"As reports of flooding, disease, and crop failure reached the central government in Lima, officials responded in typical bureaucratic fashion: They prepared two questionnaires and sent an inspector up north to find out what had happened...The year was 1580, and northern Peru was still reeling from the first major El Nino of the Colonial Period..."
In Brief...

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Precollegiate Excavations: Archaeologists Make the Difference

Biannual Monograph Series in Public Education is Initiated

Teaching Archaeology in the 21st Century: Thoughts on Undergraduate Education

Teaching Archaeology in the 21st Century: Thoughts on Graduate Education

Networks: Avoiding the Driest Dust that Blows: Web Site Reports

Insights--CRM in Introductory Archaeology Textbooks

Come to the Windy City and be Blown Away!

Student Affairs Committee--Cite This! Some Tips for Journal Publishing

News from the Register of Professional Archaeologists

Hugh Carson Cutler

Working Together--NHPA: Changing the Role of Native Americans in the Archaeological Study of the Past

News and Notes

Positions Open

Calendar
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, (520) 734-2441. Inquiries about these columns and submissions should be addressed directly to them. The SAA Bulletin is provided free to members and institutional subscribers to American Antiquity and Latin American Antiquity worldwide. SAA Bulletin can be found in gopher at alishaw.ucsb.edu, and on WWW at http://www.anth.ucsb.edu/SABulletin/. Items published reflect the views of the authors and publication does not imply SAA endorsement.
Editor's Corner

Continuing the trend from the November Bulletin, this issue is dominated by educational concerns. In addition to two more statements by the Wakulla Springs working group--this time on recommended reforms to graduate and undergraduate education in archaeology--we also have a review of the CRM sections of two recent textbooks. And if that's not enough, we have another tale of woe (but with a reasonably happy ending) about teaching precollégiate students about fieldwork. I can hear the grumbling already. More on education? It may remind some of the SAA old timers of the "great Maya controversy" (my choice of terms) American Antiquity endured in the 1970s and beginning of the 1980s. At the time, some thought the journal was dominated by articles and book reviews about the Maya. Whether it was true or not is irrelevant--most of the articles were interesting, well-informed, and useful. Even if you think we've overstressed the importance of education, I nevertheless hope you find the articles stimulating. I can think of no higher priority for SAA and its mission than public education. Our success or failure here will in great part determine the future of archaeology over the next decade. On this note, I would like to welcome Teresa Hoffman as associate editor for the new Public Education column. All Public Education Committee submissions to the Bulletin must come to us through Teresa. She can be reached at thoffman@netzone.com.

Authors take note: Starting with this issue, the contents of SAA Bulletin will be copyrighted. Although authors will continue to enjoy rights to their intellectual property, I decided to ask the Board of Directors for this protection to preserve and extend SAA's rights as well. The Board agreed to this at their November meeting, and I explain the implications of this policy on page 12.
Chicago is Shaping Up!

Winifred Creamer

Plans for the Chicago SAA Annual Meeting are taking shape. In addition to the many poster and paper sessions, roundtables, workshops, and other special events will add to our enjoyment. A reception at the Field Museum will be one of the highlights. Open to the first 300 people who sign up, the reception is being sponsored by the Field Museum Anthropology Department and the Department of Anthropology at the University of Illinois-Chicago (UIC), highlighting recent archaeological projects at both institutions.

The Field Museum has been cataloguing the archaeological collections of the late Paul Martin, Southwest archaeologist extraordinaire. Martin worked at a number of sites that yielded fundamental data on the American Southwest, including Cordova Cave and the SU site. Faculty members at UIC have been engaged in a variety of research, including projects that involve Field Museum collections and collaboration with Field Museum curators. Poster displays of these projects will share research results. Information on the joint UIC-Field Museum Ph.D. Program in Anthropology will be available.

For those who do not plan to stray far from the friendly confines of the Sheraton, there are a number of places to visit within walking distance. Navy Pier includes an IMAX show and the Chicago Children's Museum. From there you can see the lakeshore waterfront. In the opposite direction, crossing the Chicago River on the Michigan Avenue bridge, you can visit the Daley Center, where cultural events are scheduled daily. From the Hancock Building observation deck you can get a great view of the city. These are all in addition to the shopping district along North Michigan Avenue. To experience the night life in the neighborhood, try the House of Blues, Blue Chicago, or Excalibur. Look for the restaurant guide in your registration packet for places to eat that (1) are located near the meeting hotels, (2) have great ethnic cuisine, or (3) have some special quality not already mentioned. We look forward to seeing you!

Winifred Creamer, chair of the Local Arrangements Committee for the Annual Meeting in Chicago, is in the Department of Anthropology at Northern Illinois University in DeKalb, Illinois.
As our discipline learns to use communication technology via email and web sites, it would be well for those moving in that direction to remember that not every archaeologist, let alone the general public, has equal access to the hardware and software needed to participate in this information exchange. As they may not have computers, connections, or be conveniently located, public libraries cannot be presumed to enable access for those who don't have institutional, agency, business, or personal computers with connections.

While I applaud the many new sources of information, when print resources are abandoned completely in favor of electronic communications, it is a disservice to many. In the case of the Public Education Committee changing its publication strategy, transferring its newsletter exclusively to the SAA web site, there are likely to be many teachers and students who will no longer have access to that information.

I urge those who are on the Internet or World Wide Web to remember that many colleagues and most of the world's population will not be able to access such information in the near future. We must take care that we do not create a division between haves and have-nots with electronic information.

Neal L. Trubowitz
Historic Site Administrator
Department of Natural Resources
Division of State Parks, Missouri
Summary of Board of Directors' Meeting

The SAA Board of Directors met in Washington, D.C., the weekend of November 6-8, 1998. In addition to the other work accomplished, this meeting gave Board members an opportunity to visit the Washington office, meet the staff, and learn more about the work that they do. We all came away with a renewed appreciation for the huge volume of work that the executive director and her small staff manage to accomplish each year.

The main focus of the fall Board meeting is on financial matters, including approval of the budget for the next fiscal year. The FY1999 budget is a very conservative one that projects a modest surplus. The Board is continuing to focus on rebuilding the Society's financial reserves and approved a new, simple but conservative definition of reserves that will make it easy to monitor the Society's financial health at all times. The target for reserves is 30 percent of the annual budget, with a minimum annual contribution of 2 percent. In terms of our current budget, this means that the target for reserves is approximately $300,000; our current reserves are $127,200; our minimum yearly contribution will be $20,000.

Although strongly committed to rebuilding the Society's reserves, the Board recognizes that there is a growing backlog of unmet needs for increased member services. For that reason, the Board did approve one new initiative this year--an increase in the number of pages allotted to *Latin American Antiquity*. The Board also approved a request from the Publications Committee to allow author-reimbursed use of color illustrations in the journals on a limited basis.

In other news from the Publications program, Katharina Schreiber has been appointed as editor of *Latin American Antiquity* and the search process for selecting a new *American Antiquity* editor has begun. The Board also approved funding for a theme-oriented monograph to be prepared by the Public Education Committee, and authorized the executive director to work with the Publications Committee to prepare a proposal for a revived SAA publishing program. The first product of this program would be "readers," compilations of reprinted articles from the journals; the possibility of reinstituting the publication of SAA monographs will be considered as well.

The Society has received a small grant from NSF to fund three additional field training scholarships for Native American students. The Board authorized the Native American Scholarships Committee to broaden eligibility for the scholarship program to include Native peoples in the U.S. Trust Territories and Canada. The Board received a proposal from the Native American Relations Committee for a pilot workshop to convene Native Americans, the Committee, and the SAA Board to discuss SAA policy and Native American concerns. The Board has encouraged the committee to pursue this initiative and bring a plan to the Board for approval as soon as possible.

The Board approved increasing registration fees for the 2000 Annual Meeting by $2 (except for student member registrations) and increasing the cost of abstracts by $1. The Board also selected Milwaukee as the meeting site for the 2003 Annual Meeting. For the Chicago meeting, sponsorships have been found for the Field Museum reception, the COSWA breakfast, and the roundtable lunches to make those events more affordable for the membership. The Board approved in concept an SAA Student Paper Award to be given no earlier than the 2000 Annual Meeting.

In its discussions of long-range planning issues, the Board considered the following:

- **Repatriation Policy**: The sense of the Board was that the current SAA repatriation policy is still sound and can serve as the basis for providing SAA input on topics such as unaffiliated remains and amendments to the Native American Graves Protection and Repatriation Act.
• **Strategic Plan:** The Board reviewed the SAA's Draft Strategic Plan, created in 1995, and discussed strategies for ensuring that the plan is reviewed and updated on a regular basis and that the activities of the Society are directed by the plan. The Board instructed the Executive Committee to prepare a more focused draft of the plan prior to the Chicago meeting. At that time, the Board will consider ways of integrating the Strategic Plan into the functioning of the SAA's committee system.

• **Annual Meetings:** The Board discussed ways that the Society might continue to serve the traditional papers-and-symposia constituency of our meetings while diversifying the kinds of offerings to serve other constituencies as well. Suggestions included encouraging more extensive use of posters; offering workshops tailored to the training and professional development needs of today's archaeological professionals; multiple tracks and a variable pricing structure for different levels of meeting participation; and scheduling one major event at each meeting involving senior scholars presenting important papers or conducting debates or roundtable presentations. The president will ask the Meetings Development, Consulting Archaeology, and Government Archaeology committees to devise a plan for implementing these suggestions and report back to the Board at the Chicago meeting.

Respectfully submitted,

Lynne Sebastian, Secretary
Archaeopolitics: Changing Times

Judith A. Bense

As the outgoing chair of the Government Affairs Committee (GAC), I would like to highlight some of the significant events that have occurred in Washington politics and SAA in the past five years.

A Little History

Prior to 1994, SAA lobbying on Capitol Hill was done part time by a Washington, D.C.-based consulting firm that carried out the policies set by the SAA Board of Directors with the GAC's guidance. Grass-roots lobbying was performed by the Committee of Public Archaeology (COPA), a network of volunteer SAA members in each state. Realizing the importance of lobbying and a presence in Washington, the Board decided in the early 1990s to hire a full-time Washington lobbyist and attorney and establish the Government Affairs Program. Donald Craib was hired and continues to manage that program. In 1994, I became the committee chair after Dean Snow and developed a strong partnership with Craib.

The Republican Revolution

In November 1994, the Republicans won their first majority in Congress in decades, ousting our long-time political allies and placing top priority on reducing the national debt and inflation. The Advisory Council on Historic Preservation was zeroed out, the National Endowment for the Humanities was under the budget-cutting hatchet, and everywhere there was political uncertainty in archaeology. This was a sobering "wake-up call" on the importance of Washington politics to archaeology, and the membership called for immediate action.

It was quickly realized that SAA was the only archaeology organization in the country with a permanent presence and lobbyist in Washington, and we took the lead in dealing with the "Republican Revolution." Alliances with other archaeology organizations, especially the Society for Historical Archaeology (SHA) and the Archaeological Institute of America (AIA), were made. The then-SAA president, Bill Lipe, one very politically savvy archaeologist, made an unimaginable number of trips from his home base of Pullman, Washington, to Washington, D.C., to hit Capitol Hill with Craib and educate the new congressional leadership and their staff about archaeology and the serious impact of the planned cuts to our country's heritage. A spring lobbying week was developed by Craib which briefed the GAC chair and presidents of the archaeology organizations at seminars with "Washington insiders" and sent these archaeologists on a Capitol Hill mission similar to Lipe's. These sessions formed critical alliances between former competing organizations. We all realized that we are much more effective as partners for our shared interest in archaeology.

Restructuring

Quickly, the role of the GAC changed from a policy-shaping entity to an action committee. It was restructured to be "leaner and meaner" by making it smaller and more representative of professional archaeologists. The GAC is now made up of members with political experience and the facilities for quick communication who are comfortable with politicians and staffers alike. A restructured COPA became the Government Affairs Network State Representatives (GANSR). GANSR consists of one politically aware member in each state who keeps
archaeologists in his/her state informed of political activity around archaeology, and who mobilizes colleagues if swift action on a particular issue is required.

At the Annual Meeting, a regular forum sponsored by the GAC on "Washington Politics and Archaeology" was initiated to keep the membership informed about the politics of archaeology by bringing key people from inside and outside archaeology to give synopsis of issues of concern and to provide an opportunity for discussion. U.S. Rep. Phil English (R.-Pa.) participated in the 1997 GAC-sponsored forum in Nashville and received the Public Service Award for his efforts in saving the Advisory Council at a critical moment.

We've Come a Long Way

Through these changing times, SAA has emerged as the political leader in archaeology in this country, largely through the efforts of the Government Affairs Program. The Board of Directors' vision in the early 1990s has paid off. The Advisory Council was saved, NEH is still in business, and SAA is recognized as a major player on Capitol Hill.

I have had a very educational and interesting time as chair of the Government Affairs Committee through the 104th and 105th Congresses, and I am sure that incoming chair Brona Simon of Massachusetts will serve us all well. She knows her way around politics and is a natural on Capitol Hill. We can all sleep much better knowing the Government Affairs Program is watching Congress from inside the Beltway for all of us out in the trenches.

Judith A. Bense is chair of the Government Affairs Committee and director of the Archeology Institute at the University of West Florida in Pensacola.
A new year is unfolding, and the activity level is reaching peak capacity in preparation for the Annual Meeting in Chicago on March 24-28, 1999. We hope to see you there! The preliminary program describing another action-packed SAA meeting was dropped in the mail on December 23, 1998. If you’d like to begin making your plans to attend the meeting in the "Windy City," here are a few bits of information that will be helpful to you:

- **The Sheraton Chicago Hotel and Towers**, 301 E. North Water Street, Chicago, IL 60611 USA, is the location of the 64th Annual Meeting. Hotel reservations must be made directly with the Sheraton Chicago Hotel and Towers:

  - **To Make a Reservation by Phone:** Call (312) 329-7000 or 1 (800) 233-4100 and mention you are with the Society for American Archaeology. For fax and mail reservations, use the reservations forms either in the preliminary program or posted on SAAweb's meeting section. To receive the special SAA rate, hotel reservations must be made by **February 23, 1999**. Reservations received after this cut-off date will be based on availability.

  - **A Special Opportunity for You!** Register for a room at the Sheraton Chicago for the SAA meeting by **February 1, 1999**, and your name will be entered into an SAA drawing for one of two great prizes: One American Airlines round-trip domestic ticket to fly you to Chicago, or a one-year membership in SAA! Call the Sheraton Chicago (numbers above), tell them you are attending the Society for American Archaeology meeting, and make your room reservation today!

  - **For Students Only...** SAA has arranged a room block with a special rate of $85 for single-quad rooms at the Motel 6, 162 E. Ontario St., Chicago, Il 60611. **Students must present a current student ID to qualify for this rate.** There are a limited number of rooms, and they are available on a first-come, first-served basis. The deadline for student reservations is **January 21, 1999**. Students may call (312) 787-3580 to make reservations. Please indicate that you are with the SAA Archaeology meeting and the Society for American Archaeology. You may fax a reservation to (312) 787-2354. Please indicate name, address, number of persons, whether you need one or two beds, credit card information, and--if you would like verification by fax--the name and fax number to whom it must be sent. Remember these rooms are limited!

  - **Getting to Chicago...** American Airlines has been selected by SAA as the official airline for the 1999 Annual Meeting in Chicago. American is offering SAA Annual Meeting attendees special discounted fares to Chicago. You can receive a **bonus discount of 5 percent** by purchasing **60 days in advance**! To take advantage of American's discounted fares, call 1 (800) 433-1790 for reservations. Refer to **Star File Number: S0739UD**.

  - **Discounted Car Rental...** Hertz has been selected as SAA's official car rental agency for the 1999 Annual Meeting. To reserve your vehicle, call Hertz in the United States at 1 (800) 654-2240; in Canada call 1 (800) 263-0600; in Toronto call (416) 620-9620; in other international locations, call your nearest Hertz reservations center. Refer to **CV#24810** and identify that you will be attending the Society for American Archaeology Annual Meeting on March 24-28, 1999.

  - **Any Questions?...** Contact the SAA office via phone (202) 789-8200, fax (202) 789-0284, or email **meetings@saa.org** if we may provide assistance to you.
• **A New Face and Voice . . .** Jennifer Maloney joined the staff in October as our Coordinator, Administrative Services. Jennifer comes to SAA from Missouri Valley College. She has replaced Rob Thompson who has moved from the area.

See you in Chicago!

*Tobi Brimsek is executive director of the Society for American Archaeology.*
MONEY MATTERS

Jeffrey H. Altschul

In any membership society, the subject of dues is sensitive and highly charged. Boards of directors shy away from the subject and tend to be defensive about costs. SAA is no different. Historically, the Board has tended to postpone dues increases as long as possible. The result has been a cycle in which the society becomes financially overextended, runs large annual deficits, then raises dues substantially. Over the last decade, there have been three such cycles leading to a 67 percent increase ($25) in 1989, a 27 percent increase ($20) in 1994, and a 16 percent increase ($15) in 1997. Although the Society has continued to grow, with each increase the response has elicited disappointment, frustration, and a regrettable loss of some members.

The current Board of Directors believes that it is a better strategy to increase dues more frequently but by smaller amounts. We will start on this course in the year 2000 when dues will increase $5 for all membership categories (except life members). This small increase will help SAA keep pace with inflation. Raising dues, however, is only part of the equation. We also need to demonstrate that being a member is worth the cost. It is this subject that I address in this column.

To prepare for this column, I asked SAA Executive Director Tobi Brimsek to calculate the cost per member of SAA services. For an objective calculation, Brimsek engaged an outside accounting firm, Langan Associates, to prepare the estimate, which is presented in Table 1. According to Langan's calculation, it costs just over $166 per member to provide our current services. Many may wonder how the Society survives providing $166 worth of services and only charging $110 to most members, and subsidizing nearly one-third of its membership (i.e., students, retired individuals, and archaeologists from particular countries). The answer is non-dues revenue, including institutional subscriptions to our journal, the exhibit hall, advertising, and, of course, the Annual Meeting. In a previous SAA Bulletin (1998, 16(4):11), I discussed the financial importance of the Annual Meeting. Because SAA's budget is tight, and because there is considerable uncertainty each year about the financial outcome of the meeting, it is a "fact of life" for SAA that we must have a "good" Annual Meeting.

### Table 1. Society for American Archaeology Cost per Member Calculation

<table>
<thead>
<tr>
<th>Activity Center</th>
<th>Total Expense</th>
<th>Non-Member Expense</th>
<th>Membership Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governance</td>
<td>$81,424</td>
<td>$ —</td>
<td>$81,424</td>
</tr>
<tr>
<td>Member Programs and Services</td>
<td>35,158</td>
<td>—</td>
<td>35,158</td>
</tr>
<tr>
<td>Public Programs and Services</td>
<td>124,715</td>
<td>—</td>
<td>124,715</td>
</tr>
<tr>
<td>Publications</td>
<td>294,224</td>
<td>21,970</td>
<td>272,254</td>
</tr>
<tr>
<td>Annual Meeting</td>
<td>313,892</td>
<td>—</td>
<td>313,892</td>
</tr>
<tr>
<td>Awards</td>
<td>6,730</td>
<td>—</td>
<td>6,730</td>
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<tr>
<td>Membership</td>
<td>111,247</td>
<td>—</td>
<td>111,247</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>967,190</strong></td>
<td>21,970</td>
<td><strong>945,220</strong></td>
</tr>
<tr>
<td><strong>Administration</strong></td>
<td><strong>145,801</strong></td>
<td><strong>3,311</strong></td>
<td><strong>142,490</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1,113,191</strong></td>
<td><strong>$25,281</strong></td>
<td><strong>$1,087,910</strong></td>
</tr>
</tbody>
</table>

**Key:**

1. Based on 1999 Annual Budget
2. Non-member expenses:
   - Mailing list and advertising ($16,000)
   - Other publications ($200)
   - Subscriber services ($4,720)
   - Claims processing ($1,050)
3. Allocation of administration based on total non-member costs
When I ask members what they perceive as the benefits of membership in SAA, two points jump immediately to mind: Publications and the Annual Meeting. Although understandable, this response is frustrating, for it shows that we on the Board of Directors have not been very good at communicating the broad range of services provided to the membership. Figure 1 is a pie chart that shows the proportional expenses of SAA programs to the regular member. About 55 percent of the expenses are spent on publications (i.e., *American Antiquity*, *Latin American Antiquity*, *SAA Bulletin*) and the Annual Meeting, the two benefits most recognizable to members. Through its public programs and its service to the profession, SAA provides much more. As an organization, we are dedicated to the preservation of archaeological resources, much like other archaeological organizations. But of these groups, only SAA has a full-time lobbyist, making us the leader in the legislative and regulatory arenas. In particular, for the last 10 years, SAA has been deeply involved in issues surrounding repatriation and now sends a representative to each NAGPRA Review Committee meeting. These endeavors are funded as part of our public programs, which constitute 11 percent of the average member's dues. The broad-reaching work of the Public Education Committee, now 76 members strong, is the other pillar of our public programs initiatives. Other public programs include public relations, Council of Affiliated Societies, and a broad range of committees including Native American Scholarships, National Historic Landmarks, and the Task Force on Curriculum.

