. Abstracts for papers and preregistration fees are due by May 31, 1995. Write for submission

forms and return to 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, transportation, and pyrotechnology. Other ideas and suggestions are welcomed! Please send suggestions, session abstracts, 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.

June 4 - 7, 1997
A SYMPOSIUM ON BISON ECOLOGY AND MANAGEMENT IN NORTH AMERICA will be held at the Holiday Inn in Bozeman, Montana. Its objective is to provide a forum for information and discussion on utilizing various disciplines to understand and manage bison in North America. Sessions will provide insight into how disease, genetics, ecology, management, prehistory, and tribal concerns can affect bison. For more information, contact Bison Symposium, Montana State University, 235 Linfield Hall, Bozeman, MT 59717, (406) 994-3414.

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