



Dear SAA Member.

The SAA 7.5 Film Fest is coming to the 75th Anniversary Meeting in St. Louis, MO and I wanted to encourage you to submit a DVD for this exciting special event! Submitting a DVD is simple and the entry fee is only \$7.50, which includes one free Film Fest T-shirt! The top films will be recognized with awards at the Annual Business Meeting on Friday, April 16, 2010. Here is all you need to do:

- Make sure your video is less than 7.5 minutes in length, record it on a DVD, and place the title of your film and your name(s) both on the DVD case and at the beginning of the film.
- Mail your video along with a completed entry form (link to entry form) and your \$7.50 entry fee to the SAA office, ATTN: Meghan Tyler, no later than February 26, 2010.

All films will be viewed by a blue-ribbon panel of judges and those selected as finalists will be screened during the Friday Film Fest at the 75th Anniversary Meeting in St. Louis. Films can have a soundtrack in English, Spanish, Portuguese, or French.

Additional Information

- · Any DVD submitted will not be returned
- · By submitting a DVD you give SAA permission to screen, judge, and show the film at the 7.5 Film Fest
- · Submitting a DVD gives SAA explicit permission to post the film on the internet, should SAA decide to do so

Licensing and Copyright Permissions

- · If your film contains any music, you must provide SAA with proof that you have complied with licensing laws
- If your film contains any photos, images, or clips that you do not own, you must provide a copy of the required permissions to SAA
- If your film contains any recognizable individuals, you must provide a copy of the permission obtained from each individual to SAA

To submit your film now visit www.saa.org/filmfest

If you have any questions, please don't hesitate to email me or contact the SAA office at +1 202-789-8200.

Sincerely,
Bruce D. Smith
75th Anniversary Task Force Member
smithb@si.edu



The Magazine of the Society for American Archaeology
VOLUME 9, NO. 5
NOVEMBER 2009

Editor's Corner	2	Andrew Duff
In Brief	3	Tobi Brimsek
Meet You in St. Louis	5	Lisa LeCount and John Blitz
SAA's 75th Anniversary Meeting in St. Louis: Tour the Cahokia Mounds State Historic Site	6	Timothy Schilling and Mary Ann Vicari
In Memoriam: Juan Santiago Rene Schobinger	7	Mario A. Rivera
How to Win the Student Paper Award and Impress a Conference Audience	8	Marit K. Munson, Kacy L. Hollenback, and Rebecca Schwendler
SPECIAL SECTION: ETHNOARCHAEOLOGY, PART 1 Edited by Sharyn Jones		
Understanding Ancient Fishing and Butchery Strategies of the Indus Valley Civilization	10	William R. Belcher
Sailing at Once in Several Seas: Digging and I-Witnessing in Lau	15	Sharyn Jones
Shell Middens in a Pacific Island Village: Baraulu, Roviana Lagoon, Western Salomon Islands	19	Carola Flores
Fishermen's Shrines in the Northern Marquesas Islands, French Polynesia	22	Sidsel Millerstrom
Interfaces: In Defense of the Database	26	Angela H. Keller
Nomads and Commanders: Welcoming Generation X	33	Lawrence E. Moore
Money Matters	37	Paul Welch

38

40 42

43

FINANCIAL STATEMENTS

POSITIONS OPEN

NEWS AND NOTES

CALENDAR



(Top) Women and children collecting inshore fish using the traditional vono net method, on Lakeba island, Lau Group, Fiji. (Bottom) Dinner: Inshore fish collected on the island of Nayau, Lau Group Fiji. Photos by Sharyn Jones.



The Magazine of the Society for American Archaeology

VOLUME 9, No. 5 NOVEMBER 2009



The SAA Archaeological Record (ISSN 1532-7299) is published five times a year and is edited by Andrew Duff.