In response to members' request to cut dues, I often ask which programs they want to cut or eliminate. After explaining the services provided by SAA, most members are unwilling to have any cut. Indeed, they want most services expanded. I, too, am concerned about SAA expenses. But I am more concerned that, as an organization, we remain dedicated to our core programs--publication, Annual Meeting, legislation, education, and outreach. Whether we work at a university, museum, government agency, or consulting company; whether we are at the beginning of our career or near the end; whether we work in the Americas or elsewhere; whether archaeology is our profession or avocation, all of us remain deeply committed to the principle that archaeology is an important means of understanding the past and that protecting the archaeological record is vital to preserving the world's cultural heritage. To meet the multitude of diverse challenges facing American archaeology, we must have a strong SAA. That costs money. Yes, there will be a dues increase one year from now, but membership is well worth it.

The Planned Giving Program

A Special Legacy to SAA

Kurt R. Moore

This article is the first of several which will explore creative and different ways of supporting SAA's programs and mission. In SAA Bulletin 1998, 16(5): 38, Ray Thompson and Patty Jo Watson, cochairs of SAA's Fund Raising Committee, wrote about SAA's Annual Giving Program and introduced the planned giving program. In future issues of the Bulletin, I will explain how you can support your professional organization in a significant manner through a planned gift. I also hope to "demystify" the many terms associated with planned giving.

What is "planned giving?" Generally, a planned gift is a gift of assets to a charitable organization in a manner in which you, the donor, retain a financial interest (e.g., the income from or use of the asset) and which often involves the assistance of a professional such as your family lawyer, financial planner, or tax accountant. Planned giving--the term defines itself. Planned giving is not just for the well-to-do, but for everyone. If you have remembered your college, local hospital, or another tax-exempt civic or charitable institution in your will, then you have made a planned gift. Think about it. You have designated the future use of a portion of your estate for a community organization, but you will continue to use those assets for the rest of your life. The professional who assisted you most likely was a lawyer who drew up the will for you.

Often, a planned gift is one in which the income benefits to the organization have been deferred to some future time, hence the term "deferred gift." A gift of a personal residence, in which a party retains the right to live in the house for the rest of his/her life, is an example of a deferred gift. Not all planned gifts are deferred gifts, however. An individual may set up a type of trust which will provide income to a charity for a number of years and then have the principal returned to them, a family member, or other beneficiary. The benefits to the charity are immediate and undeferred, but it is still a planned gift.

Planned gifts are looked upon favorably by the IRS. Donors of planned gifts enjoy certain tax advantages. Planned gifts can reduce your current year income taxes, minimize or avoid capital gains taxes, or reduce your future estate taxes. Depending on the size and type of planned gift made, one may be able to carry forward the income tax savings for up to five additional years. Some planned gifts, such as a charitable lead trust, may allow you to pass your assets to your heirs while supporting your favorite charity and avoiding or reducing estate taxes. This type of gift may be best for those people for whom the income from the asset is less important than preserving its value intact for their children, grandchildren, or others.

What are the ways a person can make a planned gift? There are a number of categories: Bequests, trusts, annuities, gifts of life insurance, retained life estates, and pooled income funds. The nature of planned gifts allows each situation to be tailored to the specific goals and individual needs of the donor. Planned gifts also allow you to use assets that you may not have thought of using to fund charitable gifts--e.g., real estate, life insurance, closely-held stock, appreciated securities, deferred compensation plans, or other personal property.

You may ask why is this important to SAA? Planned gifts will allow our membership to financially support the programs and mission of SAA in a significant manner. Because planned gifts often accrue to SAA at a date in the future, planned gifts support and enhance the long-term goals of fiscal stability and continued service to our membership. Planned gifts are often directed to endowment funds, such as the SAA Endowment Fund, the Native American Scholarship Fund, and the Public Education Initiatives Fund. Planned gifts may be designated for special projects, new initiatives, or current operations. You, the donor, can designate the purpose for which
the funds are to be used and can be assured that the careful management of these monies in perpetuity will benefit future generations of archaeologists.

In future issues of the *Bulletin*, I will cover each of these planned giving methods in more detail and provide examples of how they work. If you have a question about planned giving, are considering a bequest to SAA, or are considering a planned gift as your year-end gift, please contact Tobi Brimsek or me through the Society for American Archaeology, 900 Second Street NE, Suite 12, Washington, DC, 20002, (202) 789-8200, email tobi_brimsek@saa.org. We would be pleased to talk with you and answer your questions.

*Kurt R. Moore, SAA member and formerly a professional archaeologist, is now director of corporate and foundation relations at Florida State University in Tallahassee. Previously he served as director of planned giving at two other institutions. He is a member of the SAA Fund Raising Committee and has volunteered his services to help SAA with its fundraising efforts.*
El Niño and the Archaeological Record in Northern Peru

Daniel H. Sandweiss

As reports of flooding, disease, and crop failure reached the central government in Lima, officials responded in typical bureaucratic fashion: They prepared two questionnaires and sent an inspector up north to find out what had happened. Witnesses spoke of whole villages washed away by the waters, people forced to take refuge on the high hills and *huacas* (pyramid mounds) or to flee to other regions, and plants rotting in the field or devoured by plagues of mice and insects. Local farmers pleaded for tax relief until they could rebuild and recover. The year was 1580, and northern Peru was still reeling from the first major El Niño of the Colonial Period, in 1578 [F. de Alcocer, (1580) 1987, Probanzas de indios y españoles referentes a las catastróficas lluvias de 1578, en los corregimientos de Trujillo y Saña. Transcribed by Lorenzo Huertas Vallejos. In *Ecología e Historia*. Chiclayo: CES Solidaridad]. Until this past year, El Niño has continued to strike the Peruvian north coast without warning and with similar consequences.

Tucume Huaca, non-Niño year

El Niño is an interannual climate perturbation linked to weather disturbances throughout the world. It was first recognized and named on the coast of northern Peru and southern Ecuador. El Niño brings warmer sea surface temperatures to the Andean coasts, reducing the normally high biological productivity of coastal waters while also causing torrential, often disastrous, rainfall on the normally arid coastal lowlands (National Oceanic and Atmospheric Administration, 1994, Reports to the Nation: El Niño and Climate Prediction. Washington DC: NOAA. Available on the Web at [www.pmel.noaa.gov/toga-tao/el-nino-report.html](http://www.pmel.noaa.gov/toga-tao/el-nino-report.html), S. G. Philander, 1990, El Niño, *La Niña*, and the *Southern Oscillation*. San Diego: Academic Press). Strong El Niño events have occurred several times each century at least for the last 5,000 years (D. H. Sandweiss, J. B. Richardson III, E. J. Reitz, H. B. Rollins, and K. A. Maasch, 1996, Geoarchaeological Evidence from Peru for a 5000 Years B.P. Onset of El Niño. *Science* 273: 1531-1533). For some time now, climatologists and archaeologists have paid attention to these events, but it is only during the past year that El Niño has become a household term throughout the world.
The 1997-1998 El Niño was climatologically similar to many earlier occurrences, but for the first time, a major event was successfully predicted months in advance. The Peruvian government (among others) was able to initiate some mitigation efforts in advance of the floods, so the consequences of this El Niño were different from prior events. Some of these consequences involve Peru's cultural patrimony.

El Niño affects Peruvian archaeological sites in many ways. Torrential rain in the north Peruvian desert directly erodes the surfaces of sites, especially those with positive or negative topographical relief, such as mounds or depressions. Looters' pits (and archaeological excavations that have not been backfilled or roofed) are focal points for edge erosion and pooled water that soaks into the soil and accelerates destruction of many remains. Runoff from the rainfall causes flash floods, leading to erosion along drainage paths. Overbank flooding in the coastal valleys inundates sites and affects their contents. The increased available moisture causes vegetation to flourish in the desert, and roots of these plants may further damage archaeological deposits. Finally, as Michael Mosely has pointed out (M. E. Moseley, D. Warner, and J. B. Richardson III, 1992, Space Shuttle Imagery of Recent Catastrophic Change along the Arid Andean Coast. In Paleoshorelines and Prehistory, edited by L. L. Johnson and M. Stright, pp. 215-235. CRC Press, Boca Raton), where El Niño floods deposit massive volumes of sediment at the coast (e.g., Rio Santa), sand is entrained in the constant onshore winds. As sand sheets move inland, sites and even landscapes on the southern, downwind sides of valleys can be covered within a few decades.

In 1578 and presumably in all major events before and after, flood victims relocated onto huacas and other high points that often have archaeological remains (W. E. Copson and D. H. Sandweiss, Native and Spanish Perspectives on the 1578 El Niño. 1997 Chacmool Conference Proceedings, University of Calgary, in press). These temporary Niño camps can last for over a year and occasionally, they become permanent settlements. Inhabitants of these settlements carry out activities that affect the underlying archaeological deposits. In the 1982-1983 El Niño, informants in the Lambayeque and Zaña valleys used the same terms as their early Colonial predecessors to describe their relocation actions, exemplified by the 1983 relocation of La Raya village on the east side of Túcume, a late prehispanic site in the Lambayeque valley. With the agricultural infrastructure in a shambles and reduced marine productivity undermining fishing, out-of-work villagers in Lambayeque and other north coast valleys often turned to looting archaeological sites in an attempt to make a living.

Even for archaeology, however, El Niño's clouds do have a silver lining. First, erosion channels through sites offer interior views generally impossible to achieve with standard excavation techniques and funding levels. An example is Carlos Elera's work at Huaca La Merced, part of the Batán Grande complex in the Lambayeque valley. Following the 1982-1983 event, Elera rescued two partially disturbed tombs and resolved stratigraphic and construction issues (see pp. 335-337, I. Shimada, 1990, Cultural Continuities and Discontinuities on the Northern North Coast. In The Northern Dynasties: Kingship and Statecraft in Chimor, edited by M. E. Moseley and A. Cordy-Collins, pp. 297-392. Dumbarton Oaks, Washington, DC). Second, temporary Niño camps as well as sites permanently abandoned or initially settled during an event provide potential analogs for recognizing and understanding the archaeological signature of human response to El Niño. In the Zaña valley of northern Peru,
the village of Lagunitas has moved twice in this century, following the 1925 and 1982-1983 events. The three 
villages (pre-1925, 1925-1982, and 1983-present) are spatially discrete and made of different materials: quincha 
(wattle and daub), cement-floored adobe, and cement. These sites could be studied through documents, 
informant interviews, and excavations to gain insight into how El Niño's effects are recorded in the ground.

Last summer, I had the opportunity to tour the Lambayeque valley briefly in the wake of the most recent El 
Niño. I was particularly interested in what had happened at Túcume, a site I had worked for many years (T. 
Widely disseminated by email, a Peruvian newspaper story had reported the collapse of part of Huaca 1 (the 
tallest mound at Túcume), revealing the painted interior face of an earlier structure. When I reached Túcume on 
July 13, 1998, I was fortunate to find Alfredo Narváez, the resident archaeologist and my former fellow director 
of the Túcume Archaeological Project, along with his principal assistant Bernarda Delgado. As we walked 
around the site together, I was immediately struck by the unaccustomed vegetation that had sprouted on and 
between the mounds, much of it already brown and dying only a few months after the rains. Moving across the 
site, Narváez explained what had happened over the last year.

A majority of climate models had predicted a strong El Niño more than six months before the rains began in 
northern Peru, and the central government decided to act on this warning. The Ministry of Industry, Tourism, 
Integration, and International Commercial Negotiation (MITINCI) provided funds for the protection of north 
coast archaeological sites of tourist value. Huaca de la Luna and Chan Chan in the Moche valley, El Brujo in the 
Chicama valley, and Sipán and Túcume in the Lambayeque valley were among the north coast archaeological 
sites of tourist value eligible for MITINCI funding. In August 1997, Narváez presented a mitigation plan for 
Túcume to MITINCI and was awarded 140,000 soles (about $50,000) to clean and channel the gullies already 
cutting through the site, cover some excavated areas such as the Huaca Las Balsas and its mud friezes with clay-
rich dirt, roof the large, open excavations on Huaca 1 and Huaca Larga, and improve the roof on the site 
museum, offices, and storage rooms.

Conducted under Delgado's direction while Narváez was on a fellowship in England, the work was completed 
prior to the onset of the rains. It was quite successful in protecting the roofed and covered areas, and little new 
erosion seems to have occurred along the cleaned gullies. The site covers over 200 ha, and it was of course 
impossible to protect most of it directly. The Túcume huacas are all covered with erosion channels from El Niño 
rains over the last 500-1000 years, and 5 m of eroded sediments from the mound face have accumulated on the 
north side of Huaca 1. However, my impression is that where undisturbed by looting or excavation, these 
mounds have reached hydrological equilibrium and little further erosion now occurs. This claim is worth 
investigating to improve future mitigation plans at sites like Túcume.

Regarding the newspaper report on the destruction of Huaca 1, Delgado said it was simply wrong--a few small 
segments of adobe facing had collapsed, revealing nothing underneath them nor posing a threat to the structural 
integrity of the mound. By and large, Túcume fared quite well during El Niño. Although flow rates in the rivers 
of Lambayeque at times surpassed the 1982-1983 maximum flow, government projects to channel water out of 
the cultivated sectors of the valley were successful in preventing massive overbank flooding near Túcume, as 
had occurred in 1982-1983, in 1578, and presumably in other strong events.

Not all of Lambayeque's archaeological patrimony fared as well as Túcume or Sipán, which also was adequately 
protected. No funds were available to safeguard sites that were not on the tourist circuit. The Batán Grande 
complex, where Izumi Shimada and his colleagues have worked for many years, was badly damaged. According 
to newspaper reports and to Carlos Wester, an archaeologist at the Brüning National Museum in Lambayeque, at 
least one site on the south side of the Lambayeque valley was totally destroyed by flooding of the Río Reque. 
Prior to El Niño, Huaca El Taco lay some 300 m from the river. After the first erosion episode in March, a team 
from the Brüning Museum started test excavations on this late prehispanic mound, which measured about 30 x 
60 m and was 22 m high. The next day, the river washed away most of the remaining structure.

Under the direction of Walter Alva, the Brüning Museum is responsible for cultural patrimony throughout 
Lambayeque Department. Although they received government grants to mitigate El Niño at major sites such as 
Sipán, an unforeseen consequence of the event was a serious drop in visitors to the museum. The resulting loss
of income has forced the museum to seek other funding for daily operations and to cease its normal investigations.

According to John Dickson, a U.S. Embassy information officer in Lima, the embassy became concerned with the broad impact of El Niño on the Peruvian economy and on the lives of Peruvian citizens in early 1998. Spurred in part by the news report of destruction at Túcume, they included the cultural patrimony in their discussions. Ambassador Dennis Jett wrote to the *SAA Bulletin* [D. C. Jett, 1998, 16(3): 3] alerting Society members to the ongoing damage, and many archaeologists also were contacted by email. United States Information Service (USIS) personnel held a series of meetings with archaeologists and officials from Peru's National Institute of Culture, and Connie Stromberg of USIS became the coordinator for these efforts. Among her activities was the compilation of a list of sites throughout Peru known to have been affected by El Niño between late 1997 and May 1998.

Although the embassy had no direct funds available, USIS personnel offered to help broker applications to international agencies such as the World Bank. The Lima office of UNESCO agreed to handle any funds that might be acquired. In May, Walter Alva presented a proposal for "protection and conservation of the archaeological patrimony affected by El Niño in the Lambayeque Region" for the embassy to forward to appropriate agencies. Alva listed the project's major benefits: In addition to preserving important segments of the remaining archaeological record, the project would employ many of the local people hardest hit by El Niño. When I left Peru in late July, however, funds had not yet been secured.

The previous high-impact El Niño, in 1982-1983, caused over $8 billion of damage to the global economy (NOAA 1994). Final dollar figures on the impact of El Niño 1997-1998 are not yet available, but the effects on world economy, ecology, and cultural patrimony were certainly severe. As usual, the central Andean nations bore a large share of these costs. But this event was different in one crucial way from all prior Niños: Accurate predictions were available with enough anticipation for some effective mitigation. Decisions, however, needed to be made on how to allocate scarce funds, and the Peruvian government should be lauded for including cultural patrimony among its priorities. Protected sites such as Túcume escaped relatively unscathed. Other sites of lower economic priority, such as Huaca El Taco, were damaged or erased from the archaeological record.

Peru's archaeological resources, like those all over the world, are under constant threat. The situation worsens during El Niño, which augments virtually every source of danger to the cultural patrimony: Increased erosion, enhanced wetting and drying cycles, temporary and permanent settlement expansion, greater poverty resulting in looting as an economic necessity for local people, new construction during rebuilding, and so on. Such destruction cannot be new. El Niño is not only a component in scenarios for cultural change, it also is a critical formation process for the local archaeological record.

El Niño 1997-1998 offers valuable lessons for the future of Peru's cultural patrimony. We need more than the anecdotal information provided here--we require critical studies of how climate predictions were transmitted and employed at various levels; of the processes by which local, regional, and international agencies reached decisions and channeled funds for mitigation efforts; of how agricultural and other mitigation projects such as regional drainage systems had unexpected consequences--positive and negative--for archaeological sites; of which on-site conservation techniques were effective and which were not. Taking proper advantage of the recent event will require an interdisciplinary collaboration among archaeologists, geomorphologists, climatologists, political scientists, and economists--at the least. If the trend of the last 20 years continues, El Niño will return ever more frequently. The more we learn from the recent event, the better prepared we will be for the next one.

*Daniel H. Sandweiss is assistant professor of anthropology and quaternary studies at the University of Maine. All photographs in this article were taken by Sandweiss.*
COSWA Corner

Mary Ann Levine and Rita Wright

COSWA will sponsor several activities at the SAA Annual Meeting in Chicago. These include the Women as Professionals in Archaeology Roundtables, the Women's Network Reception, and a meeting of the Women and Archaeology Interest Group. Information about these activities are described below. Please check your SAA preliminary program for registration information and additional details.

**Women as Professionals in Archaeology Roundtables:** The COSWA Roundtables will take place at a breakfast meeting on Saturday, March 27, 7:00-8:00 a.m. Barbara Roth (Oregon State University), organizer of the roundtables this year, has planned eight tables around specific career themes. The primary objective of the roundtables is to provide a forum to bring senior women archaeologists into contact with graduate students and recent Ph.Ds. Roundtables are intended to afford women early in their careers an opportunity to discuss ideas and concerns, to gain information on specific topics, and to expand their professional networks.

The following women will lead roundtable discussions on the topics in parentheses: Kathryn Toepel of Heritage Research (Careers in Contract Archaeology); Julie Stein of the University of Washington (Academic Careers); Terry Childs of the National Park Service (Careers in Government); Margaret Nelson of Arizona State University (Organizing a Field Project); Mary Stiner of the University of Arizona (Getting Grants); Cheryl Claassen of Appalachian State University (Publishing); Phyllis Messenger of Hamline University (Public Education and Outreach); and Barbara Mills of the University of Arizona (Ceramic Analysis).

Due to the generous support of three cosponsors (Desert Archaeology, Inc.; Archaeological Consulting Services, Inc.; and the Department of Anthropology at the University of Pennsylvania), the cost of participating in this year's roundtables has been substantially reduced to $7. It is necessary to register for the roundtables. In 1998, 77 people participated in 11 roundtable discussions. Please tell your friends about this opportunity to meet with other archaeologists on important career topics.

**Women's Network Reception:** This COSWA-sponsored reception is designed to provide an opportunity to share news and information and to expand your networks. All women archaeologists are invited to attend this informal reception on Friday, March 26, 3:30-5:00 p.m. No preregistration is required and there is no charge. A Cash Bar will be available.

**Women and Archaeology Interest Group:** As described in the September 1998 issue of the *SAA Bulletin* [16(4): 13], this group functions as a network for SAA members who are interested in professional, research, and scholarly issues of concern to women archaeologists. Many of its objectives may overlap with those of COSWA, as they include fostering involvement of women in SAA activities; and improving contacts between junior and senior scholars and augmenting COSWA mentoring activities. The Interest Group is a broader forum than COSWA, because participation is voluntary and COSWA is a committee of 10-member committee appointed by the SAA Board of Directors.

Co-organizers of the Interest Group are Cathy Costin (California State University) and Mary Ann Levine (Franklin and Marshall College). Those interested in the Interest Group should attend this year's meeting to discuss a variety of activities in which the Interest Group will be involved. In the year 2000, the Interest Group will co-organize (with COSWA) a symposium to be held at the Annual Meeting. Please come to the meeting on March 25, 6:00-7:00 p.m. to help plan and organize a very exciting session.
Regional Women's Receptions: COSWA encourages women to organize network receptions at regional meetings. If you wish to organize a regional women's reception and would like additional information about them, contact Rita Wright at rita.wright@nyu.edu.

Mary Ann Levine, a member of COSWA, is assistant professor of anthropology at Franklin and Marshall College. Rita Wright, chair of COSWA, is associate professor of anthropology at New York University.
In November, the Board of Directors moved to extend copyright protection to the contents of *SAA Bulletin* beginning with the January 1999 issue, bringing the *Bulletin* into conformity with our journals. Tobi Brimsek and I asked the Board to implement this policy given the transformation of the *Bulletin* over the course of my editorial direction from a primarily Society-business newsletter to a quasi-journal of archaeology with increasing citation of its contents in other professional venues. Although authors will continue to have rights to their intellectual property, establishing copyright protection for selected *Bulletin* contents will ensure that SAA's legal rights are maintained. This is especially important for the electronic *Bulletin*, which can be easily "reprinted" by establishing links to the web pages that house it.

The costs to SAA are minor; the *Bulletin* will be registered with the Library of Congress (at ca. $100/year). Additional administrative costs will be incurred such as the issuance and tracking of letters to authors of copyright eligible works.