Deadlines for submissions are: December 1 (January), February 1 (March), April 1 (May), August 1 (September), and October 1 (November); send to Andrew Duff, The SAA Archaeological Record, Andrew Duff, Department of Anthropology, Washington State University, Pullman, WA 99164-4910, (509) 335-7828, or email duff@wsu.edu. Manuscript submission via email or by disk is encouraged. Advertising and placement ads should be sent to SAA headquarters, 900 Second St., NE #12, Washington, DC 20002, (202) 789-8200.

Associate editors include:

Gabriela Uruñuela [Exchanges, Mexico & Central America]

gabriela@mail.udlap.mx

Jose Luis Lanata [Exchanges, Southern Cone]

jllanata@filo.uba.ar Anne Vawser [Government]

Anne_Vawser@nps.gov Susan Chandler [Insights]

susan_chandler@alpinearchaeology.com

Mark Aldenderfer [Interfaces]

aldender@email.arizona.edu

John Hoopes [Networks]

hoopes@ku.edu Andrew Duff [Public Education]

duff@wsu.edu

Jamie Brandon [The Recent Past]

jbrando@uark.edu

Kurt Dongoske [Working Together] kdongoske@cableone.net

Inquiries and submissions should be addressed directly to them. The SAA Archaeological Record is provided free to members and institutional subscribers to American Antiquity and Latin American Antiquity worldwide. The SAA Archaeological Record can be found on the Web in PDF format at www.saa.org.

SAA publishes The SAA Archaeological Record as a service to its members and constituencies. SAA, its editors and staff are not responsible for the content, opinions and information contained in The SAA Archaeological Record, SAA, its editors and staff disclaim all warranties with regard to such content, opinions and information published in The SAA Archaeological Record by any individual or organization; this disclaimer includes all implied warranties of merchantability and fitness. In no event shall SAA, its editors and staff be liable for any special, indirect, or consequential damages or any damages whatsoever resulting from loss of use, data, or profits, arising out of or in connection with the use or performance of any content, opinions or information included in The SAA Archaeological Record.

Copyright © 2009 by the Society for American Archaeology. All Rights Reserved.



EDITOR'S CORNER

Andrew Duff

Andrew Duff is an Associate Professor of anthropology at Washington State University.

his issue of The SAA Archaeological Record features the first of a two-part group of articles on ethnoarchaeology, solicited by Sharyn Jones. Four articles appear in this issue, largely related to fisher folk and the ethnoarchaeology of fishing and islanders, and a companion group of four papers will appear in the January issue. Sharyn worked to assemble the authors, provided deadlines, and edited and submitted the papers, for which she has my thanks. Originally planned as a single issue, we had to break the papers into two groups to fit within our page limits. The second batch of papers is also conceptually coherent, a bit more focused on trajectories of ethnoarchaeological research and results, but concludes with an overview that includes commentary on the papers appearing in both issues as a group.

This issue also features pieces related to the 75th Anniversary Annual Meeting in St. Louis and tips on how win praise and prizes with your presentation from the Student Paper Award Committee. Additional articles include commentary on generational trends and how this will impact archaeological practice (Larry Moore), a practical piece on database definition and design (Angela Keller), an obituary marking the passage of Juan (Hans) Schobinger, and an update on the financial status of the Society (Welch).

I would like to thank those of you who have recently sent materials in, and to again invite everyone to submit materials for consideration to me (duff@wsu.edu) or, if you think it falls within the topical realm of one of the regular columns, to the appropriate Associate Editor.

I would also like to thank Teresa Pinter for her service as Associate Editor of the Public Education column for several years. She has been a great help and has solicited several articles related to Public Education that have appeared regularly. She is retiring this year (enjoy sailing!) and also stepping down as Associate Editor with this issue. For the remainder of my term as editor, I will also serve as coordinator for this column.