Those parts of the *Bulletin* deemed copyright eligible are the contents of some of our columns (e.g., Working Together, Interfaces, Networks) and other solicited or unsolicited articles not related to Society business. Much of the *Bulletin* content, specifically information about Society matters, is not covered under this agreement consequently, most authors will not be required to sign copyright letters. Those who must will be issued a letter by either the Washington D.C. office or the associate editor soliciting the article. These letters must be returned to Publications Manager Beth Foxwell before the paper can be provide. To avoid unknown potential legal entanglements, we publish our copyright agreements in English only, as do the journals.

Please bear with us through the early stages of implementing this new policy until we work through the kinks. If you have questions or comments, don't hestitate to send them to Tobi, Beth, or me.

*Mark Aldenderfer, editor of the SAA Bulletin, is professor at the University of California, Santa Barbara.*
SAA Native American Scholarship Programs and Fundraising Activities for the Native American Scholarship Fund

Tristine Lee Smart and Joe Watkins

What do Choctaw ballsticks, a check-box on the SAA membership renewal form, and royalties from the AltaMira Press publication, *Native Americans and Archaeologists: Stepping Stones to Common Ground*, have in common? The answer: They are all part of the efforts to raise money for the SAA Native American Scholarship Fund (NASF). We want to thank the many people who have contributed directly to the Fund, donated book royalties, or participated in the Native American Scholarships Committee (NASC) silent auction held at the 1998 SAA Annual Meeting in Seattle.

SAA created the Native American Scholarship Fund in 1988 to support Native people who are interested in studying archaeology. In 1997, the SAA Board established two Native American Scholarship programs to be funded by the NASF. The Arthur C. Parker Scholarship provides up to $1,500 to support training in archaeological methods for current students and personnel of tribal or other Native cultural preservation programs. This scholarship is named in honor of the first president of SAA, who was of Seneca ancestry through his father's family. The second scholarship program, specifically targeting graduate education, is not yet funded.

Initially, applicants and nominees for the Parker Scholarship were Native Americans or Native Hawaiians. However, last November, the SAA Board decided to broaden eligibility to include Native peoples from the U.S. Trust Territories and Canada. The NASC is now considering the possibility of proposing a third scholarship program specifically for Native peoples from Latin America. We would welcome feedback from SAA members on this idea, sent to the address below. Do you feel it would be a worthwhile effort? If so, what type of program might be most helpful? Should this program target students at a particular stage in their education, or should it be more inclusive?

The first Arthur C. Parker Scholarship was awarded in spring 1998 to Angela Steiner Neller, a Ph.D. student at the University of Illinois at Urbana-Champaign. In addition, the National Science Foundation (NSF) awarded a Small Grant for Exploratory Research to SAA to provide $1,500 each for three other people who applied for the 1998 Parker Scholarship. We want to thank NSF for this support.

The Native American Scholarship Fund can only support a biannual award of $1,500. However, thanks to the success of the NASC silent auction held in Seattle in 1998, we are able to offer the Parker Scholarship again in 1999. For more information about this scholarship and the application or nomination procedures, contact SAA headquarters, at the address below. Application or nomination materials must be postmarked no later than February 13, 1999.

To build the NASF to the level at which it can fully support an annual award of the Parker Scholarship and the second scholarship program for graduate education, we could use your help. The NASC will be holding a second silent auction at the upcoming SAA Annual Meeting in Chicago. Please stop by the NASC silent auction booth in the SAA exhibit hall and consider placing a bid. It's fun, and if your bid is the highest, you will be contributing to the NASF. Donations to the silent auction also would be greatly appreciated. Last year's contributions for the silent auction included used and new books, jewelry, equipment and services used by archaeologists, Native American craft items, and artwork. This year, we are planning a special auction of donated T-shirts, and we will be giving people the opportunity to vote for their favorites. We would welcome contributions of T-shirts or any other item that an archaeologist might like to have.
The NASC takes this opportunity to thank the following donors as well as those who donated anonymously for their generous contributions to the 1998 silent auction.

Marjorie Akin
AltaMira Press
Archaeology Magazine
Archmat, Inc.
Mel Bohleen
Cambridge University Press
Kenneth Carleton
Cultural Resource Technologies
Hester Davis
Francoise Drayer
Ann M. Early
Lynn Fisher
Douglas Frink
Annette Fromm
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Rick George
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Jim Huffman
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Marvin Keller
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Light Impressions
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University of Alabama Press
University of Arizona Press
University of Michigan Museum of Anthropology Publications
University of Oklahoma Press
University of Pennsylvania Museum
Jeff Van Pelt
Miranda Warburton
Joe Watkins
John R. Welch
White Mountain Apache Tribe Heritage Program
White Mountain Apache Tribe

If you are interested in contributing to the 1999 silent auction or if you would like to comment on establishing a scholarship program for Native peoples in Latin America, contact Joe Watkins (jwatkins@telepath.com) or Tristine Lee Smart (tristine@t.imap.itd.umich.edu) via email or c/o SAA. For more information about the Arthur C. Parker Scholarship or about donating to the Native American Scholarship Fund, contact SAA, 900 Second Street NE, #12, Washington, DC 20002-3557, (202) 789-8200, email info@saa.org.

Tristine Lee Smart and Joe Watkins are members of the Native American Scholarships Committee. Smart is a graduate student at the Museum of Anthropology, University of Michigan in Ann Arbor, Michigan, and Watkins is with the Bureau of Indian Affairs in Oklahoma.

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Public Education Committee

Update

Associate Editor's Note: The Public Education Committee (PEC) strives to meet the needs of many constituencies through its subcommittees. Our efforts take various forms and updates on several are provided below. We're also pleased to present the second in a series of thematic articles that focus on issues related to precollegiate archaeology education programs and the use of simulated or actual excavation experiences. The articles were selected from the SAA Public Education Committee-sponsored symposium "Should Kids Dig? The Ethics of Children Digging in Real or Sand Box Sites" that was organized by Megg Heath for the 61st Annual Meeting in New Orleans. Although focused on precollegiate education, these studies raise a host of issues that are relevant to those of us who are asked to work with a teacher or children's groups, present a program at a school, conduct a hands-on program for an Archaeology Week session, or work with a state or regional professional organization in developing educational materials and programs for use by educators.

Archaeology Education Handbook to be Published by AltaMira Press

The many years of effort by the SAA PEC have resulted in enhanced curriculum materials and resources available for teachers and students, lesson plans and instructional media for archaeologists working with the public, and much improved communications between educators and archaeologists.

Adventures, Mysteries, Discoveries, and Archaeology in Chicago

Carol J. Ellick

What could a 1,400-year-old neighborhood, a 1911 shipwrecked steam barge, and the adventures of Dirk Pitt have to do with one another? Well, if you have ever read one of Clive Cussler's adventure novels, this question is not as far-fetched as you think!

This year's SAA Public Session at the Annual Meeting will present stories of human behavior, adventure, mystery, and discovery on Saturday, March 27, 1999, from 2-5 p.m. (doors open at 1:30 p.m.) at the Field Museum of Natural History. The session is designed for an interested public but should be of equal interest to professional archaeologists.

The session features three fascinating lectures. Mark Mehrer (Northern Illinois University) will take us back through time for "A Wonderful Day in the Neighborhood" that occurred sometime between A.D. 300 and 700, as several Late Woodland families moved to the banks of the Rock River in northern Illinois. Their small village, consisting of huts around a courtyard, was occupied for only a short span of 2 to 10 years. Because of this relatively brief occupation, we get a clear snapshot of variability in ancient domestic and village life. How can two families from the same "neighborhood" be so different?

Hawk Tolson (Michigan State University Center for Maritime and Underwater Management) will help us time travel to a mishap on Lake Michigan 1400 years later. "The Last Voyage" begins during a storm in 1911 and ends in spring 1996, when a landslide on South Manitou Island exposed the largely intact hull of the steam barge
Yet to date, there has been no instruction manual or textbook to consult on how teaching and archaeology intersect. SAA is cooperating with AltaMira Press to produce the first handbook for archaeologists on how to effectively reach K-12 students and teachers in U.S. and Canadian educational systems. *Sharing the Past With Kids: The Archaeology Education Handbook*, edited by PEC members Karolyn E. Smardz and Shelley J. Smith, includes contributions by 27 veteran teachers and archaeology educators. Written for archaeologists, the book explains the "culture" of the education system, discusses the interface between education and archaeology, forewarns of sensitive and inflammatory issues, and provides real-world examples of a variety of successful archaeology education programs. Throughout, the emphasis is on exemplary

*Three Brothers.* A wealth of documentary and photographic evidence, along with testimony from the daughter of the U.S. Life Saving Service officer who rescued the crew, have allowed a detailed reconstruction of the events of that last voyage: While hauling lumber from Boyne City, Michigan to Chicago in 1911, she was deliberately run aground to prevent her from sinking during a gale. Be a part of the welcoming committee as tale of the *Three Brothers*’ last journey finally makes it to Chicago.

Our keynote speaker, Clive Cussler, will divulge his secrets in "Outrageous Adventures and Grains of Truth." Cussler, author of 15 adventure novels and one nonfiction book--*Sea Hunters*--will talk about the intrigue and the mystery surrounding the discovery of sunken ships. With him, we will travel from the very real and chilling underwater depths of sunken ships to the outrageous adventures of his fictional hero, Dirk Pitt. Wrapped by the thrilling escapades of Dirk Pitt and the National Underwater Marine Agency (NUMA) is a grain of truth. In actuality, Cussler has created NUMA as the mechanism to participate in the adventures himself. Credited with the discovery of more than 60 lost ships, he can be applauded for leaving them where they lay. Following the session, Cussler will sign books.

At tables in the museum's lobby, those interested in getting involved in public archaeology can speak with representatives from state and national organizations who will be available to answer questions and offer information on their programs.

*Carol J. Ellick, a member of the Public Session Subcommittee, is with Statistical Research, Inc., in Tucson, Arizona.*
programming that meets the needs of students, educators, and archaeologists in a realistic, achievable manner. *Sharing Archaeology with Kids* is scheduled for publication in spring 1999.
Precollegiate Excavations: Archaeologists Make the Difference

Nancy Hawkins

Excavation is the part of archaeology that is most familiar to the public. It also is appealing to teachers as a high-interest, hands-on educational tool. As a result, it functions as a "hook" to get precollegiate students involved with archaeology. The Louisiana Division of Archaeology (LDA) has explored many types of student excavations, both simulated and actual, and has had experiences that run the spectrum from disastrous to exemplary. In our experience, the primary factor that leads to a positive educational experience is direct and intensive leadership by archaeologists. Therefore, I now discourage any type of educational excavation, even a simulated one, unless a professional archaeologist is directly involved.

DIG 2: Simulated Excavation

In the early 1980s, the LDA explored various avenues of working with precollegiate teachers. A goal of the newly established Outreach Program was to build on successful existing activities while introducing new ones.

Local teachers, who already included archaeology in their classes, frequently used two types of activities: Collecting field trips led by nonarchaeologists, and simulated excavations using a commercial product called DIG!, which in 1982, was revised and renamed DIG 2 (Jerry Lipetzky, 1982a, DIG 2: A Simulation of the Archeological Reconstruction of a Vanished Civilization (Teachers' Guide). Interaction Publishers, Inc. Lakeside, California; 1982b, DIG 2: A Simulation of the Archeological Reconstruction of a Vanished Civilization (Students' Guide). Interaction Publishers, Inc. Lakeside, California). Teachers described these activities as exciting, hands-on, and interdisciplinary.

Dismissing collecting expeditions as inappropriate, I examined the DIG 2 project. The DIG 2 teachers' guide states: "In DIG 2, competing teams create secret cultures. Artifacts are made that reflect these cultures. Each team buries its artifacts for the other team to excavate and reconstruct. A final confrontation reveals the accuracy of each team's reconstruction and analysis" (Lipetzky 1982a: 1).

One of the LDA's goals in introducing archaeology to students is to teach what archaeology tells about the past, and how archaeologists collect information and draw conclusions. Another is to promote site protection and archaeological ethics. DIG 2 was assessed to see how well it accomplished these goals.

DIG 2 does a good job of teaching social studies concepts and helping students grasp ways that certain aspects of culture can be expressed at archaeological sites. However, it emphasizes creative representation of cultural universals through a mural, a Rosetta Stone, a central symbol, and a secret tomb, also referred to as a "cursed tomb" (Lipetzky 1982a: 13).

In DIG 2, the "how" of archaeology is presented through an introduction to metric measurements, grid systems, tools, site numbers, site forms, mapping, and observational recording. It introduces terms such as artifact, feature, and stratigraphy, and refers teachers to excellent published books about archaeology. Yet it also mentions the "thrill of finding mysterious artifacts" (Lipetzky 1982a: 4) and fosters an image of archaeologists being concerned with digging up symbolic and ceremonial artifacts.
The lab aspect focuses on reconstructing artifacts and preparing label cards for an open house. This may reinforce the Indiana Jones stereotype that the purpose of archaeology is to provide objects for museums. On the positive side, the cards do include interpretations of artifact functions.

As for ethics and site protection, the guide emphasizes context and that "archeology is much more than collecting arrow heads and mummies" (Lipetzky 1982a: 10), and points out that "anyone who calls himself/herself a professional archeologist is expected to write a final report" (Lipetzky 1982b: 22) Conservation, however, never appears as a theme.

The DIG 2 activity is intriguing, and the enthusiasm of teachers using it is impressive. I decided to modify the activity to represent archaeology in Louisiana more accurately. One goal was to decrease the fun and wildly creative aspects of the project, replacing them with an emphasis on realistic, detailed recording, analysis, and interpretation. Unfortunately this decision to make the simulation more like real archaeology ultimately backfired.

**Mystery Culture Excavation Simulation**

I included the resulting activity,"Mystery Culture Excavation," in the first edition of an activity guide, *Classroom Archaeology* (Nancy Hawkins, 1984, *Classroom Archaeology: An Archaeology Activity Guide for Teachers*. Division of Archaeology, State of Louisiana, Baton Rouge). As in DIG 2, students divided into two teams, and each team described a group of people, created a site, excavated the opposite team's site, and interpreted it. As in DIG 2, students described cultural traits like technology, dwellings, food, art, and religion. However, I omitted many traits used in DIG 2, such as values, ethics, rites of passage, dance, drama, and literature. These are rarely encountered in the archaeological record. "Mystery Culture Excavation" had no Rosetta Stones, murals, or tombs, but it had plenty of instructions about excavation, mapping, and labeling.

When some teachers reported that they needed a shortened version of the activity, I added instructions for creating a late prehistoric circular house and a historical two-room house (*Classroom Archaeology: An Archaeology Activity Guide for Teachers*. 2nd ed. Division of Archaeology, State of Louisiana, Baton Rouge 1987). Teachers could create a "site" according to the plans, allowing the students to skip the steps of creating cultures, manufacturing artifacts, and burying artifacts. It also made it more likely that the simulated sites would be similar to actual sites.

I tested the simulated excavation in teacher training programs and with students who attended a week-long workshop. It was engrossing, educational, and exciting. I felt that this activity was a success and a good substitute for both the collecting forays at real sites and the unrealistic DIG 2. Then reports began trickling in about how the instructions were actually used. The good news was that some teachers liked the activity and used it as I had imagined. The bad news was that other people liked it, but put a new spin on it, resulting in the Treasure Hunt and the Real Excavation.

**The Treasure Hunt**

The Treasure Hunt occurred at a major arts festival in Shreveport in northwestern Louisiana. Initially, the Treasure Hunt was held in conjunction with a nearby, professionally led, public excavation. The festival organizers suggested also having a kids-only simulated excavation at the festival itself. The simulated archaeological excavation was modeled after a geology program also was held at the festival, in which children dug in the sand for crystals, fossils, and other stones that they were allowed to keep.

At the suggestion of the festival organizer, I met at length with a bright, energetic woman who set up the first of many Treasure Hunts. I gave her the instructions for the Mystery Culture Excavation. We talked about the goals and processes of archaeology and about the purpose and details of conducting a simulated excavation. The plan was to simulate a site from the 1800s, which coincided with the age of the real site that was being excavated.
After the festival was over, I heard from Louisiana Archaeological Society members that the organizer had abandoned plans to use careful excavation techniques after the first onslaught of children. I contacted the woman who organized the activity afterward, and she was ecstatic. She said the response to the activity was "phenomenal." Two thousand kids participated in the first two days and parents reported that it was their children's favorite event. We discussed improvements for the future, such as more supervision and more emphasis on recording artifacts. I was disappointed in the first year's event, but I was optimistic that it would be better run in the future.

Instead, the Treasure Hunt went downhill from there. In the following years, all attempts to do anything other than find artifacts were discontinued. Actual artifacts were used, and children were allowed to keep them. The intervention of professional and avocational archaeologists was ineffective in redirecting the event.

**The Real Excavation Phenomenon**

In 1989, the Division of Archaeology sent a questionnaire to recipients of *Classroom Archaeology*, asking about its usefulness. Through this process we found out about the Real Excavation phenomenon. A college student reported that he used the simulated excavation instructions to conduct an actual excavation. A teacher reported: "We carried out three digs in DeSoto Parish (County) during the month of May 1986. This guide was our 'Bible.'" We also received a copy of a newspaper article reporting another teacher-led excavation. These responses made me think that the instructions in *Classroom Archaeology* were too thorough, making the activity too much like real archaeology. We revised and reprinted *Classroom Archaeology* without the simulated excavation information.

Despite this, we recently discovered that a teacher planned an excavation of historic remains on her school's property. The teacher reported that she had received instructions about how to conduct an excavation from the Division of Archaeology. When questioned, she mentioned that the instructions were in *Classroom Archaeology*. She was redirected to non-excavation classroom activities.

These experiences have led me to oppose providing instructions to teachers or other nonarchaeologists about how to conduct simulated excavations. If, however, archaeologists are available to construct a simulated site, to teach students about the nonfield parts of archaeology, and to supervise students during excavation, simulated excavations can be a valuable part of an in-depth introduction to archaeology. As with actual excavations, however, well-run simulated excavations are labor-intensive in their preparation and supervision.

Since the late 1980s, the LDA has avoided classroom digging activities. The concern has been that excavation activities that are simple enough for nonarchaeologists to teach to precollegiate students tend to omit the complexities of real archaeology. Archaeology is not just using a screen to recover display quality artifacts, and it is not merely intuitive. At real sites, artifact and feature functions often are not obvious, and the remains that answer important questions may never make it into a museum exhibit. We do students and archaeologists a disservice if we inadvertently teach that archaeology is just a matter of having the combination of the right tools and good common sense.

**Precollegiate Students and Actual Excavations**

Through Louisiana Archaeology Week and other programs, the LDA has been tangentially involved in several excavation projects for precollegiate students. Very few projects have succeeded in providing good educational experiences for the students or in conducting good research, but those that have offer the students:

1. an introduction that includes the purpose of the excavation and findings of the research to date;
2. opportunities to observe archaeologists conducting fieldwork;
3. carefully placed excavation units that minimize damage to complex or significant remains;
limited digging time (for school field trips, 30-45 minutes);

intensive supervision of students excavating (no more than five students to one archaeologist);

activities or discussions touching on analysis, interpretation, and report writing; and

post-field, follow-up presentations about site interpretations and conclusions.

One very successful project was conducted in the French Quarter in New Orleans in 1996. The New Orleans Planning Archaeologist at the University of New Orleans directed an introduction to historical archaeology for approximately 400 teenagers (Shannon Lee Dawdy, 1996, Final Report for New Orleans Archaeology Planning Project, College of Urban and Public Affairs, University of New Orleans. Manuscript on file, Division of Archaeology, Baton Rouge, Louisiana). The participants were 13-16 year-old, at-risk, and disadvantaged students who took part in the project through the New Orleans Recreation Department's Teen Camp.

The courtyard of an 1811 Creole cottage was investigated. Students came in groups of 25 for two sessions, each lasting about 1.5 hours. During the first session, they participated in 45 minutes of introductory activities about the purpose and processes of archaeology and about the history of the site. Then they proceeded to the excavation area, where they learned how to use archaeological tools, complete a field excavation form, and store artifacts. Two or three students worked in each of 10 1 x 1-m units, which had been placed to avoid privies, wells, and other features. One archaeologist supervised five students who excavated and screened for 45 minutes. The field crew straightened walls and floors of excavation units and thoroughly documented the work, both before and after students excavated.

During the second 1.5-hour session, students washed and sorted artifacts. They also learned techniques of artifact identification, interpretation, and statistical analysis. Finally, they wrote a brief narrative about what they had learned. Archaeologists and students also discussed the issue of site preservation versus development in New Orleans.

Approximately 1,250 supervisory hours were devoted to the project. The student research provided important information about the site. The project was professionally reported in the lead archaeologist's annual report (Dawdy 1996), as well as through presentations at archaeological conferences and for the public.

In another effort, archaeologists in Louisiana's Kisatchie National Forest have incorporated students into Windows on the Past site testing projects during Louisiana Archaeology Week. The parish (county) social studies and science supervisors coordinated scheduling 8th-grade classes for the site visits, partnering with the local school system in bringing archaeology into the educational experience.

Here, students worked in no more than three 1 x 1-m excavation units at a time, and only one student excavated in each unit at a time. School groups were limited to 30 students, accompanied by two adults. When a class arrived, the introduction to archaeology began before students reached the site itself. An archaeologist discussed ethics, the goals of archaeology, site safety and etiquette, and the site background (Alan Dorian, personal communication 1996). Students then walked through the woods to the site, where the leader divided the students into groups of 10 or fewer. Each group rotated to each unit during the class visit. One archaeologist was stationed at each excavation unit, and another archaeologist was available to handle media interviews, other visitors, or students who required extra attention.