IN BRIEF

Tobi A. Brimsek

Tobi A. Brimsek is executive director for the Society for American Archaeology

On Going Green

Over the past few years, there has been a concerted effort to move toward the greening of SAA and its meeting. The focus of the column this month is to share some of the decisions that have been made that contribute to moving SAA farther along on this spectrum. In fact, the effort to go greener serves as an underlying goal in the Society's headquarters office as well with regard to the annual meeting. It must be noted that the greener decision is not always the least costly one. So, take SAA's fiscal prudence, combine it with SAA's genuine desire to go greener, and consider some of SAA's choices to reduce, reuse, and recycle:

At SAA headquarters all staff contribute to SAA's greener efforts in both personal and professional ways:

- · Staff recycle.
- All staff participate in energy saving strategies—lighting, heating and cooling. Despite rising energy costs, through conservation, staff has been able to stabilize or even lower consumption.
- By E-communicating and e-reporting in an effort to go more paperless and using double-sided printing where applicable, staff contribute to the reduction of use of paper.
- The online transactions and resources that enable our community to join, renew, pledge, donate, submit sessions/papers, register for the annual meeting, purchase books and gear, search governance documents and history, apply for scholarships and find one another through SAAweb contribute further to paper reduction as well as to connectivity!
- E-marketing via our electronic media kit which replaces three separate brochures and numerous forms has been in place for two years.
- Effective use of fonts to reduce the number of printed pages and developing designs of pieces for minimal environmental impact are ongoing strategies.
- The online manuscript system for the journals to eliminate

- paper submissions and reviews not only reduces paper but also solidifies our global community.
- Staff has incorporated the use of online production systems from our vendors enabling digital proofing and file delivery.
- Staff use a software program that cleans up the mailing list and removes undeliverable addresses, thereby saving resources.
- With the redesign of SAAweb, the Society has moved to a green provider for host services. In this case, there was not only an environmental win but a lower cost to the Society as well.
- 88.5% of the staff commute to work via public transportation. The other 11.5% carpools in a hybrid vehicle.

For the SAA Annual Meeting

Greening of the meeting does not start with the actual meeting itself but rather the planning process begun five years out:

- SAA's RFP's to various cities are always delivered electronically. More often than not, bids are received electronically as well. Replacing notebook after notebook of information with access to online drawings and files facilitates the decision-making process.
- The contracting process is done electronically until the final signed version.
- The online submissions and registration processes are inherently green. SAA has moved to electronic confirmations as well.
- Whenever available, SAA uses web tools for management of hotel blocks and making reservations. For the past several years, there have been pages saved in the Preliminary Program by the elimination of housing forms. In addition, following the initial mailing of the Preliminary Program, subsequent requests are all filled electronically.



A SPECIAL NOTE FROM SAA'S PRESIDENT

SAA's ongoing greening initiatives are an important step in putting the Society on a more sustainable and eco-friendly path ... but there's more work to be done. One thing SAA members

can do to make an immediate impact is to request electronic-only renewal forms and renew their memberships early. These efforts can save the Society well over \$10,000 in printing and postage costs, not to mention significantly reducing the amount of paper used during the renewal process. These are valuable membership dollars that can be put toward developing SAA programs. It's not too late to request electronic-only renewal forms by emailing SAA at membership@saa.org today. Join me in helping SAA go green!

Meg Conkey President

- When available from the decorator, electronic exhibitor kits are used as opposed to thick mailing packets of forms.
- SAA is no longer offering plastic bags at its booth. Reasonably priced, reusable canvas totes are available for sale.
- SAA has been using recycled registration envelopes. In 2009, the larger envelopes were replaced with standard envelopes—less waste.
- Reusable signage has been SAA's approach for years.
- SAA has always used refillable water coolers as opposed to less friendly, throw-away plastic bottles of water. Not only is this more environmentally friendly, it is less costly.
- In 2010, abstracts will no longer be printed. This is a huge initiative in paper reduction. Abstracts will be available on SAAweb about a month before the meeting as a searchable pdf, and there will be an abstract viewing center on-site near the Exhibit Hall for searching the file in St. Louis. Earlier and accessible to everyone—these are the goals set for this new abstract delivery format.