When a group reached an excavation unit, the archaeologist in charge demonstrated the tools and techniques for the students. The archaeologist also described the artifacts and features recovered thus far at the unit. After the archaeologist demonstrated, one student began troweling or shovel skimming in each unit. The other students screened and bagged artifacts, took notes, and learned about Munsell soil descriptions. Each student got a chance to dig at each unit during the hour at the site. Afterwards, the students regrouped for a debriefing. They discussed what they saw and did, and how the site fit into local prehistory or history. The students' visit lasted a total of about 90 minutes.
Summary

If dedicated archaeologists are not available to commit the time and effort required to teach students personally, teachers should be discouraged from conducting actual or simulated excavations. Teachers can use many excellent classroom activities without ever undertaking any type of digging. They can teach about the science of archaeology as well as the results of archaeology without becoming archaeologists.

Nancy Hawkins is outreach coordinator with the Louisiana Division of Archaeology, Baton Rouge, Louisiana. A version of this article first appeared in A&PE 8: 3.

Acknowledgment: Alan Dorian of Kisatchie National Forest, and Shannon Dawdy, now in the doctoral program in the Department of Anthropology, University of Michigan, and formerly the Planning Archaeologist with the University of New Orleans directly contributed to this article. They, and many other Louisiana archaeologists, have accepted the challenge of sharing the processes and results of archaeology with the students of our state.
Biannual Monograph Series in Public Education is Initiated; Archaeology and Public Education Newsletter Format Modified

KC Smith and Amy Douglass

In 1995, when the Archaeology and Public Education (A&PE) mailing list topped 10,000 recipients, the SAA Board knew it could no longer offer the newsletter free of charge. A modest subscription fee was initiated for non-SAA members, although members could opt to receive the publication as a benefit of membership. However, the freebies soon outstripped the subscriptions, and A&PE remained a financial liability. The board and PEC members discussed various options, but it was clear that A&PE's days were numbered.

An ad hoc newsletter committee convened at the 1998 SAA Annual Meeting to consider the alternatives. For various reasons, we preferred not to convert the newsletter entirely to an electronic document on the SAAweb. We all felt strongly that archaeology educators, especially classroom teachers, would best be served with a printed publication--and that is the course we decided to pursue.

In 1999, the PEC will introduce a new, biannual monograph series. Each booklet will include feature articles that explore a specific archaeological topic, complemented by an educational component. However, the monographs will be sold individually, fewer copies will be printed, and they will be marketed to a wider audience. The series will have a new name and a new look, and it will continue to provide information about archaeology, geared primarily for the public.

A&PE will live on electronically in a modified form. The newsy elements of the newsletter will be posted and updated periodically on the SAAweb, and previously printed issues will be available online, much like the past editions of the SAA Bulletin. A team from the Arkansas Archeological Survey has agreed to study how this can be done efficiently and economically. It will make a recommendation to the SAA Board, which then will determine a course of action.

A&PE 8(3), which was mailed to readers in mid-December 1998, will be the last printed version of the newsletter. However, through the monograph series and the web pages, the PEC's objectives of providing in-depth information as well as timely announcements will be continued, but simply in different formats.

KC Smith and Amy Douglass are coeditors of Archaeology and Public Education. Smith is at the Museum of Florida History in Tallahassee and Douglass is with the Tempe Historical Museum in Tempe, Arizona.

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Teaching Archaeology in the 21st Century:

Thoughts on Undergraduate Education

Hester A. Davis, Jeffrey H. Altschul, Judith Bense, Elizabeth M. Brumfiel, Shereen Lerner, James J. Miller, Vincas P. Steponaitis, and Joe Watkins

Editor's note: Paper prepared by the Undergraduate Education Work Group (Hester A. Davis, chair) at the SAA Workshop on "Teaching Archaeology in the 21st Century" held at Wakulla Springs, Florida, February 5-8, 1998, George S. Smith and Susan J. Bender, workshop cochairs. See SAA Bulletin 16(5): 11 for a discussion of the workshop.

During the past two decades archaeological practice has been transformed by internal and external forces, requiring archaeologists to develop new skills and ethical principles for the practice of archaeology in all its applications. To prepare archaeologists for the challenges of the 21st century, it is critical that these ethical principles be infused into the undergraduate curriculum, enhanced at the graduate level, and continued as part of postgraduate education and professional development.

Principles for a Renewed Archaeology Curriculum

The following principles reflect SAA's Principles of Archaeological Ethics:

(1) Foster stewardship by making explicit the proposition that archaeological resources are nonrenewable and finite;

(2) Foster understanding that archaeological remains are endowed with meaning and that archaeologists are not the sole proprietors or arbitrators of that meaning because there are diverse interests in the past that archaeologists study. Archaeologists, therefore, share their knowledge with many diverse audiences and engage these audiences in defining the meaning and direction of their projects;

(3) Recognize diverse interests in the past;

(4) Promote awareness of the social relevance of archaeological data and its interpretations;

(5) Infuse the curriculum with professional ethics and values that frame archaeological practice;

(6) Develop fundamental liberal arts skills in written and oral communication, and computer literacy; and

(7) Develop fundamental disciplinary skills in fieldwork and laboratory analysis and promote effective learning via the incorporation of problem solving, either through case studies or internships.

Stewardship
In considering archaeological resources, students need to understand the nonrenewable nature of archaeological sites and associated material. The information content of such material and the value of the data in interpreting and understanding human behavior should be emphasized. Once the information has been removed from the ground—whether through archaeological excavation or as a result of looting, development, erosion, or other processes—the site itself is gone. When archaeological investigations are conducted, the information from the ground is transformed into archaeological data in the form of collections, records, and reports that are used to interpret and explain the past.

As part of this discussion, the damage caused by looting sites and trafficking artifacts should be presented in the context of the loss of information and, thus, the ability to interpret the data. Examples of looted sites such as Slack Farms or the impact of vandalism on many sites in the Southwest can be discussed. Students can evaluate the resulting loss of information and its impact on learning about these sites and their inhabitants.

The conservation ethic—how the past can be preserved—must be explained. Once students understand the fragile nature and value of the resources, they must examine methods of the wise use of resources, or conservation. Conservation can include stabilizing an archaeological site, preserving it in place, excavating it, or promoting public understanding of its information content through site development and interpretation. Examples of successfully conserved sites can be discussed (e.g., developed sites, such as Cahokia or Mesa Verde; ongoing site interpretation, such as at Alexandria; site protection through the Site Stewards of Arizona).

It also should be noted that recent trends toward conservation have led to the hiring of archaeologists as cultural resource managers. This segment of the profession, comprising nearly 50 percent of employed archaeologists, emphasizes stewardship of the archaeological record. As part of this responsibility, archaeologists now work with many different publics to communicate the value and importance of archaeological data. In this context, it is important to discuss—in more advanced courses—preservation laws such as the National Historic Preservation Act (NHPA), Archaeological Resources Protection Act (ARPA), and Native American Graves Protection and Repatriation Act (NAGPRA).

**Diverse Interests**

In presenting archaeology courses to undergraduate students, the instructor should make students aware that archaeologists no longer have exclusive rights to the past, but that various publics have a stake in it. No one truly "owns" the past; rather, we all share common roots in a past that bears different fruits. Diverse groups—descendant communities; state, local, and federal agencies; and others (salvers, "metal detectors")—compete for and have vested interests in the nonrenewable resources of the past. Students also must be informed of the existent preservation laws that stress the protection of our common heritage and that development of partnerships with these diverse groups can enhance the protection. By examining the ways that the products of the past have been used to further political and national interests, students also can be made aware of the social implications of our discipline. By recognizing that different views arise from common roots, we can understand our relationships, extend influence beyond our individual reach, and unite to attain common goals.

**Social Relevance**

If we are to justify the existence of archaeology as a discipline and gain public interest and support, then we must effectively show how archaeology benefits society. In the past, archaeologists considered these benefits to be self-evident. Teachers simply presented the "substantive findings" of the field and assumed that students would intuitively see its value. But this complacent approach can no longer dominate the way archaeology is taught. Given the existence of diverse interests in the past (some of which may prefer to see archaeology disappear), those who teach archaeology in the 21st century must convey the importance of archaeology to their students.

One method is to highlight ways in which the past can be used to help us think productively about the present and future. As we teach archaeology, particularly in introductory and large-enrollment courses, it is essential to
show students how archaeology may be relevant to today's issues. Let's call this approach "Lessons from the Past," and list some examples:

- Discuss the role of environment on the development of past societies, including the effects of environmental degradation
- Discuss the history and role of warfare in relation to politics, economy, and other historical circumstances
- Discuss the history of cities and urban life, and the many forms these took in the past
- Discuss how archaeological techniques can be applied directly in matters of public policy and the law, such as in the case of forensic studies (Bosnia) and the University of Arizona's "Garbage Project"
- Discuss past systems of social inequality and draw connections to and contrasts with the present
- Discuss the history of human health and disease.

**Professional Ethics and Values**

The articulation of ethical principles and core values are a sign of growth and maturation of the profession. The eight SAA Principles of Archaeological Practice are fundamental to how archaeologists conduct themselves regarding the resources, data, colleagues, and the public. Linking these principles to specific lecture topics or presenting them as individual lectures will provide students with a foundation for establishing their own interests in the study of cultural resources. The Register of Professional Archaeologists (ROPA) Code of Ethics and Standards of Research Performance provides a more detailed set of ethical behaviors relative to the specific practice of research. These statements provide a direction and foundation for the practice of field archaeology and its consequences, and as such, should be incorporated into presentations in upper-division classes.

**Communication**

Archaeology depends on the understanding and support of the public. For this to occur, archaeologists must communicate their goals, results, and recommendations clearly and effectively. Archaeology education must incorporate frequent training and practice in logical thinking, and in written and oral presentation. For any nonspecialist audience, jargon inhibits understanding and makes it less likely that archaeological goals will be appreciated and supported. An archaeologist must be able to make a clear and convincing argument, based on the analysis and interpretation of relevant information, in public and professional contexts. Development of effective communication skills also includes mastery of standard tools like computers and the Internet as well as the ability to interact cooperatively and productively with others involved in a project.

**Basic Archaeological Skills**

Students planning a career in archaeology must acquire a set of basic skills. At a conceptual level, these involve the ability to make pertinent observations of the archaeological record, describe and record these observations, and draw appropriate inferences. Requisite skills include survey and cartography (e.g., map making and reading), stratigraphy (e.g., draw and accurately interpret a soil profile), archaeological methods (e.g., complete field and laboratory forms), database management (e.g., create and use data tables), and technical writing (e.g., write artifact, feature, and site descriptions).

**Real-World Problem Solving**

One of the most difficult things for undergraduates to do is to merge theory (classroom experience) with practice (real world experience). Helping students to make this transition in the context of course work often drives home
the main points and demonstrates the applicability of archaeology to their lives. Fundamental to "real-world problem solving" is flexibility and a solid grounding in archaeological concepts.

Students can be exposed to problem solving through classroom examples and observations of real situations where they can see for themselves that archaeology is only one of many competing interests to be reconciled to successfully complete a project. Having students attend a descendant population meeting where archaeology is discussed will be an eye-opener. As teachers of archaeology, it is our responsibility to demonstrate how business, politics, and local bureaucracy works, and to foster an understanding of preservation laws and regulations. Outside the academy, archaeology is usually done as part of a planning process or as a solution to a construction or development problem when construction planning has been ignored. One way to expose students to this process is to have them attend city or county commission meetings or invite urban planners or politicians to lecture to the class about the political process.

**Recommendations for the Undergraduate Curriculum: Embedding the Principles in Existing Curricula**

Curricula can be revised effectively and efficiently simply by embedding the principles in existing course structures. To assist in planning revisions of this type, standard undergraduate courses and their audiences are identified and matched below. This information is then summarized in Table 1, along with information on which ethical principles can or should be introduced in certain course contexts. Suggestions follow for specific topics appropriate for teaching each principle to particular target audiences.

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* (1) Non-majors (1 course); (2) Anthropology Majors (who enter another profession); (3) Archaeology Track Majors (who attend graduate school in archaeology)

**Suggested Topics:**

**Stewardship**
Looters and Trafficking
Conservation Ethic
Non-Renewable Resource
Diverse Interests

Different Views of Past
Partnerships (collaboration with many groups)
Public Involvement (reporting results)
Politics Uses of the Past (nation building)

Social Relevance (lessons from the past)

Garbage
Population Dynamics
Environmental History
Systems of Social Inequality
Warfare
Health/Disease

Ethics and Values

Principles of Archaeological Ethics
Preservation Law

Communication

Clear writing (implied clear thinking)
Clear speaking (implied clear thinking)
Public Speaking
Computer Literacy

Basic Archaeological Skills

Observations skill (inferential skills)
Basic map skills (scales, contours)
Organize and assess data
Knowledge of the law
Description (one step above field description)

Real World Problem Solving

Professional Responsibilities and Accountability
Archaeopolitics (know the players and process)
Citizenship (civics)
How business works
Legal and regulatory (know the rules)

Hester A. Davis is the Arkansas state archaeologist, Jeffrey H. Altschul is president of Statistical Research, Inc., Judith Bense is chair of the Department of Anthropology at the University of West Florida, Elizabeth M. Brumfiel is with the Anthropology Department at Albion College, Shereen Lerner is on the anthropology faculty at Mesa Community College, James J. Miller is the Florida state archaeologist, Vincas P. Steponaitis is president of SAA and director of the Research Labs at the University of North Carolina, and Joe Watkins is with the Bureau of Indian Affairs.

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Teaching Archaeology in the 21st Century: Thoughts on Graduate Education

Mark J. Lynott, David G. Anderson, Glen H. Doran, Ricardo J. Elia, Maria Franklin, K. Anne Pyburn, Joseph Schldenrein, and Dean R. Snow

Editor's Note: Paper prepared by the Graduate Education Work Group (Mark J. Lynott, chair) at the SAA workshop on "Teaching Archaeology in the 21st Century, held at Wakulla Springs, Florida, February 5-8, 1998, George S. Smith and Susan J. Bender, workshop cochairs.

Workshop participants agreed that as a discipline, we must instill more rigorous requirements at the graduate level, since many practicing archaeologists limit their degree work at the Master's level. At present, archaeologists with the terminal degree of an M.A. have an enormous impact on the management of cultural resources and the perception of archaeology by people outside the profession. The following recommendations represent the essential standards in knowledge, skills, and abilities for the graduate studies in historical and prehistoric archaeology for both M.A. and Ph.D. programs.

In the case of some doctoral programs which do not build upon M.A. degree programs and may not grant an M.A. degree in the course of doctoral study, the early portion of the doctoral program should be enhanced along the lines recommended here for stand-alone M.A. programs. Those seeking doctoral training and careers as professors at research universities will inevitably be called upon to instruct students whose own careers will require the elements we regard as essential in a graduate program.

There is strong sentiment that an individual should demonstrate competency in research and writing by completing an M.A. thesis, Ph.D. dissertation, or qualification equivalent. The successful completion of an original research project demonstrates that a student can conduct independent research, participate in the management of important archaeological resources, and evaluate the research and contributions of colleagues and peers.

It is imperative that students receive instruction and training on ethics and professionalism in archaeology throughout the graduate program. Discussion of ethical principles, codes, and policies developed by SAA, the Society of Professional Archaeologists/Register of Professional Archaeologists (SOPA/ROPA), the Archaeological Institute of America (AIA), and the Society for Historical Archaeology (SHA) should be incorporated into course work wherever possible. This training should emphasize the finite and nonrenewable nature of archaeological resources and the threat to archaeological resources from development and the illegal antiquities trade. The stewardship responsibility of professional archaeologists as identified in SAA's Principles of Archaeological Ethics also should be emphasized.

Undergraduate Prerequisites

A Background in Three Subfields at a Minimum. Before enrolling in a graduate program, students must develop a strong, well-rounded background in anthropology including courses in archaeology, cultural
anthropology, and physical anthropology. Training in these subfields of anthropology is needed to prepare students to specialize in archaeology at the graduate level.

**Area Specialization in Archaeology.** At least one course that specializes in the archaeology of a particular area or region is required. It is highly recommended that students complete a course in North American archaeology, which is required in many hiring programs for federal employment, and will prove useful to those pursuing a career in cultural resource management or in teaching students about cultural resource management.

**Field Experience.** Prior to entering a graduate program in archaeology, students should participate in field research. Traditionally, undergraduate students were offered field schools in archaeological methods. More recently, students have been able to gain field experience through paid positions on cultural resource management projects. Either alternative is acceptable as long as students develop an understanding of field methods.

**Method and Theory.** Students should take courses that expose them to the relationship between research methods and archaeological theory. This can include courses in the history of anthropology/archaeology, quantitative or qualitative analysis, or lithic and ceramic analysis.

**Foreign-Language Competency.** Undergraduate students should develop competency in at least one foreign language useful in graduate research. Competency in a second language also is useful in developing an appreciation for cultural diversity.

**Archaeology as a Profession.** Public knowledge about archaeology often is obtained from major media stories, movies, and books that portray archaeologists as adventurers and treasure hunters. It is recommended that undergraduate students be offered formal instruction to help them understand professional and employment opportunities in archaeology.

**Graduate Core Competencies**

**Anthropology.** Graduate students should take at least one course in a subfield of anthropology other than archaeology to help them understand the intellectual relationship of archaeology to the rest of the discipline.

**Ethics, Law, and Professionalism.** Formal training in laws and government regulations that pertain to archaeology is essential and should be taught in association with archaeological ethics. Courses should provide students with an introduction to the ethical issues that face the archaeological profession, and an understanding between ethical and legal conduct. The course should be general towards developing an understanding of professionalism in archaeology students.

**Method and Theory.** Graduate students should complete advanced coursework in archaeological method and theory. Students should receive formal training in development of research designs, hypothesis testing, data collection, and so on. This training is intended to provide students with a basis for designing their own research and evaluating the research of colleagues.

**Statistics.** All graduate students in archaeology must develop an understanding of quantitative methods and the use of statistics in archaeological research--basic skills for archaeological research.

**Supervised, Broad-based Field Experience.** It is essential that all graduate students participate in formally supervised field research that teaches the basic skills of mapping, photography, survey, sampling, data recording, and record keeping. Students should be taught the nonrenewable nature of archaeological resources and the destructive nature of archaeological research. Especially important is training in problem-oriented research that selects only those field methods and portions of the archaeological record necessary to solve the problem. It is also encouraged that students be exposed to non-destructive research techniques such as geophysical surveys (e.g. magnetometer, soil resistance meter, soil conductivity meter, ground-penetrating radar).
Survey Course of Archaeological Sciences. Students should receive formal instruction in application of non-archaeological sciences to the study of archaeological resources and research problems. Students should receive basic training in a wide range of possible research areas, including but not limited to faunal and floral analysis, soil and stratigraphic analysis, geophysical survey methods, archaeological dating techniques, isotope analysis of human bones, and ceramic compositional analysis.

Cultural Resource Management and Preservation. The management and study of archaeological resources as mandated by law and regulations has become a major part of archaeology. Students should be exposed to the contemporary practice of cultural resource management through case studies or internship experience associated with "real-world problem solving."

Statement Regarding the Ph.D. Degree

The Ph.D. degree is an advanced graduate degree that recognizes specialized research achievement. We anticipate that doctoral programs will continue to expect additional courses in subjects such as statistics, specialized seminars, and an additional language or research skills. Doctoral programs should be structured to recognize the special expertise in oral and written communication skills required of educators and the directors of research projects. Thus, we envision that the Ph.D. provides for the enhanced training in the aforementioned areas as well as a specific research focus. The Ph.D. must continue to involve production of a doctoral dissertation, which might in some circumstances obviate the need for a master's thesis at an earlier stage of graduate study.

Mark J. Lynott is manager of the Midwest Archeological Center, National Park Service; David G. Anderson is an archaeologist with the Southeast Archeological Center, National Park Service; Glen H. Doran is with the Department of Anthropology at Florida State University; Ricardo J. Elia is with the Archaeology Department at Boston University; Maria Franklin is with the Anthropology Department at the University of Texas at Austin; K. Anne Pyburn is with the Anthropology Department at Indiana University; Joseph Schuldenrein is with Geoarchaeology Research Association; and Dean R. Snow is the chair of the Anthropology Department at Pennsylvania State University.
Avoiding the Driest Dust that Blows: 
Web Site Reports 

John W. Hoopes

Maiden Castle, Excavations at Jericho, Olduvai Gorge, Casas Grandes, The Prehistory of the Tehuacan Valley, Urbanization at Teotihuacan, In the Land of the Olmec--these are examples of classic site reports, publications that strive to document the minutiae of archaeological fieldwork for posterity. Each presents the results of thousands of hours of field and lab research, sometimes stretching over several decades. Because most archaeological fieldwork is destructive and non-repeatable, a good site report is expected to include all of the elements necessary to reconstruct--within reason--the totality of the scientific field experience. While journal articles synthesize and interpret the meaningful (and interpretable) data, an ideal site report documents even those details whose utility is not immediately apparent. It should be a dense repository of information that not only supports interpretation, but provides fuel for critiques, alternative interpretations, and future investigations. Archaeological site reports are arguably the most important publications of our discipline--especially because they preserve data that can only be collected once. However, because they are often oversized and packed with maps, level plans, profiles, and artifact illustrations (not to mention pages of tables and even computer-coded data files), these multi-volume works are hideously expensive to produce, often requiring massive financial subvention and ongoing institutional support. As university monograph series decline or disappear in the face of increasing production costs and diminishing budgets, and as academic publishers become increasingly wary of projects that are unlikely to show a profit, lavish hardcopy site reports are in danger of extinction. Fortunately, the Web provides an attractive alternative that may eventually transform the publication of archaeological data.

There are several good reasons to publish a site report on the Web. The process can be both quick and cheap. Even the most expensive paper publications rarely include four-color illustrations or multi-megabyte data files, each of which are readily distributable over the Web. Online documents can be made available instantly and updated from any location with Web access, making them a versatile form of field reporting. Other advantages are inherent in the medium itself. How many of us have balked at the prospect of re-entering artifact frequency data from hardcopy tables to test or extend a quantitative analysis? How many hours have been spent thumbing through a multi-volume site report to find every reference to textiles, shell ornaments, or a lens of yellow sand? Web documents can be readily downloaded, reformatted, searched, indexed, and used to generate concordances. Search engines can provide immediate cross-references to information in several different documents. Web sites also can provide access to other documentary material that would be prohibitively expensive to print on paper. Fieldnotes, record forms, correspondence, transcripts of interviews, complete sets of plans and profiles, photographs from multiple angles taken at different times in the excavation, images of artifacts, bones, shells, seeds, and so forth--all of these constitute valuable data. There is no reason why the ultimate goal of archaeological documentation shouldn't be the presentation of every relevant piece of information that has been obtained about the archaeological record. Someday, for many archaeological sites and regions, this will be all that survives for future colleagues to investigate.

In addition, the Web also offers new possibilities for providing multiple interpretations of the archaeological record. Ruth Tringham at the University of California-Berkeley has been experimenting with the presentation of archaeological data in hypermedia documents that reveal the subjectivity of constructions of "what happened" in the past and actively engage individuals in the creation and testing of alternative views. A reading of any of classic report, from Jericho to Olduvai to Casas Grandes, reveals the effects of the principal investigator's particular interpretation in shaping the presentation of evidence. Web documents can be constructed in such a
way that there are alternative choices in how the reader is "led" through the data, facilitating and encouraging active critiques of specific interpretations and participation in the construction of knowledge.

Permanence of the medium is a legitimate concern. After all, one can still consult an original copy of Schliemann’s *Troy and its Remains* (1869) to interpret what was found (and to guess at what was trashed). However, any document that can be presented on the Web also can be stored on a CD-ROM or DVD. While neither of these is as permanent as high-quality, acid-free paper in a durable binding (the current estimates for CD-ROM shelf-life are about 30 years), any archaeologist knows that the ubiquity and reproducibility of an item of material culture is at least as important to its survival over time as the durability of a given example. Digitized documents can be copied and duplicated quickly and easily. A usable copy of "Casablanca" is likely to be available on DVD or some other digital medium long after the last celluloid copy has crumbled to dust.

One example of what is possible is Archaeology of Teotihuacan, Mexico
[archaeology.la.asu.edu/vm/mesoam/teo/](archaeology.la.asu.edu/vm/mesoam/teo/), created two years ago by Saburo Sugiyama at Arizona State University. This Web site provides a thorough description of the Teotihuacan, Mexico, with descriptions of the major architectural features, photos, and eight QuickTime movies of the major structures, features, and excavations. It provides a chronological chart, maps, and a bibliography together with *Teotihuacan Notes*, an online journal edited by Sugiyama and Debra Nagao. The first number (January 1998) contains five online articles on Teotihuacan iconography. The award-winning Feathered Serpent Pyramid pages (last updated 8/15/97) are the most extensive, with detailed information and abundant photographs of this structure and the excavations that revealed extensive burials beneath it. Most of these images have not been published elsewhere, making this an indispensable supplement to hardcopy publications. The Moon Pyramid page has not yet been updated with this past season's discoveries, but this information will fit neatly within the site's existing structure to make this an even more valuable online resource. There are no interactive features (other than the email addresses of the authors), so in this sense the Web site represents an online version of what might otherwise be offered in a paper publication.

**Web Reporting as Postprocessual Methodology**

Çatalhöyük: Excavations of a Neolithic Anatolian Tell
[catal.arch.cam.ac.uk/](catal.arch.cam.ac.uk/)

The ongoing Çatalhöyük project, directed by Ian Hodder, provides a radically alternative model for the future of Web-based site reports. The project Web site, currently maintained by Anja Wolle, is not only an attempt at the construction of an online site report, but is an exercise in a postprocessual, reflexive, multivocal methodology (I. Hodder, 1997, Always Momentary, Fluid and Flexible: Towards a Reflexive Excavation Methodology." *Antiquity* 71: 691-700), that seeks to redefine the relationships between the excavator, the archaeological record, and the various audiences--both local and global--that are consuming the results of interactions between excavators and the excavated. (Several theoretical justifications for this approach are available online, including a valuable paper by Adrian Chadwick published in the online journal *Assemblage* at [www.shef.ac.uk/~assem/3/3chad.htm](www.shef.ac.uk/~assem/3/3chad.htm)). The project is producing not only traditional excavation data, but video documentation and virtual reality modelling, both of which will eventually become available online. A CD-ROM resource has already been published, and it is likely that more will be forthcoming as additional digital resources are created.

Although the site is not as image-rich as the Teotihuacan Web site, an enormous amount of information is available online. This includes a bibliography of research at Çatalhöyük, Archive Reports for both 1996 and 1997 seasons, seven artifact distribution plots from excavated floor surfaces (with detailed phase information), and the texts of papers presented at a conference in 1996. There are four newsletters (January 1995, April 1996, December 1996, and December 1997), each of which constitutes a detailed preliminary report. The following table of contents from the 1997 Archive Report gives an idea of the nature of other substantive online content:

- Introduction and Summary (Ian Hodder)
- Mellaart Area (Shahina Farid)
The Çatalhöyük database provides access to extensive excavation data. Its features include the Excavation Diary (recorded by the excavators in the field) and Excavation Data (the excavation records resulting from the field season). An additional feature, Find Data, provides summary information for materials such as animal bone and lithics from multiple units. Data from the 1998 season is still incomplete (only 1/3 of all excavation units have been entered so far), but information from previous seasons gives a good idea of what one can expect.

The Excavation Diary features 235 entries from the 15 different participants in the fieldwork. One can generate a list of all entries from 4/8/96 to 10/9/98, retrieve all of the entries made by a single person, or retrieve all of the entries made by each member of the crew on a single day. As far as content goes, the excavation diary is like, well, reading someone's field notebook! The records are far from complete. Some excavators have contributed only a few entries while others were admirably consistent. One person provides only technical data about the units on which they have been working, while another includes personal comments about their own health and motivation level. There are grumbles about the ineptitude of the local laborers, the length of time it takes to process sieved material, and typical frustrations of supervisors with excavation teams. At one point, Hodder even comments on how the theft of a bead during a "press day" jeopardized the continuation of the project, writing, "I feel very sad, sorry, angry, let down." Thankfully, there also is optimism and even exhilaration when things go well. While the text is abundant and often painstakingly technical, the multiple perspectives of the excavation presented here come closer to representing the reality of archaeological data collection than any publication I have ever seen. If the goal of a site report is to allow the reader to vicariously participate in and reconstruct an actual excavation, this method is extremely effective. Any project director who has been faced with the task of gleaning valuable data from multiple sets of field notes in different states of completeness knows that their interpretation can be a major headache. However, in this case, anyone can see and critique the raw data from which the excavation narrative must be constructed.

The Excavation Data page makes it possible to search on excavation units and features by numbers. Currently, there are 2,742 excavation units listed in 64 different excavation "spaces." Each has a basic description form listing information such as location, dimensions, excavation dates, stratigraphic relationships with other units, sieving volume, and linked cross-references to lists of samples (flotation, pollen), "X-finds" (objects retrieved during excavation, not sieving), and bulk finds (from sieving procedures). The unit forms make it possible to link them to plans and profiles as well. The Feature Data Table lists 183 features, ranging from walls to burials, pits, caches, and even bucrania (cattle skulls). Each is linked to an individual form, which (ideally) contains more detailed descriptions and cross-references to relevant excavation units. The Find Data page allows one to search individual units and retrieve descriptions of bone and lithic remains that were recovered.
Using a combination of the Excavation Diary pages and the Excavation, Feature, and Find Data pages, one can actually undertake a detailed reconstruction of the Çatalhöyük excavations. While this is unquestionably a tedious process, it allows for the type of cross-checking and confirmation that is required for validation of archaeological interpretations presented in the general reports. There is much more that could be done to facilitate this process. For example, the artifact distribution plots should be image-mapped with links to information on specific units and features-and vice versa. Profiles and a clickable Harris matrix also would be helpful, as well as links from the excavation diaries to unit and feature records (all of which is possible on the Web).

In addition to providing technical excavation data, the project strives to situate itself relative to a broad audience. There is a translation of a prizewinning essay from a Turkish citizen on the significance of Çatalhöyük. Another "postprocessual" feature is an online dialogue that began in January 1998 between Ian Hodder and Anita Louise, a member of the "Goddess community"--an international group of followers of the writings of Marija Gimbutas and others who follow Mellaart's interpretation of Çatalhöyük as a focal point of ancient goddess worship. Hodder writes:

"Some have said `but we are not interested in your interpretations; they are already biased; we want to make our own interpretations.' This is an important challenge to archaeologists. We cannot assume that the provision of `raw data' is enough. This is because the data are never `raw.' The data are immediately interpreted by the archaeologist. And it is quite possible that someone from the Goddess community would interpret the 'primary, raw data' differently. There is a need for archaeologists to contribute to a scholarly dialogue with the Goddess community. Because of the need for this debate, we have started to provide as much data about the site on the Web. I know you have looked at our Web site, and we plan to add a lot more data to that. Obviously it is impracticable to expect everyone in the Goddess community who is interested in the site to come and develop their ideas at the site itself. So we want to make the site data as accessible as possible on the Web, and to make the data easily understandable and useable. We hope it will be possible for people to add their own comments and interpretations at the Web site."

The Çatalhöyük Web site is currently open for comments, but so far only six have been submitted. (The comments are provided in tabular form rather than as threaded discussions--the latter are likely to be more stimulating and productive). They reflect a diverse audience, ranging from tourists to a Ph.D. student and a retired professor. I'd like to encourage all SAA members to record their own thoughts on Hodder's ambitious venture in reflexive methodology. It may well shape the future of archaeology!

Conclusions

As Mortimer Wheeler wrote in *Archaeology from the Earth* (1954: 13): "Archaeology is a science that must be lived, must be `seasoned with humanity.' Dead archaeology is the driest dust that blows." Hodder's conception of the online "site report" transforms a traditional mainstay of archaeological knowledge into an active vehicle for ongoing interpretations of the past. While the medium is new, the concept may not be. The best of the "classic" site reports (found in the finest of archaeological libraries, although the librarians will hate me for saying so!) are those that have been modified again and again with handwritten corrections and annotations, underlining, highlighting, exclamations of approval or disdain, and occasional cross-references scribbled in the margins by generations of dedicated students. At a time when the costs of traditional publishing might have spelled the end of classic site reports for most researchers, the Web offers abundant potential to bring new life to this essential form of archaeological documentation.

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THE MANY FACES OF CRM

Associate Editor's note: At the SAA Annual Meeting in Seattle, the Committee on Consulting Archaeology decided to review introductory archaeology textbooks with regard to their treatment of cultural resource management (CRM), and to publish these reviews in the SAA Bulletin. Reviewers were asked to consider: (1) what aspects of CRM are covered, (2) what essential topics are not addressed, (3) accuracy, completeness, and timeliness, (4) if the discussion is fair and free of anti-CRM bias while effectively addressing the real problems and limitations of CRM, and (5) if the presentation provides the student with useful information about CRM and its opportunities. In the past, introductory archaeology textbooks did not approach CRM in a constructive way. However, the following books seem to be doing a good job and we look forward to a continuation of that trend in other reviews.


Reviewed by Robert G. Elston

This is one of the best current texts for introducing the nuts and bolts of archaeology, and presenting a comprehensive review of contemporary archaeological goals and methods. Postmodern archaeology is given a nod, but the book seems designed for use by instructors who prefer to teach a positivist and processual archaeology. Those who find the book too long on methodology may order it bundled with Price and Feinman's Images of the Past (also published by Mayfield), which discusses large issues in prehistory at an introductory level, and presents the fruits of archaeological research, beautifully illustrated in a large format.


Reviewed by Tony Klesert

David Hurst Thomas's Archaeology, Third Edition is an excellent, engaging introduction to the field, and an admirable choice to introduce college students to archaeology. The book is full of interesting historical accounts of archaeology, has well-presented discussions of theory and method, and is not afraid to tackle the practical and ethical dilemmas encountered by practicing professionals. He takes on the
Sharer and Ashmore present a balanced and positive view of CRM. Throughout, their discussion of CRM emphasizes practice in the United States, but the authors also cite examples from other countries. Their brief introduction to CRM in the first chapter is a discussion of archaeology as a profession. CRM is acknowledged as "the fastest growing segment of the archaeological profession accounting for more than half of all professional archaeologists employed in the United States" (in 1998, CRM archaeologists are an even larger majority). The authors view the growth of CRM archaeology as a positive response to accelerated destruction of cultural heritage in the United States and globally. CRM is distinguished from academic research by its venues (mostly private firms and government agencies), and by its statutory goals (protection and conservation; identification, evaluation of cultural properties, and data recovery from significant properties when necessary). Sharer and Ashmore apparently assume that in the domain of research, goals and execution of CRM and academic archaeology are identical: Good archaeology is good archaeology no matter what the venue. They observe that CRM archaeologists are often concerned with theoretical issues, and are frequently in the methodological vanguard.

In the final chapter, "Challenges to Archaeology," Sharer and Ashmore briefly discuss the history and legal framework for CRM in the United States, providing a list of major legislation through the Federal Reburial and Repatriation Act of 1990. However, they do not delve into the details of site evaluation, and say very little about relationships between agencies, contractors, SHPOs, and the Advisory Council; in fact, the Section 106 and 110 processes are not mentioned. The authors devote several pages to the ethical responsibilities of archaeologists in conservation, working with ethnic groups, archaeological training, public contact, and publication. Written before ROPA, SOPA gets a mention as the organization defining professional qualifications and standards.

Sharer and Ashmore voice their concern over the destructive effects on the archaeological record of looting and large-scale land modification, and discuss the need for effective legislative and ethical responses to these problems. They note that "salvage" efforts by individual archaeologists in emergency situations usually lack sufficient time and the means to result in effective research. In contrast, modern "contract archaeology," is explained as a kind of salvage project conducted in many countries to deal with cultural resources threatened by construction projects. As the usual arrangement in American CRM, an archaeologist, firm, or institution is contracted by the construction agency to deal with any cultural properties affected by the project.

Sharer and Ashmore take the opportunity to say that deficiencies of contract archaeology as practiced in the United States during the Great Depression, gave the enterprise a bad myths of archaeology and even provides extensive references to Internet web sites.

My task here is to review Thomas's treatment of CRM. Thomas alludes to CRM at several points in the book and then devotes an 18-page chapter explicitly to the subject: Chapter 20, "The Business of Archaeology: Caring for America's Cultural Heritage." This is an intriguing chapter, both in terms of what is included and omitted.

In his "Chapter Preview," Thomas emphasizes that the essence of contract archaeology is a "trade-off" between development and preservation. He also notes, and repeats later, that most professionals today work in some form of contract archaeology, because that's where the jobs and money are--an important message to neophytes (although he includes no CRM archaeologist in Chapter 1, "Meet Some Real Archaeologists"). Chapter 20 defines CRM and includes sections on the legal and competing cultural definitions of "significance," the fragmented nature of CRM in this country, the need for archaeological standards, a discussion of CRM as a career, the status of women in archaeology, educating CRM archaeologists, the use of avocational archaeologists, and "protecting the past for the future." There is even a sidebar on "the Indiana Jones myth."

While it is a good chapter, I was left with lingering concerns that the chapter could have been even better. Thomas includes some topics that, in fact, apply to the profession as a whole, rather than particularly to CRM, and seem out of place: "Women in archaeology" and "the need for archaeological standards" are foremost. These are issues of great importance and his discussions are quite good, but by presenting them in this chapter Thomas implies that these are problems with CRM, not with archaeology as a whole. This is, of course, incorrect. I would counter that
name, but that improved attitudes of archaeologists and better policies of sponsoring agencies have in recent years vastly improved the quality of such work. Research now has a higher priority than in the past, and allocations of time and funds are more realistic. The authors mention the "growing pains" caused by the growing Federal and State budgets for contract archaeology: A corresponding shortage of qualified archaeologists, occasional legal and ethical confusion, and questions about priorities and policies. Nevertheless, Sharer and Ashmore are encouraged by what they see as "the increasingly positive attitude of archaeologists toward contract archaeology and [CRM] as areas in which creative research can be carried out."

The authors extend the term "contract archaeology" to include salvage archaeology promoted by the national interests of sponsoring agencies. This, they caution, could result in lower quality research, stemming from priority for non-research concerns, or control of the project by the funding agency. From the text it is unclear whether this situation is more likely to be encountered in foreign countries with strong nationalist governments. Nevertheless, it is noteworthy that non-research concerns are frequently imposed on archaeological contracts let by U.S. Government agencies. Among those I have frequently encountered in my own practice are lack of choice in research area and/or sampling design (sample must be drawn to meet agency requirements), lack of choice in what sites will be intensively investigated (sites must meet government eligibility standards), lack of choice in data recovery methods (screen size, excavation strategy specified), and lack of permission to excavate burials if encountered. Of course, creative archaeologists try not to allow such restrictions to impede research. But we must not forget that nearly all archaeological research is government supported; if one takes the King's coin, one is subject to the King's whim.

Altogether, Sharer and Ashmore devote only about 6 of more than 600 pages to CRM. Since page counting was my first task for this review, I was prepared to be miffed at such "skimpy" treatment. Instead, I am pleased that the authors so obviously view CRM as: (1) generally a good thing that helps counter contemporary destruction of the archaeological record, (2) a fact of archaeological life world-wide, (3) a good venue for creative, cutting edge archaeology, and (4) a good career choice for archaeologists. The positive and optimistic tone of the authors with regard to CRM is worth many pages of less enthusiastic text. I suggest, however, that in future editions, some theoretical and methodological examples be drawn from CRM projects. There are none in the present edition.

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competitive bidding). But this is just a brief sidebar—which too many students will ignore—on a subject that should be central to the chapter.

Perhaps for the *Fourth Edition*, Thomas could move the sections on women and standards to Chapter 21, "Archaeology's Unfinished Business," where they belong, making room for a three or four page discussion of "archaeology as business." Thomas's earlier chapters on "Doing Fieldwork" provide extensive concrete examples of how to conduct surveys, remote sensing, and excavations, and are a real strength of the book. He ought to apply that same level of presentation in Chapter 20 to such topics as requests for proposals, applying for permits, preparing research designs and budgets, recruitment, project organization, meeting deadlines, bookkeeping, legal compliance, public relations, the media, and so forth. These are as important to CRM as excavation methods.

It is in the nature of a review to focus on perceived weaknesses, and I have tried to point out the few I found. But in closing I must return to my initial assessment of the book as a whole, including its overall treatment of CRM. Thomas's style is open and appealing, his coverage is encyclopedic, and of particular strength, is his presentations of ethical and political issues, such as "who owns the past" and repatriation, from multiple points of view. His discussions of such contentious issues are enlightening and even-handed. Thomas's treatment of CRM is thorough, up to date, accurate and useful. If it was a movie, I would give Chapter 20 three stars out of four, and I do recommend Thomas's *Archaeology* for its lucid introduction to the practice of CRM.

Tony Klesert is director of the Navajo Nation Archaeology Department in Window Rock, Arizona.

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Come to the Windy City and be Blown Away!

LuAnn Wandsnider

At the 1999 Annual Meeting of the Society for American Archaeology in Chicago this March, over 1,700 presentations (including formal presentations and discussions) will be made, offering an in-depth exposure to the many facets of contemporary archaeology. As you design your survey strategy to most efficiently sample the many papers and posters that will be featured, keep in mind the following:

(1) Last year, the change in presentation format from 20 to 15 minutes caught many presenters by surprise, causing them to retreat to their hotel room to spend an evening editing rather than imbibing and exchanging information. Some presentations, nevertheless, exceeded the allotted time and some sessions ran off schedule. The 15-minute presentation format continues this year. Presenters have been alerted to this fact and chairs have been specifically asked to keep their symposia and sessions on schedule.

(2) The Sheraton Chicago Hotel and Towers was retained as the 1999 meeting venue some five years ago and it poses special challenges for this year's Annual Meeting. The number of meeting rooms is limited, and there are few small rooms to use for intimate discussions on specific topics. As well, SAA members have indicated (with their feet) that evening sessions are not desired. Thus, save for the Opening (Wednesday evening) and Plenary (Friday evening) sessions, no evening sessions have been scheduled. To accommodate the volume of papers submitted without scheduling evening sessions, other concessions were necessary. Except for Thursday, sessions run almost throughout the day with a minimal lunch break. This means you will want to eat a hearty breakfast and bring along your yogurt and banana so you needn't miss that paper that might change your research life forever.

In the November SAA Bulletin, I called attention to the symposia celebrating the many accomplishments of several of the more productive members of our community. This time, let me highlight other attractions of the upcoming Annual Meeting. For one, throughout the three and a half days, there will be back-to-back symposia explicitly devoted to theoretical and paradigmatic issues in archaeology. Several of these, "One Hundred Years of Conspicuous Consumption" (James Boone and Lance Lundquist, organizers) and "Evolutionary Theory in Archaeology" (Douglas MacDonald, organizer) are offered as forums, where presenters, discussants, and audience share ideas in interactive discussion. As it has for the last several years, evolutionary theory will feature prominently in many of these sessions.

In addition, there will be continuously running sessions on Mayan archaeology, Southwestern archaeology, Andean archaeology, Paleoindian archaeology, lithic studies, and, of course, the archaeology of the Midwest and Great Lakes. If one of these is your passion, you will be occupied Thursday morning through Sunday morning. Within each of these geographically or thematically organized sessions, the papers range from reports of basic data, to explorations of archaeological variation, to theoretical treatises.

A number of sessions will be of interest to members of the CRM community, including one forum devoted to funding, "Beyond Section 106: Public Funding Sources for Archaeology" (organized by Brona Simon); another to curation, "The Ethics of Curation" (organized by Hester Davis); and a third to policy revision, "Section 106 and Archaeology: Council Archaeologists Discuss how Select Issues will be Treated under Revised Regulations" (organized by Tom McCulloch). See also the session "Delivering Archaeological Information Electronically," organized by Mary S. Carroll and Harrison Eiteljorg II.
Other sessions tackle important issues of archaeological data collection, given the buried nature of the archaeological record in the American Midwest. For example, Rinita Dalan and Subir Banerjee have organized a forum on "Soil Magnetism and its Application to Archaeological Research." At the other end of the scale, Payson Sheets and Jame Wiseman have empaneled a forum on remote sensing. See also the Fryxell Symposium (organized by Bonnie Blackwell), which will honor the work of Henry P. Schwarz. "The Final Frontier or Lost in Space?: Data Quality and Archaeological Spatial Analysis," organized by Clay Mathers, explores critical aspects of data quality.

The Student Affairs Committee has put together several workshops that promise to be very stimulating. One, "Communication and Consultation: Working Toward an Informed Archaeology," focuses on working with Native Peoples and draws upon the insights of Native archaeologists and archaeologists who have worked closely with Native communities. The second, "Archaeology for the Masses: A Workshop in Publishing and Presenting in the Public Domain," considers communication with the public across a variety of media, again drawing on colleagues who have contributed most in this area.

As a reminder, the Opening Session (Wednesday evening) will spotlight the archaeology of the Great Lakes and Midwest, especially focusing on mound archaeology and its interpretation. I am grateful to Bill Green and Mark Lynott for putting together this session, which will allow us to become reacquainted with the issues of mound archaeology in the Midwest and current in their interpretation. The Plenary Session, which follows the Annual Business Meeting and Awards Presentation on Friday evening, examines the intellectual legacies of archaeological thought emanating from Chicago over the last many decades. Special thanks to Mark Lycett and Kathy Morrison, who have recruited the purveyors and players who will consider these legacies in detail.

It is impossible to overview here each of the 112 symposia and 56 general sessions that will be featured at this year's Annual Meeting. Suffice it to say that whatever your archaeological interest, there will be at least one and likely many sessions to satisfy.

Of course, the Annual Meeting is more than just posters and presentations. Don't forget the Roundtable Luncheons. Eighteen Roundtable Luncheons, scheduled for Thursday noon, will offer a chance to explore specific topics with others similarly engaged by that topic. The Roundtable Luncheons will cover a wide variety of themes, from how to facilitate communication between archaeologists in the private and government sectors, to how to design an archaeological survey, to discussions on museum collection management. On Saturday morning, the SAA Committee on the Status of Women in Archaeology will be hosting a series of roundtable breakfasts that focus on professional issues of interest to women in archaeology.

Other highlights include the Reception for Students, New Members, First-time Attendees, and Committee Members slated for Wednesday evening. Come and meet colleagues with whom you hopefully will be spending the next 50 years. And, the Committee on the Status of Women in Archaeology extends an invitation to all women in archaeology to join them at a reception Friday.

And don't forget the Awards Presentation and Annual Business Meeting, scheduled for 5:00 pm on Friday afternoon. Come here to learn how your Society operates and how you might make a difference. Traditionally, the business meeting provides a forum at which the state of the organization is reviewed. It is here also that the contributions volunteered by many SAA members are acknowledged.

In sum, the 1999 Annual Meeting of the Society for American Archaeology promises to be an intellectual feast and more. Come to the Windy City and you will be blown away!

LuAnn Wandsnider, chair of the 1999 Annual Meeting Program Committee, is an associate professor in the Department of Anthropology at the University of Nebraska-Lincoln.
Publishing is an essential aspect of archaeological research, and venues for archaeological publication are growing by leaps and bounds. For students, publishing represents a means to demonstrate professional commitment and capability before entering the job market. To help students with the process of journal publishing, we have gathered some tips from editors and professionals.

Learning to publish takes time, and because putting your ideas in print opens them up to debate and criticism, the process can be unnerving. Don't be shy about submitting articles for publication! The only way to get your ideas out is by submitting them for peer review. Scholars rely on this process to move the discipline forward--be a part of it! Consider publishing to be a necessary part of your development. Approach everything you write as potentially publishable.

Tips for Submitting Journal Articles:

(1) When choosing a journal for submission of your manuscript, make sure that your topic matches the journal's focus. Often, otherwise publishable manuscripts are submitted to inappropriate journals and are rejected for publication. Before submitting an article or research report, scan recent issues of the journals you are considering to gauge what kind of articles they tend to publish. Assess how your article would fit into each particular publication venue and submit your manuscript accordingly. Another useful resource to consult are the mission or focus statements that accompany the style guides of many major journals.

(2) Once you have chosen a journal, prepare your manuscript according to the journal's style guide. We listed at the end of this article style guide locations for several major archaeological journals. Preparing your manuscript should always be done carefully and thoroughly. Although all manuscripts undergo later revisions, it is a mistake to assume that all of the editing can wait until later. You should ensure your tables and figures add up, your in-text citations are in your bibliography, and so on. According to one editor, this essential editing is not done on the majority of the manuscripts submitted. Often these manuscripts are returned with negative evaluations from the reviewers, who assume that sloppy scholarship is the problem.
(3) When writing critically or reviewing previous work on your topic, be careful about the attitude presented in your writing. One editor commented that it is tempting for students to criticize too harshly. It is possible to critically evaluate another scholar's work in a reasonable way. Critique your sources, don't criticize them! This is especially true in the case of citing other authors.

(4) Once your manuscript is returned from the reviewers, there are a few important issues to keep in mind. First, editors try to elicit a range of evaluations from reviewers, so don't be surprised if you end up with either very different or conflicting responses. Second, while it is easy to get defensive about negative reviews, try to remain open, receptive, and rational when you receive suggestions about your manuscript. Third, the editor will decide which of the reviewers' recommended changes that you need to make.

Tips for Writing Book Reviews:

(1) The book review section of a journal is usually allotted only limited space. Because of this limiting factor, book reviewers appreciate succinct reviews, so keep your comments about the book to a reasonable length. The more succinct the original review, the less "cropping" will occur before it goes to press.

(2) Include a synopsis, or chapter-by-chapter overview, in a book review. These reviews are designed not just to give an opinion, but also to inform the audience about the book's contents.

(3) As stated previously, be careful about the attitude that comes across in your writing. While it is fine to state your opinion, remember that the views you express will be in print, including those which may offend. It is a good idea to summarize heavily and be diplomatic when stating your opinions. Also, take the time to consider whether or not you would be able to review a book fairly and responsibly (i.e., is it an author you typically disagree with and you will most likely write a negative review?).

(4) While most journals do not solicit book reviews, (i.e., do not allow people to select which book they will review) book review editors will often accept curriculum vitaeas, and letters detailing areas of expertise which they will then use to assign books for review. If you are interested in writing a book review--a great venue for student publishing--contact the book review editors of journals you read and let them know who you are. You never know what might happen!

Style Guides: Where to Find Them

The following is a list of archaeological journals and their most recently published guidelines for contributors. Both print copies and World Wide Web (WWW) addresses are given. In searching through these resources, we often found the WWW to have more complete information, although beware of using the Web version of style guides. Some software and web-browsers may alter the format of items on Web pages. While this doesn't generally pose a problem for Web users, it could make quite a difference in searching for format and style information!

*American Anthropologist*
In Print: See the back of each volume for basic information and editorial contacts
On the Web: [www.ameranthassn.org/ameranth.htm#3](http://www.ameranthassn.org/ameranth.htm#3)

*American Antiquity*
In Print: October 1992, Volume 57: 749-770
The authors would like to thank all of the individuals who offered suggestions and advice for this article. Particularly we would like to thank Lynne Goldstein, Bill Lovis, and Carla Sinopoli.

Jane Eva Baxter is a doctoral candidate at the University of Michigan and is a member of the Student Affairs Committee. Heather Van Wormer is a graduate student at Michigan State University and is a campus representative for the Student Affairs Committee.
Fifty-eight percent of the ballots were returned in the first election of the Register of Professional Archaeologists (ROPA). Newly elected to the Board of Directors are: Donald L. Hardesty, president-elect; Charles M. Niquette, secretary-treasurer; and Elton R. Prewitt, grievance coordinator. These officers assumed their duties on January 1, 1999. Hardesty's election fills a vacancy in the position of president-elect that has existed since the creation of the Register, and takes the voting membership of the board to its full complement of five individuals. Hardesty will become president on January 1, 2000. Niquette will succeed Rochelle Marrinan, and Prewitt will succeed David Browman. Marrinan and Browman are to be thanked for their significant contribution to the Register during its period of transition. The Board of the Register will thus be as follows starting January 1, 1999:

- President: William B. Lees
- President-elect: Donald L. Hardesty
- Secretary-Treasurer: Charles M. Niquette
- Director appointed by SAA: William D. Lipe
- Director appointed by SHA: Vergil E. Noble
- Registrar (ex officio): John P. Hart
- Grievance Coordinator (ex officio): Elton R. Prewitt

The next Register election will be in September 1999. Elected as chair of the Nominations Committee for 1999 is Heather McKillop, and as Nominations Committee member is Claire Lyons. A third member of the committee will be appointed.

The board is working closely with Clemons and Associates, Inc., of Baltimore, Maryland, to establish a permanent business office for the Register. In fall 1998, Clemons and Associates, Inc., was awarded a contract for the operation of this office. Database conversion, development of an application processing function, and design of a Web site are the current foci of their efforts. Independently, an Oklahoma City design firm is completing work on a logo for the Register, which will soon appear on all Register materials and at promotional booths at the upcoming meetings of the Archaeological Institute of America (AIA), Society for Historical Archaeology (SHA), and Society for American Archaeology (SAA). The board met in late December 1998, at the AIA meetings in Washington D.C., and will meet again in March 1999 at the SAA Annual Meeting in Chicago. At these meetings, the board will begin to move beyond the transition work to discuss developing the Register into an effective mechanism for promoting and protecting the standards of professionalism in American archaeology.

Bill Lees, president of ROPA, is with the Oklahoma Historical Society in Oklahoma City.
Hugh Carson Cutler

David L. Browman

Hugh Carson Cutler, son of Manuel and Mary Cutler, was born September 8, 1912, in Milwaukee, Wisconsin. He died September 22, 1998, in Topeka, Kansas. Cutler employed flotation and serial washing, sieves of various mesh sizes, and differential wetting agents in retrieving palynological samples for his B.A. in 1935 and his M.A. in 1936 in botany at the University of Wisconsin-Madison. He is best known in anthropology for his influence in persuading archaeologists to employ these techniques for the recovery of plant remains. After completing his M.A., he moved to Washington University where he secured his Ph.D. in 1939. Cutler married Marian W. Cornell on August 26, 1940 and had one son, William Cornell Cutler, nicknamed Bill, born in 1946.

Cutler's interest in economic botany began with his Ph.D. fieldwork. His first archaeobotanical work dates to 1940, when he and his wife spent their three-month honeymoon traveling in the Southwestern United States, Mexico, and Guatemala, and collecting 60 wild varieties of *Tripsacum* and 300 cultivated varieties of maize, including some cobs from a 900-year-old Anasazi ruin in southern Colorado. As Cutler would note in 1964, this helped define his career commitment to "the useful plants of the New World and their relatives; studies related to the taxonomy of useful plants; research on the wild relatives, variability, and kinds grown by living people; and specimens recovered from archaeological sites" (H. C. Cutler, 1964, Career Statement. Washington University, St. Louis Archives).

Although Cutler's first love was the Southwest, much of his research from 1941 through 1946 was spent in Peru, Bolivia, and Brazil. During this period, Cutler was a research associate of the Harvard University Botanical Museum. He was awarded Guggenheim fellowships in 1942-1943 and 1946-1947 to conduct research on useful plants in Peru and Bolivia. During these sojourns, he also made ethnographic films on indigenous highland food production and preparation techniques. From 1943 to 1945, he worked for the U.S. Army's Rubber Development Corporation in Brazil, flying in blimps over Amazonia to identify wild rubber tree groves to be tapped later by ground parties. He subsequently was awarded several National Science Foundation, Wenner-Gren, and Guggenheim grants to continue his research on economic and ethno botany.

From 1947 to 1953, he was curator of economic botany at the Field Museum of Natural History in Chicago. In 1953, he moved to the Missouri Botanical Garden (MBG) in St. Louis to take over a similar position. It was during the early 1950s that he became more directly involved with archaeologists, continually suggesting and demonstrating the flotation techniques that became the basis for today's technologies in paleoethnobotany for recovery of floral materials. While flotation recovery had been employed earlier in Old World research, New World students had not yet adopted this methodology. In 1951 and 1952, he employed flotation techniques to extract plant remains in the excavations by Paul Martin at Tularosa Cave and Higgins Flat Pueblo. In 1953 he demonstrated the technique again for the Point of Pines project for Emil Haury and his students. One of the undergraduate students involved in Haury's 1953 season was Patty Jo Watson, who was to become a strong advocate of plant recovery by flotation techniques.
In 1960, Bill Cutler participated in Stuart Struever's field school for high school students at Kampsville, Illinois. Visiting his son at the site, Cutler suggested to Struever that plant remains might be recovered by flotation techniques. Struever, who is often viewed by archaeology students as one of the "inventors" of flotation techniques, clearly notes in his 1968 article that "The original idea of attempting flotation recovery of food remains was planted in my head by Dr. Hugh Cutler; it was his urging that prompted us to experiment with these methods, and for this I am grateful" [S. Struever, 1968, Flotation techniques for the recovery of small-scale archaeological remains. *American Antiquity* 33(3): 361]. Watson similarly notes her debt to Hugh Cutler for his first demonstration in 1953 as well as his later consultations at Washington University in St. Louis.

Cutler continued his association with the Missouri Botanical Gardens, serving in various administrative positions from 1954 to 1964, until his retirement in 1977. Initially, administrative responsibilities and rebuilding the infrastructure of the institution occupied much of his time, but he was later able to devote more of his research time to questions directly related to anthropology. A frequent attendee of the Pecos Conferences because of his interest in the subsistence patterns of prehistoric populations in the Southwest, he decided that botany could benefit from a similar meeting. Using the Pecos Conference as his model, he established the ongoing, annual MBG Systematics Symposium in 1954.

From the mid-1950s onward, most of his more than 150 publications focused upon the results of analyses of plants from archaeological and ethnographic field researchers. Cutler had a particular interest in prehistoric races of maize, squashes, and gourds, although his analyses (usually done gratis) detailed the identification of all the plant specimens submitted in the sample. Also in the mid-1950s, his work caught the attention of a St. Louis avocational archaeological group. After training, a few members volunteered to assist in the more tedious parts of these analyses. Cutler was always very generous in sharing credit in his publications. One of these volunteers, Leonard W. Blake, worked in Cutler's lab twice a week and is listed as the coauthor of many analyses, the best known of which is *Plants from Archaeological Sites East of the Rockies* (H. C. Cutler and L. W. Blake, 1973, St. Louis: Missouri Botanical Gardens).

Cutler was named an adjunct professor of anthropology at Washington University in 1969, and began the first departmental seminar in paleoethnobotany in 1970. Upon his retirement in 1977, his archaeological maize and cucurbit collection was sent to the Illinois State Museum in Springfield and is now curated as the "Cutler-Blake Collection." His collection of more than 12,000 ears of ethnographic maize (including specimens integrated into his sets from earlier investigations by Edgar Anderson) was transferred to the Department of Agriculture at the University of Illinois Urbana-Champaign.

*David L. Browman is professor of anthropology at Washington University, St. Louis. He gratefully acknowledges the biographic assistance provided by Leonard Blake, William Cutler, Douglas Holland, Carole Prietto, and Patty Jo Watson.*
The relationship between Native Americans and archaeologists in the United States has changed substantially since the passage of the National Historic Preservation Act (NHPA) of 1966. In the last 30 years, under the impetus of the NHPA, Native Americans have implemented numerous initiatives to increase their involvement in archaeological research and strengthen their control over the management of their heritage resources. This column reviews the economic, political, social, and intellectual aspects of these initiatives, and then assesses the current status and future prospects for incorporation of Native American perspectives in archaeological method and theory.

The Role of Native Americans in Archaeology before the NHPA

Native American involvement in archaeology did not begin with the NHPA. Native Americans have a long history of contributing to archaeological research. The first generation of archaeologists in the Southwest used Native Americans as laborers, field archaeologists, and sources of the ethnographic analogies used to interpret the archaeological record. From 1882 to 1920, Native American field archaeologists employed by scholars, such as Frank Hamilton Cushing, Jesse Walter Fewkes, and Frederick Webb Hodge, worked with the archaeological record and provided important clues on how it should be interpreted.

As the focus of archaeological method and theory changed to time-space systematics and processual approaches, the intellectual involvement of Native Americans in archaeology waned. This is not to say that there were no important Native American archaeologists in the 20th century. Arthur C. Parker, the Seneca Indian and New York State archaeologist who served as the first president of SAA, and Edmund J. Ladd, a Zuni Indian who served as Pacific archaeologist for the National Park Service (NPS), provide two examples of Native Americans who made significant contributions to our discipline during this period.

It was not until the passage of the NHPA in 1966, however, that Indian tribes, as well as individual Native Americans, became directly involved in conducting and regulating archaeological research. The growing
number of tribes involved in archaeology in the last 30 years has greatly increased the numbers of both Native Americans employed as archaeologists and archaeologists employed by Native Americans. These trends are helping to restructure the intellectual growth of our discipline.

**Impacts of the NHPA**

The NHPA has had three important impacts on Native American involvement in archaeology. The first was to increase the number of Indian tribes sponsoring archaeological research. Passage of the NHPA spawned the rapid development of cultural resources management as a source of employment and research opportunities. Many, if not most, U.S. archaeologists are now involved at some point in their career with the identification and evaluation of historic properties under the edict of the NHPA, in the mitigation of adverse impacts to these sites through mandated data recovery programs, or in the management of these activities.

The increase in the number of archaeologists working on Indian lands, as well as the need to get "archaeological clearance" prior to development of land modifying projects, were both of interest to tribal leaders in the 1970s. Within five years of passing the NHPA, for instance, the governor of Zuni Pueblo, Robert E. Lewis, began a program in association with the Arizona State Museum to train tribal members to undertake work mandated by the NHPA. From the outset, Lewis' goals were to provide employment, keep money circulating within the Zuni economy, and provide the rapid delivery of necessary archaeological services to the Zuni Indian Reservation. This effort led to the establishment of a tribal archaeology program in 1975, which now includes a regulatory office (the Zuni Heritage and Historic Preservation Office) and a contract business (the Zuni Cultural Resources Enterprise).

Similarly, the Navajo Nation responded to the NHPA in the early 1970s by expanding its museum-based archaeology program to include a contract business. With roots in litigation work for the Indian Claims Commission, the Navajo program eventually grew to include the Navajo Archaeology Department (providing archaeological services under contract) and the Navajo Nation Historic Preservation Department (fulfilling a regulatory function).

Reaping the financial benefits of the NHPA was an early part of the rationale for tribal sponsorship of archaeological research and remains important today. During the last two decades, both the Zuni and Navajo programs have provided major sources of employment for tribal members, and many of the wages paid to the non-Indian archaeologists employed by these programs are spent on the reservation, helping the tribal economy.

The other two important impacts of the NHPA are related to the 1992 amendments of the act. One of these amendments officially recognized that traditional cultural and religious sites—"traditional cultural properties"—are historic properties that may be eligible for the National Register of Historic Places, and therefore must be considered during the review process to ensure compliance with Section 106 of the NHPA. Section 106 requires federal agencies to consider the effect of their undertakings on historic properties before permits are issued or funds are expended.

Traditional cultural properties in the national historic preservation program are required to be inventoried and evaluated in a manner similar to archaeological sites. In fact, many traditional cultural properties are archaeological sites—introducing an ethnographic component into historic preservation activities. Many tribes prefer to undertake their own ethnographic research using tribal employees or consultants rather than employ outsiders for the studies. Tribal research of traditional cultural properties engages tribes in the implementation of the NHPA, and, more often than not, increases tribal involvement with archaeology in general.

The third impact of the NHPA has been to foster a tribal role in the management of heritage resources, including the regulation of archaeological research. Once tribes began to provide professional survey and excavation services for federal compliance with Section 106, many also decided to become more involved in the regulation of that research on their reservations. This involvement led to the establishment of many tribal historic and cultural preservation offices, allowing tribal assumption of functions formerly fulfilled by State Historic Preservation Officers (SHPOs). Between 1992 and 1997, 15 tribes assumed assumed SHPO responsibilities for
their reservation (Table 1). The functions assumed by Tribal Historic Preservation Officers (THPOs) include inventorying resources, determining the eligibility of places for the National Register, education, and planning and compliance review pursuant to Section 106 of the NHPA. While the revised NHPA encourages tribes to embrace professional standards and guidelines in historic preservation activities, it also mandates that tribal values be taken into account. This means that each tribe can fashion a program to meet its particular needs. Because these new THPO programs are still in development, their full impact on archaeology cannot yet be assessed. It is clear, however, that they will have a major effect on the practice of archaeology on Indian lands by structuring research questions that are relevant to tribes and regulating the methods by which those questions are investigated.

### Table 1. Tribes Assuming THPO Functions

<table>
<thead>
<tr>
<th>Tribe</th>
<th>State</th>
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<tbody>
<tr>
<td>Confederate Salish and Kootenai Tribes of the Flathead Nation</td>
<td>Montana</td>
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<tr>
<td>Confederated Tribes of the Colville Reservation</td>
<td>Washington</td>
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<tr>
<td>Confederated Tribes of the Umatilla Reservation</td>
<td>Oregon</td>
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<tr>
<td>Confederated Tribes of the Warm Springs Reservation</td>
<td>Oregon</td>
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<tr>
<td>Huuapai Tribe</td>
<td>Arizona</td>
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<tr>
<td>Lac du Flambeau Band of Lake Superior</td>
<td>Wisconsin</td>
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<tr>
<td>Chippewa Indians</td>
<td>Minnesota</td>
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<tr>
<td>Leech Lake Band of Chippewa Indians</td>
<td>Minnesota</td>
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<td>Mille Lacs Band of Ojibwe Indians</td>
<td>Minnesota</td>
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<tr>
<td>Narragansett Tribe</td>
<td>Rhode Island</td>
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<tr>
<td>Navajo Nation</td>
<td>Arizona, New Mexico, Utah</td>
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<tr>
<td>Spokane Tribe of Indians</td>
<td>Washington</td>
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<tr>
<td>Standing Rock Sioux</td>
<td>North Dakota, South Dakota</td>
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<tr>
<td>Uinta-Bighorn Tribe</td>
<td>Louisiana</td>
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<tr>
<td>White Mountain Apache Tribe</td>
<td>Arizona</td>
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<tr>
<td>Yurok Tribe</td>
<td>California</td>
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### Number of Tribes Participating in Archaeology

One way to measure the participation of Native Americans in archaeology is by counting the number of tribes that have received federal grants to undertake archaeological research or develop historic preservation programs. The NPS has taken the lead in providing historic preservation funding for tribes. Information distributed by the Tribal Preservation Program of the NPS documents that between 1990 and 1997, 249 Historic Preservation Fund grants totaling $9 million were awarded to 170 tribes. Not all grants deal with archaeology per se; many involve cultural research, ethnobotany, rehabilitation of historic buildings, cultural camps, and other activities representing the breadth of Native American priorities for historic preservation. A review of NPS grants made in 1995 and 1996, however, indicates that 32 of the 75 grants were for archaeological research, the development of tribal ordinances governing historic preservation, or other historic preservation regulatory activities. These 32 grants totaled $1,671,900--almost half of the total funds awarded.

By combining data on NPS grants gleaned from CRM and the SAA Bulletin, I compiled a list of 57 tribes actively involved in tribally-based archaeological research and historic preservation programs (Table 2). These tribes are located in 21 states over a wide geographical area. This is undoubtedly a conservative list; there are probably additional tribes engaged in archaeological research that were not represented in the consulted sources. However, these 57 tribes constitute almost 10 percent of all tribes in the United States--a cogent testimony to the effectiveness of the NHPA in increasing Native American participation in archaeology. These tribal archaeology and historic preservation programs increase the tribal control in establishing the archaeological agenda on tribal lands, thus helping to make archaeological research more relevant to Native Americans.
Table 2. Tribes Engaged in Archaeological Research and Historic Preservation Programs

<table>
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<th>Tribe</th>
<th>State</th>
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<tr>
<td>Afognak Native Corporation</td>
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<td>Bannock-Shoshone Tribe</td>
<td>Idaho</td>
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<tr>
<td>Caddo Tribe</td>
<td>Oklahoma</td>
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<tr>
<td>Camp Verde Apache Tribe</td>
<td>Arizona</td>
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<tr>
<td>Catawba Tribe</td>
<td>South Carolina</td>
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<tr>
<td>Chugach Community</td>
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<td>Confederated Salish and Kootenai Tribes of Flathead Nation</td>
<td>Montana</td>
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<tr>
<td>Confederated Tribes of the Coeur d'Alene Reservation</td>
<td>Idaho</td>
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<td>Confederated Tribes of the Umatilla Res.</td>
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<td>Confederated Tribes of the Warm Springs Res.</td>
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<td>Coquille Indian Tribe</td>
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<td>Dakota Tribe</td>
<td>Minnesota</td>
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<td>Eastern Shoshone Tribe</td>
<td>Wyoming</td>
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<td>Gay Head Wampanoag</td>
<td>Massachusetts</td>
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<td>Gila River Indian Community</td>
<td>Arizona</td>
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<tr>
<td>Hopi Tribe</td>
<td>Arizona</td>
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<td>Houmatok Band of Mattakee Indians</td>
<td>Maine</td>
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<td>Huqulapí Tribe</td>
<td>Arizona</td>
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<td>Iowa Tribe</td>
<td>Oklahoma</td>
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<td>Jemez Pueblo</td>
<td>New Mexico</td>
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<tr>
<td>Klamath Tribe</td>
<td>Oregon</td>
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<tr>
<td>Kodiak Area Native Association</td>
<td>Alaska</td>
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<td>Lac du Flambeau Band of Lake Superior Chippewa Indians</td>
<td>Wisconsin</td>
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<td>Leech Lake Band of Chippewa Indians</td>
<td>Minnesota</td>
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<td>Little Traverse Bay Band of Ojibwa Indians</td>
<td>Michigan</td>
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<td>Lower Sioux Indian Community</td>
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<td>Mashantucket Pequot Tribe</td>
<td>Connecticut</td>
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<td>Me-Wik Indians</td>
<td>California</td>
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<td>Meskwaki Nation</td>
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<td>Narragansett Tribe</td>
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<td>Navajo Nation</td>
<td>Arizona, New Mexico, Utah</td>
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<td>Northern Cheyenne and Crow</td>
<td>Montana</td>
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<td>Pokagon Potawatomi Nation</td>
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<td>Port Gamble S'Klallam Tribes</td>
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<td>Port Graham Corporation</td>
<td>Alaska</td>
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<td>Quileute Tribe</td>
<td>Washington</td>
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<td>Salt River Pima-Maricopa Indian Community</td>
<td>Arizona</td>
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<tr>
<td>San Carlos Apache Tribe</td>
<td>Arizona</td>
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<td>Seminole Tribe</td>
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<td>Seneca Nation</td>
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<td>Sokokoki Chippewa Community</td>
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<td>Turtle Mountain Band of Chippewa Indians</td>
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<td>Wampanoag Tribe of Gay Head Indians</td>
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<td>Wichita and Affiliated Tribes</td>
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<td>Yavapai Apache Tribe</td>
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<td>Yurok Tribe</td>
<td>California</td>
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<tr>
<td>Zuni Pueblo</td>
<td>New Mexico, Arizona</td>
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</table>

Economic Considerations

Tribal archaeology and historic preservation programs have positive financial benefits for tribes (Table 3), as can be seen by examining the FY1996 historic preservation budgets for five tribes in Arizona and New Mexico. By any standard, the $4 million budget and 67 employees of the Navajo Nation Historic Preservation Department are impressive. In fact, the Navajo program is the largest historic preservation office in the nation, larger than any state or federal office. The Navajo Nation Archaeology Department combined with the Navajo Historic Preservation Department, spends more than $7 million and employs more than 150 people in historic
preservation and archaeological research. With control of this funding, the Navajo Nation has become the leading agency governing the archaeological research conducted on the Navajo Indian Reservation.

<table>
<thead>
<tr>
<th>Table 1: Comparative Data for Historic Preservation Programs</th>
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<tbody>
<tr>
<td><strong>Typical Budget</strong></td>
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<tr>
<td>Navajo Nation</td>
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<td>Zuni Pueblo</td>
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<td>Hopi Tribe</td>
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<tr>
<td>Hualapai Tribe</td>
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<tr>
<td>WM Apache</td>
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<tr>
<td>State of Arizona</td>
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</table>

Note: Arizona funding includes $10,009 from the Historic Preservation Fund and $433,054 in matching funds from the Arizona Department of Transportation used to support archaeological highway projects. SHPO grants distributed from the Arizona Heritage Fund are not included in this table.

The Navajo Nation budget is much larger than any other tribal program and almost four times the size of the operating budget for the State of Arizona, excluding Heritage Fund Grants funded by the Arizona Lottery (Figure 1). While the annual budgets and staffs of other tribal programs are smaller, they are still significant when compared to the population of the tribes or the size of their reservations. For instance, the 2,000-member Hualapai Tribe actually spends the most preservation dollars per capita—$190 per tribal member (Figure 2). The Hopi Tribe spends about $48 per capita, while the other tribes spend around $20 to $25 per capita.

Another way to measure preservation budgets is to look at the available funds in relation to the size of landbase (Figure 3). In this perspective, Zuni Pueblo spends the most money—$147 per km². The other tribes spend between $34 and $90 per km². All of the tribes spend more per km² than the State of Arizona.

When examining these charts, it is evident that all of the tribes have significantly more financial resources per capita and per km² of land than the Arizona State Historic Preservation Office. This is partly due to economies of scale because certain functions must be provided regardless of landbase or population size. However, this discrepancy also is due to a much broader range of research and preservation activities undertaken by tribes to fulfill cultural preservation mandates.

Ultimately, the success of THPOs depends on long-term programmatic funding. SHPOs are funded from allocations from the U.S. Historic Preservation Fund using revenues from offshore mineral leases. A similar permanent arrangement needs to be made for tribes in a manner that ensures that tribes and SHPOs are not competing for the same limited funding sources. The continued success of the NHPA requires that THPOs and SHPOs both have the funding necessary to carry out their mandates.

**Native American Archaeology in a Social and Political Context**

The tribes that have become directly involved in archaeological research have sought to redefine professional ethics and sponsor archaeology that is conducted in ways acceptable to Native American values. *Native Americans and Archaeologists, Stepping Stones to Common Ground*, (AltaMira Press, 1997), offers stimulating
personal views about social and political factors involved in making archaeological research and heritage management acceptable to contemporary Native Americans.

There are many reasons why Native Americans in the United States allow archaeologists to work on their land or do archaeology themselves. These include the management of cultural resources using tribal values, a genuine interest in tribal history, the litigation of land claims, attainment of intellectual parity with non-Indian researchers, facilitation of development, retention of financial benefits, and maintenance of political sovereignty. For many tribes, the tribal assumption of SHPO responsibilities has become a meaningful way to assert tribal sovereignty because it replaces a regulatory process led by a state official with a tribal process led by a tribal official.

As tribes have become major employers of archaeologists, many non-Indian archaeologists now have regular, face-to-face interaction with Native Americans. To some degree, this interaction entails a process of socialization whereby archaeologists come to understand and accommodate Native American values, even if they do not personally subscribe to those values. This new understanding can have a profound effect on how these archaeologists choose to do archaeology. I know of few archaeologists who have worked for Indian tribes for any length of time who have not come to reevaluate their thoughts about archaeological excavation and the study of human remains.

Many archaeologists employed by tribes find themselves in the role of a "cultural broker," explaining the reasons and methods archaeology to Native Americans, and, simultaneously explaining to non-Indians why Native Americans want certain approaches to archaeology. This is difficult work, fraught with the potential for misunderstandings on both sides.

**Intellectual Aspects of Collaboration with Native Americans in Archaeological Research**

In explaining archaeology to Native Americans, archaeologists routinely examine the epistemological basis of their discipline. Recognizing that Native Americans view the past in fundamentally different ways than non-Indians, these archaeologists often will incorporate cultural relativism and multidisciplinary approaches in their research without relinquishing their commitment to collect archaeological data scientifically. Further, they explore ways to report their results without precluding alternative interpretations by Native Americans. Science and traditional history complement rather than compete with each other in this approach.

Many archaeologists working with Native American traditional cultural properties find their research blurs the boundaries between archaeology and ethnography. In dealing with cultural landmarks and landscapes, these subdisciplinary distinctions often have little relevance to Native Americans. Many of the places that have cultural importance to contemporary native peoples have archaeological manifestations, yet these can only be fully understood and evaluated using knowledge derived from traditional history and cultural practice. This new and still emerging body of work is a new form of ethnoarchaeology, which, unlike earlier formulations of ethnoarchaeology designed primarily to improve archaeological method and theory, is oriented towards managerial and interpretive goals.

**Unresolved Ethical Issues**

As should be expected, the current developments in Native American archaeology entail a number of unresolved and sometimes contentious issues: the confidentiality of privileged information, use and publication of scholarly results, and the place of the traditional structure and use of esoteric knowledge versus the scholarly freedom to pursue academic research. Determining what information should remain confidential and how this can be accomplished is a difficult task. The archaeological ethic of sharing work with peers through publication often conflicts with tribal ethics to keep certain types of cultural information esoteric and private. These unresolved issues provide a dynamic tension in the daily work of both Indian and non-Indian archaeologists working for or with tribes, and will result in a new code of ethics that will foster archaeology as an acceptable discipline for Native peoples.
Prospects for a Native American Archaeology

Following and using the archaeological report series produced by tribes in the Southwest for the last 20 years, I have seen the Navajo Nation and the Zuni Pueblo produce hundreds of reports, all meeting high professional standards. The more recently established programs operated by the Gila River Indian Community and the Hopi Tribe have begun to contribute to the professional archaeological literature generated by tribal organizations. These reports are subjected to the same review process as other archaeological reports and must meet the same standards.

Most of the principal investigators and project directors employed by tribes are non-Indian and have been successful in making the research questions and archaeological method and theory guiding tribal archaeological research meet the standards of the profession. This is important because it has given tribal programs the credibility they need.

While tribes produce solid archaeological reports, these rarely contain Native American perspectives interpreting the archaeological record. The question, then, is: If tribes are doing solid, conventional archaeology, what are the prospects for the development of uniquely Native American perspectives in archaeological research? Ultimately, the answer depends on our success in providing the academic preparation needed by Native Americans to fill high-level archaeological positions. The challenge here is to provide Native Americans with the rigorous scholarly standards for scientifically-valid work without forcing them into normative paths of non-Indian thinking--a far from easy task, but not an unattainable one either.

Several years ago I attended an ethnobiology conference in Albuquerque where a distinguished panel of scholars discussed ethnotaxonomy, using the Linnaean classification as a frame of reference. After hearing these papers, Joe Zunie, a Zuni colleague attending the conference, said he thought the papers implied the Linnaean system was based on some ultimate truth that the folk classifications lacked. He turned to another archaeologist and asked, "Don't these people know that the Linnaean system is just one more folk classification?" This was an insightful observation, and it is upon such insights that a Native American perspective will ultimately be developed.

At present, we can only glimpse what such a Native American archaeology might entail. Carlos Condori, an Aymara from Bolivia, and Roger Echo-Hawk, a Pawnee from the United States, have both published on the historiographic basis for historical interpretation provided by Native American oral traditions and how they can be used in reconstructing archaeological culture history. The use of Native American traditional histories in archaeological research has great potential but its success will be contingent upon the participation of tribal members in all aspects of the research, from research design through fieldwork to report preparation.

Condori (Conflict in the Archaeology of Living Traditions, Unwin Hyman, 1989) also suggests that Native American archaeology can be developed using Native concepts of time and space. Archaeologists already use multiple temporal frames of reference, including calendrical time, radiocarbon time, and relative time based on archaeological phases. There is no reason why Native concepts of time cannot also be arrayed alongside these other frames of reference.

Traditional Native American knowledge about the past is sometimes embedded in a conceptual framework that is spatial rather than temporal. For instance, the Páez Indians of Colombia transmit historical knowledge in fragments of oral narratives that allow listeners to construct a history based on their spatial knowledge of geographical referents. There is, therefore, not one history but multiple histories. It should be possible to use these and other similar principles to structure archaeological research but Native peoples will have to take the lead in accomplishing this task. When they do so, our profession will be enhanced with important new ways of understanding the past.

Conclusion
The NHPA has increased participation of Native Americans in archaeology, and the control of tribes over archaeological research and the management of heritage resources. The increasing number of Native Americans working as professional archaeologists is beginning to change the paradigmatic basis of our discipline in new and exciting ways. This is an invigorating prospect for archaeology, and we can further the process by continuing to work together. Non-Indian and Indian archaeologists need to continue collaboration in research, and both groups need to continue working with traditional Native peoples in the study of the past. In so doing, the archaeological research being conducted for and by Native Americans under the auspices of the NHPA will help to restructure our discipline and enrich our intellectual understanding of the archaeological record.

*T. J. Ferguson is with Heritage Resources Management Consultants in Tucson, Arizona.*
The Sainsbury Research Unit for the Arts of Africa, Oceania, and the Americas is offering full- and part-time grants for the 1999-2000 M.A. course in Advanced Studies in the Arts of Africa, Oceania, and the Americas and for research leading to a Ph.D. The M.A. course combines anthropological, art historical, and archaeological approaches, and is intended for students who wish to pursue research and academic/museum related careers. Facilities in the Sainsbury Centre for Visual Arts include a major research library and personal study space with PCs. Applicants should have, or be about to have, an undergraduate degree in anthropology, art history, archaeology, or a related subject. Application deadline is March 10, 1999. The Research Unit also invites applications for two three-month Visiting Research Fellowships, tenable during the calendar year 2000. Fellowship tenure is preferred during the January-April and September-December periods. Holders of a Ph.D. who are undertaking research for publication in the Arts of Africa, Oceania, and the Americas are eligible to apply. In exceptional cases, advanced doctoral candidates may be considered. The value of the Fellowship is [sterling]3,750 sterling (approximately $6,188) plus one return fare to the University of East Anglia to a maximum of [sterling]600 (approximately $990). Application deadline is April 1, 1999. For further details and application information, contact the Admissions, Secretary, Sainsbury Research Unit, Sainsbury Centre for Visual Arts, University of East Anglia, Norwich, NR4 7TJ, U.K., (011-160) 359-2198, fax (011-160) 325-9401, email admin.sru@uea.ac.uk.

For a study of the collapse of the moundbuilding cultures in eastern North America (Adena, Hopewell, Mississippian), we seek information relating to epidemic diseases in these populations. In particular, we are interested in the possibility of Old World disease, such as bubonic plague, that may have been transmitted by precolombian voyagers across the Atlantic. Contact Fred Olsen, c/o Madeleine Lynn, FERCO/TIMEXPO, P.O. Box 310, Middlebury, CT 06762, email mlynn@timexpo.com.

The Belize Valley Archaeological Reconnaissance Project will once again be conducting archaeological research in various caves in Belize, Central America, in summer 1999. This regional study will involve caves previously investigated in 1997 and 1998, including Actun Tunichil Muknal (Stone Sepulchre), Actun Uayazba Kab (Handprint Cave), Actun Chapat (Bat Cave), and a number of recently discovered caves. Elite burials, stone monuments, cave art, and carvings will be investigated, with the objective of interpreting the role of caves in ancient Maya culture. Jaime Awe of the University of New Hampshire will be directing the investigations, which will include extensive exploration of cave sites, survey, mapping of rooms and artifacts, pottery typing, artifact tabulation, data recording, and excavation. The project also will include laboratory training in ceramic and lithic analyses and preliminary analysis of human remains. Lectures will provide an overview of Maya civilization with a particular focus on ideology and cosmology relating to their use of caves. The field school is available in two or four week sessions: Session 1--May 30 to June 12 (or June 26), 1999; Session 2--July 4 to July 17 (or July 31), 1999. Academic credit may be obtained for the course through the University of New Hampshire. Two credit options are available; the details are provided in the application package. Due to the strenuous and
dangerous nature of cave reconnaissance, it is imperative that volunteers be at least 18 years of age and in excellent physical condition. Prior spelunking experience is preferred. Registration fees for the project are $950 (two-week session) or $1,600 (four-week session), which include lodging, weekday meals, and transportation to and from the cave sites. Travel to and from Belize and incidental expenses are the participant's responsibility. For applications and more information, contact Cameron Griffith, Codirector, email BelizeMaya@aol.com, web php.indiana.edu/~casgriff/Belize/CAVE.html.

The American Heritage Center announces the Bernard L. Majewski Research Fellowship for 1999, intended to provide research support for a recognized scholar in the history of economic geology and to facilitate the fellow's use of archival collections in the American Heritage Center at the University of Wyoming. For the purposes of the fellowship, economic geology is defined as the activities of exploration and development of petroleum, and base, precious and industrial minerals, including basic geological research. Acceptable related fields include history, oral history, and historical archaeology pertaining to economic geology, environment and natural resources history, and business or economic history related to economic geology. Research projects which integrate archival data with data gathered from other sources (such as historical archaeology and the earth sciences) also are encouraged. Applicants for the fellowship must submit a 2-3 page research proposal, a proposed timeline for project completion, a résumé including a list of publications authored by the applicant, and copies of two of the author's most recent publications which pertain to the proposed research. Application materials must be received by February 16, 1999. The fellow will receive a stipend of $2,500 which will be used to defray research costs at the American Heritage Center, travel, and other expenses associated to the research and publication. The fellow will be responsible for scheduling and conducting the research within one year of award receipt and for making timely progress toward publication of research results. For further information, contact Director, American Heritage Center, University of Wyoming, P.O. Box 3924, Laramie, WY 82071, (307) 766-4114, fax (307) 766-5511, email AHC@uwyo.edu.

The Curtiss T. and Mary G. Brennan Foundation announces two pilot programs of grants to support archaeological field research in (1) early civilizations in the Mediterranean world and (2) Andean South America. Those areas and periods of the Mediterranean world qualifying include the Bronze Age and earlier of Egypt, Anatolia, the Levant, Near East, Greece, Crete, Cyprus, and the Aegean. Funds are available to a maximum of $5,000 to support research designed to establish the significance of proposed projects and the feasibility of carrying them to completion, or to fund ancillary portions of ongoing projects important to an understanding of the project as a whole. Application must be made by the sponsoring institution through the principal investigator. Individuals are not eligible and dissertation research does not qualify. Application may be made throughout the year, with deadlines of April 15 and October 15. For guidelines and application materials, contact the Curtiss T. and Mary G. Brennan Foundation, 551 W. Cordova Rd., Suite 426, Santa Fe, NM 87501, fax (505) 983-5120, email BrenFdn@compuserve.com.

The Anthropology Department at University of Nevada, Las Vegas, announces a new Ph.D. program in anthropology, starting September 1999. The program focuses on humans in arid environments, with concentrations in all of anthropology's major subfields. The archaeology and biological anthropology faculty includes Bernardo Arriaza (paleopathology, human osteology, mummies), Ted Goebel (hunter-gatherers in extreme environments, Paleolithic/Paleoindian archaeology, lithics), Margaret Lyneis (Virgin Anasazi, ceramics), Alan Simmons (arid land adaptations, early agriculture, paleoecology), Jennifer Thompson (human evolution, hominin growth and development, skeletal biology), and Claude Warren (professor emeritus, archaeology of the desert southwest). Cultural anthropology faculty includes Jiemin Bao, William Jankowiak, Martha Knack, Tony Miranda, Gary Palmer, Rainier Spencer, John Swetnam, and George Urioste. The department has active research programs in North America (Mojave Desert, eastern Great Basin), South America (Chile), and various parts of the Old World (Jordan, Cyprus, Egypt, Siberia). The program has been growing significantly over the last several years, and is currently expanding with a newly created faculty position in Museology. For more information on the department and Ph.D. program, contact the graduate coordinator or any of the above faculty at Department of Anthropology, University of Nevada, Las Vegas, 4505 Maryland Parkway, Las Vegas NV 89154-5003, (702) 895-3590, web www.unlv.edu/Colleges/Liberal_Arts/Anthropology.
The United States Information Agency (USIA) announces its new Web page featuring International Cultural Property Protection [www.usia.gov/education/culprop/index.html](http://www.usia.gov/education/culprop/index.html). The page provides background on the problem of international pillage of artifacts and the U.S. response; information about relevant laws, bilateral agreements and U.S. import restrictions; recent news stories and magazine articles, and much more. High-resolution images of classes of artifacts protected by the United States will be added in the near future. The United States is joined with many other countries in an international effort to protect cultural heritage globally. USIA, which oversees the U.S. role in protecting international cultural property, is the lead agency in carrying out decision-making responsibilities under the Convention on Cultural Property Implementation Act. The Act enables the United States to impose import restrictions on certain categories of archaeological or ethnological material in accordance with the 1970 UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import and Transfer of Ownership of Cultural Property when the pillage of such material places in jeopardy the cultural heritage of the country of origin. USIA also supports the Cultural Property Advisory Committee, appointed by President Clinton, in carrying out its responsibilities under the Act.

**John L. Cotter, a pioneer in Paleo-Indian studies and a founder of the discipline of historical archaeology, has been honored by the Society for Historical Archaeology (SHA).** At its 1998 Annual Meeting in Atlanta, Georgia, the society created its third named award--the John L. Cotter Award in Historical Archaeology. This award will honor individuals at the start of their professional careers and be given for a specific achievement which is truly outstanding in a particular category. Cotter was the first SHA president (1968), first editor of *Historical Archaeology*, the excavator of Jamestown (1953-1957), and the chief architect behind the urban archaeology of Philadelphia. His selection as the award's namesake, however, does not directly refer to these many contributions, but rather to Cotter's long career as a teacher at the University of Pennsylvania, where he taught what is commonly regarded as the first formal course in historical archaeology in the United States, and to his lifelong support for each new generation as it entered the discipline. Cotter's door at the University Museum was always open to Penn undergraduates, avocationa(l] archaeologists, high school students, and the general public, as well as his own graduate students. His influence on the younger generation extends across North America and spans at least five decades.

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POSITIONS OPEN

Curator, Collections Division. The Arizona State Museum seeks a senior-level curator of collections with strong experience in Southwestern anthropology, an extensive background in material culture studies, and demonstrated intellectual and administrative leadership skills. As a division head within the Museum, the curator of collections will oversee a staff of 11 and participate in divisional and institutional projects and initiatives. The Museum has outstanding anthropological collections from the Southwest United States and Northwest Mexico, and the curator of collections will be expected to take a lead role in the evaluation and strengthening of the collections, including research on and interpretation of the collections through scholarly publications, lectures, and exhibitions, and fostering donor relationships. The successful candidate must have an M.A. in anthropology or a closely related field, substantial experience in an anthropological museum, and demonstrated record of anthropological research and all aspects of curation of anthropological collections, including repatriation. Preferred qualifications include a Ph.D. in anthropology or a closely related field, ethnological expertise, knowledge of Spanish and/or Southwest Indian languages, participation in strategic planning, and experience associated with building expansion and renovation. The curator of collections is an academic professional/faculty position within the University of Arizona reporting to the director of the Museum. Potential exists for a joint appointment with a related academic department. Salary is competitive, commensurate with educational level and experience, and includes complete university benefits. Visit the UA Human Resources web site hr2.hr.arizona.edu/ for further information (UA Job #12720). See also the ASM web site w3.arizona.edu:180/asm/. Nominations are welcomed. Applicants must send cover letter, curriculum vitae, and names and addresses of three references to George J. Gumerman, Director, Arizona State Museum, P.O. Box 210026, University of Arizona, Tucson AZ 85721-0026. The closing date is March 15, 1999. The University of Arizona is an EEO/AA employer-M/W/D/V.

State Archaeologist sought for the Arkansas Archeological Survey, to begin June 1, 1999. The State Archaeologist implements public education and National Register programs for archeology, coordinates Survey preservation activities with federal and state agencies, and serves as the primary liaison between the Survey and the Arkansas Archeological Society, a state-wide amateur organization. Ph.D. required, expertise in regional archeology and teaching experience preferred. Send curriculum vita and names of three references to Thomas J. Green, Director, Arkansas Archeological Survey, P.O. Box 1249, Fayetteville, AR 72701, by February 15, 1999. The Arkansas Archeological Survey is an independent unit of the University of Arkansas System. The University is an equal opportunity/affirmative action institution.

The Department of Archaeology, Boston University, announces a tenure-track position for an assistant or associate professor in remote sensing and archaeology, effective September 1, 1999. Requirements include a Ph.D. with a concentration in archaeology, research and instructional background in remote sensing, and
familiarity with GIS. Geographic area of interest is open. The successful candidate will have a strong commitment to teaching at the undergraduate and graduate level and have an active research program. Application, vita, and the names and addresses of three referees are due by February 15, 1999, to James R. Wiseman, Chair, Search Committee, Boston University Archaeology, 675 Commonwealth Ave., Boston, MA 02215.

The Rock Island District, U.S. Army Corps of Engineers, Rock Island, IL, has a vacant position for which applications are being solicited. Position: Supervisory--"Interdisciplinary"* GS-000-13, Chief, Environmental Analysis Branch, Planning, Programs and Management Division. *Interdisciplinary position classifiable in any of the following series: GS-0193, Archaeologist; GS-0023, Outdoor Recreation Planning; GS-0401, General Biological Science; GS-0810, Civil Engineering; GS-0819, Environmental Engineering; GS-0020, Community Planner. Required qualifications include: Ability to supervise and coordinate the work of natural and cultural resource experts in accomplishing environmental and historic properties compliance in support of integrated planning for river navigation, environmental management and restoration, and flood damage reduction. Salary: $52,176 (plus locality pay). Travel: Maximum 25 percent. Benefits: Health and life insurance, retirement plan, leave (vacation, sick), and applicable moving expenses will be paid. Forward your name and address to U.S. Army Corps of Engineers, Rock Island, Attn: CEMVR-PC-C, Clock Tower Building, P.O. Box 2004, Rock Island, IL 61204-2004, or fax to (309) 794-5629, no later than January 30, 1999. Please mention in which publication you saw this ad. Formal application packages will be forwarded to you after February 1, 1999. AA/EEO.

SUNY-Geneseo Department of Anthropology seeks to hire anthropological archaeologist: entry-level, tenure-track, assistant professorship for fall 1999. Qualifications required: Anthropology Ph.D. by September 1999; teaching experience; field, archival, and/or lab research; specialty areas in archaeological field methods and lab analysis, quantitative methods, and cultural resources management; archaeological fieldwork in North America. Fieldwork in Northeastern U.S. archaeology will be considered a plus to our program. We are looking for candidates who are committed to teaching undergraduates. Send letter of application, vita, three letters of recommendation, and graduate transcript to E. R. Kintz, Chair, Department of Anthropology, One College Circle, SUNY Geneseo, Geneseo, NY 14454. Apply by January 30, 1998. Position will remain open until filled. Women and minorities are strongly encouraged to apply. SUNY Geneseo is an Affirmative Action/Equal Opportunity Employer.

The Archaeology Service Center (ASC) at Murray State University seeks a contract archaeologist meeting the Secretary of Interior's minimum qualifications, with experience in the Ohio/Mississippi River valley. Staff archaeologist position is initially paid on a per contract basis. Work begins immediately. Send résumé and names of three references to Ken Carstens, Director, ASC, Rm. 317 Ordway Hall, Murray State University, Murray, KY 42071, (502) 762-4058.

Santa Clara University, Department of Anthropology and Sociology invites applications for a full-time tenure-track position in Archaeology starting September 1999. Rank: Assistant Professor; Ph.D. required at the time of appointment. We are looking for a colleague who can work interactively in a small anthropology program. Candidates will have teaching responsibilities in some or all of the following: Introductory archaeology, introductory biological/physical anthropology, environmental archaeology, ecological anthropology, and archaeological field methods. Geographic focus on South/Southeast Asia or Africa preferred, although not required. Area of specialization is open. The successful candidate will be affiliated with the Environmental Studies Program which offers an interdisciplinary minor. The current instructional load is seven courses per year on a quarter calendar, with one course normally released for scholarly pursuits. The department offers the Bachelor of Science degree in anthropology. Santa Clara is a Jesuit, value-oriented university located in the heart of "Silicon Valley." Commitment to quality teaching and scholarship in an undergraduate department is essential. Applicants should send a current vitae, a letter of application detailing teaching philosophy and scholarly interests, sample syllabi for two courses, a sample of student evaluations of teaching, a sample of scholarly writing, and the names and addresses of three references by January 31, 1999 or until the position is filled to Russell Skowronek, Search Chair, Department of Anthropology/Sociology, Santa Clara University, Santa Clara, CA 95053. SCU is an equal opportunity/affirmative action employer, and welcomes applications.
from women, persons of color, member of historically under-represented U.S. ethnic groups, persons with
disability, veterans, and Jesuits.

The University of North Texas, Department of Geography and Center for Environmental Archaeology
seeks to fill a tenure-track assistant professorship in environmental archaeology, beginning January 1999.
To complement existing program in geoarchaeology, candidates need Ph.D. and teaching experience; fields
preferred are zooarchaeology, paleoecology, spatial, or quantitative analysis. Teaching will include introductory
archaeology, regional survey, and upper division/graduate specialty courses. Applications will be reviewed
beginning October 31, 1998, and will be accepted until the position is filled. Send letter, vita and names of three
referees to Reid Ferring, Department of Geography, P.O. Box 305279, University of North Texas, Denton, TX
76203. UNT is an AA/EEO employer; minorities and women are encouraged to apply.

CAR, which functions as an applied archeological research unit within William and Mary (W&M) and its
Department of Anthropology, seeks a part-time Associate Director (AD). For a description of the AD duties, see
our web listing at www.wm.edu/CAS/WMCAR. Applicants should send a letter of interest, a curriculum vitae,
and have three letters of recommendation sent to Franz Gross, Chair of the Search Committee, Ewell Hall,
College of William and Mary, P.O. Box 8795, Williamsburg, VA 23187-8795. Review began November 1, 1998,
and will continue until the position is filled. W&M is an equal opportunity/affirmative action university.
Members of under-represented groups (including people of color, persons with disabilities, Vietnam veterans,
and women) are encouraged to apply.
February 2, 1999

**2e Journie du Film Archiologique de Mariemont** continues the Morlanwelz Musie Royal's new quarterly series of days dedicated to films about archaeology with a program focused on archaeological surveying techniques. A third program, scheduled for May 15, will feature films about Archaic and Classical Crete. The entry deadline for that program is February 1, 1999. For information, contact Fridiric Andre, Organizer, Musie Royal de Mariemont, 100 chie de Mariemont, B-7140 Morlanwelz, Belgium, + (32-64) 212193, fax + (32-64) 262924. email frederic.andre@skynet.be.

February 20-21, 1999

**The 10th Annual Workshops in Archæometry Conference** will be held at the State University of New York, Buffalo campus in Buffalo, New York. It is an international symposium that focuses on the presentation and development of archæometric research. This free event consists in the presentation of current research during four half-day sessions. For additional information, contact Hex Kleinmartin, Department of Anthropology, 380 MFAC, Buffalo, NY 14261, email hfk@acsu.buffalo.edu.

February 24-27, 1999

**The North Carolina Archaeological Council is sponsoring the Uwharries Lithics Research Conference** in Asheboro, North Carolina, for archaeologists interested in the prehistoric utilization of rhyolites and other lithic resources from the Uwharrie Mountains of the North Carolina Piedmont. There will be a registration fee and space may be limited. Assistance for this conference is being provided by the North Carolina State Historic Preservation Office and the National Forests of North Carolina, among others. For further information, contact (preferably by email) Kenneth W. Robinson, Chair, North Carolina Archaeological Council, Director of Public Archaeology, Wake Forest University, (336) 758-5117, email robinskw@wfu.edu.

February 27-28, 1999

**The 27th Midwest Conference on Andean and Amazonian Archaeology and Ethnohistory** will be held at Central Michigan University. For additional information, consult our Web site at www.chsbs.cmich.edu/soc/andean/andean.htm or contact Charles M. Hastings, Department of Sociology, Anthropology, and Social Work, Central Michigan University, Mt. Pleasant, MI 48859, email charles.hastings@cmich.edu.

March 5-6, 1999

**The 22nd Midwest Mesoamericanists Meeting will be held at the University of Illinois-Chicago.** It is an informal forum for presenting recent research from archaeology, art history, and ethnohistory of Mesoamerica. The preliminary program will be available in late January. For information on art history, contact Ellen Baird, etbaird@uic.edu or Virginia Miller, VEM@uic.edu, and for information on anthropology and Latin American studies, contact Joe Palka, (312) 996-0789, email jpoolka@uic.edu.

March 12-13, 1999

**The National Council for Preservation Education, in partnership with the National Park Service and**
Goucher College, will hold its second national forum, "Multiple Views; Multiple Meanings," at Goucher College, Towson, Maryland. For further information, contact Michael A. Tomlan, Project Director, National Council for Preservation Education, 210 W. Sibley Hall, Cornell University, Ithaca, NY 14853, (607) 255-7261, fax (607) 255-1971, email mat4@cornell.edu.

March 24-28, 1999
The 64th Annual Meeting of the Society for American Archaeology will be held in Chicago at the Sheraton Chicago Hotel and Towers. For information, contact SAA, 900 Second St. NE #12, Washington, DC 20002, (202) 789-8200, fax (202) 789-0284, email meetings@saa.org.

April 20-25, 1999
The Society for Applied Anthropology will convene the 58th Annual Meeting in Tucson, Arizona, with the theme "Constructing Common Ground: Human and Environmental Imperatives." For additional information, contact the Offices of the Society, P.O. Box 24083, Oklahoma City, OK 73124, (405) 843-5113, fax (405) 843-8553, email sfaa@telepath.com. For pre-registration forms, visit our webpage www.telepath.com/sfaa.

April 22-25, 1999
The 1999 Society for California Archaeology Annual Meeting will be held at Red Lion's Sacramento Inn, which can be contacted at (800) 547-8010 or (916) 922-8041. For additional information, contact the meeting organizers, William Hildebrandt and Kelly McGuire, Cochairs, Far Western Anthropological Research Group, (530) 756-3941 or Kathleen Hull, Program Chair, (510) 465-4962, fax (510) 465-1138.

April 28-May 1, 1999
The 1999 Canadian Archaeological Association Conference will be hosted by the Government of Yukon Heritage Branch. A web page with more details about the upcoming conference and other important information is available. The conference Web page address is posted on the Canadian Archaeological Association Web page www.canadianarchaeology.com. For information, contact Ruth Gotthardt, Program Coordinator, (867) 667-5983, (867) 667-5377, email Ruth.Gotthardt@gov.yk.ca.

April 28-May 1, 1999
The 68th Annual Meeting for the American Association of Physical Anthropologists will be held at the Hyatt Regency Columbus in downtown Columbus, Ohio. For program information, contact Mark Teaford, Department of Cell Biology and Anatomy, Johns Hopkins University School of Medicine, 725 N. Wolfe St., Baltimore, MD 21205, (410) 955-7034, email mteaford@welchlink.welch.jhu.edu. For local arrangements information, contact Douglas Crew, Department of Anthropology and School of Public Health, 113B Lord Hall, 124 W. 17th Ave., Columbus, OH 43210-1316, (614) 292-1329/4149, email crews.8@osu.edu.

May 7-9, 1999
A two-day workshop will be held at the University of Wisconsin, Madison instructing users on the principles of plane pattern symmetries. Symmetry analysis is a powerful tool that aids in the analysis of patterns on textiles, ceramics, and other decorated surfaces. Instructors will be Donald Crowe, co-author with Dorothy Washburn of Symmetries of Culture; Branko Grunbaum, co-author with G. Shephard of Tilings and Patterns; Doris Schattschneider, author of M.C. Escher: Visions of Symmetry; Kevin Lee, designer of Tesselmania, the pattern-making software; and Verda Elliot, renowned weaver. For further information about registration, contact Dorothy Washburn at dkwashburn@worldnet.att.net or (609) 737-7451.

July 8-13, 1999
A celebration of 10,000 years of life on Vega will be held on the Island of Vega, Norway, consisting of concerts, exhibitions, workshops, and seminars. Vega has one of the longest maritime archaeological records in the world, 10,000 years. This way of life continued essentially unchanged for 8,000 years. Vega's Stone Age is an appropriate focus for the turn of the millenium, developing the Norwegian theme, "What can we learn from others?" The congress will provide an opportunity to visit the unique archaeological sites on Vega and to attend an array of lectures by some of the world's leading archaeologists and experts on early maritime adaptations. The deadline for preliminary registration is January 15, 1999. Submission of abstracts must be done before March
October 4-8, 1999
**XIII Congreso Nacional de Arqueología Argentina** will be held at Cabildo Municipal, Córdoba, Argentina. For information, write Casilla de Correo 1082, Correo Central 5000, Córdoba, Argentina, fax (+ 54 51) 68-0689, email 13cnaa@ffyh.unc.edu.ar, web www.filosofia.uncor.edu.

November 7-11, 1999
**The Departments of Conservation and Archaeological Research at the Colonial Williamsburg Foundation** announce a multidisciplinary conference designed to convene conservators, archaeologists, and forensic anthropologists to discuss the unique problems faced when working with human remains. For additional information and/or to be placed on the mailing list, contact Colonial Williamsburg, Williamsburg Institute, P.O. Box 1776, Williamsburg, VA 23187-1776, (800) 603-0948, (757) 220-7182, fax (757) 565-8630, email dchapman@cwf.org.

November 11-14, 1999
**The 32nd Annual Chacmool Conference**, Indigenous People and Archaeology: Honoring the Past, Discussing the Present, Building for the Future, will be held at the University of Calgary, Calgary, Alberta, Canada. Currently there is a trend in archaeology in which traditional schools of thought concerning the past are being augmented and adjusted as a result of increased exchanges with indigenous people. Interaction between indigenous people and archaeologists has increased markedly as a result of the increased political presence of the former, the rise of postprocessional archaeology, and an increasing interest in the past and the role of archaeology in land claims. The purpose of this conference is to share information on mutual benefits and to open a dialogue on issues of controversy. For additional information, contact Chacmool '99, Department of Archaeology, University of Calgary, Calgary AB T2N 1N4 Canada, fax (403) 282-9567, email chacmool@ucalgary.ca, or consult our Web page www.ucalgary.ca/UofC/faculties/SS/ARKY/Chacmool.html.

November 19-21, 1999
**Plans are underway for the 3e Festival International du Film Archiologique** in Brussels, a biennial event which focuses on recent production about all aspects of archaeology, with an emphasis on good cinematography. The festival will continue to build on traditions and relationships established by a previous Brussels festival, whose name it adopted in 1995. The entry deadline is April 15, 1999. For information, contact Didier Dehon, President, or Serge Lemaître, Secretary, Asbl Kineon, Chaussie de la Hulpe 579, B-1170 Brussels, Belgium, tel/fax + (32-2) 675-90-29, email slemaitr@ulb.ac.be.