These are only some examples that illustrate the direction in which SAA is going. There are all shades of green. While SAA may be mid-spectrum, we are proud that we are aware and contributing to the greening of the Society. No, the Society has not made carbon offset contributions for the annual meeting. That is a more costly choice. But, President Meg Conkey has personally made a carbon offset for the travel by the Executive Committee. You may be thinking—how can I help SAA? Here are a few suggestions:

- Think green.
- Consider personal carbon offset donations for travel.
- Do you really need paper dues notices? Why not switch to online renewals?
- If you really need the paper renewal process, why not remit with the first rather than the 3rd or fourth notice or postcard?
- Think about when you renew. If you renew before the close of the January grace period, there will be no interruption in your journal or magazine subscriptions. If you renew later in the year, a bulky package of back issues needs to be sent to you under separate cover in an envelope rather than with the rest of the efficient bulk mailing at the time of distribution.
- Consider registering online for the Annual Meeting. In reality, most attendees do. About 1% register via fax/mail.
- Together and individually, we can make a difference. Go Green! See you in St. Louis April 14–18, 2010 at SAA's 75th Anniversary Meeting. Watch for the Preliminary Program online around mid-December and in mailboxes late December/early January.

Join the Conversation!

There's a whole new way to connect with the SAA community ... Facebook, Twitter, and LinkedIn! Get to know SAA today by visiting the SAAweb homepage (www.saa.org) and clicking the logos pictured below.









MEET YOU IN ST. LOUIS

Lisa LeCount and John Blitz

Lisa LeCount and John Blitz are the program chairs for the 75th Anniversary Meeting.

he 2010 Anniversary Meeting will celebrate the 75th time the Society for American Archaeology has come together as an organization. From the first meeting of 75 people at Andover in 1935 (8 papers were read) to the thousands that will assemble at St. Louis on April 14–18, the Annual Meeting is where we share the excitement of archaeology with friends, colleagues, students, and the public. Along with sessions, symposia, forums, and posters, the anniversary meeting has special offerings and events befitting this benchmark in the history of SAA. Not merely a reflection on where we have been, the 75th anniversary meeting will showcase the best of archaeology today and offer a vision of where archaeology is headed in the twenty-first century.

No matter what your interests, there will be something for you in St. Louis. The SAA staff and Program Committee are busy planning a schedule of almost 150 symposia, more than 600 individual contributed papers and posters, 22 organized poster sessions, 19 forums, and 3 electronic symposia. The program begins Wednesday evening with a Native American blessing, followed by the Opening Session organized by James Sneed, which sets the tone with "Archaeology Now: Intersections of Theory, Method, and Practice in the 21st Century." Contributors Elizabeth Arkush, Matthew Liebmann, Monica Smith, Dawnie Steadman, and Barbara Voss present five creative projects that illustrate the different theoretical perspectives and research contexts possible in contemporary archaeology.

Also special this year is the Roundtable Luncheon, which returns to SAA on Friday. The Roundtable discussants are contributors to *Voices in American Archaeology*, edited by Wendy Ashmore, Dorothy Lippert, and Barbara Mills, a volume that celebrates the 75th anniversary by highlighting the proactive work of the Society. Join hosts at 13 tables for food and conversation focused on the volume's topics, which include "Communities and Collaborations" (Stephen Silliman), "Should Archaeologists Ever Be Social Activists?" (Larry Zimmerman), "Finding Our Voice: Writing in the 21st Century" (Rosemary Joyce), "Preparing for a Career in CRM, Historic Preservation, and Beyond"

(Jeff Altschul), "Life on the Edge: Interdisciplinary Archaeology" (Jane Buikstra), and "Future Connections, Future Communities" (Joe Watkins). Roundtables are your chance to connect with people well informed about the topics that interest you.

This year's sessions cover wide-ranging interests. Interdisciplinary science, archaeometrics such as geophysics and residues, climate change, ethical concerns for avocational, native, and local communities, and the particularities of sites and regions are emerging themes. You will encounter sessions on frontier occupations, gendered labor, forensic archaeology, "the dark side" of cave archaeology, massacres, and even "turds, turkeys, and ticks!" The geographical coverage spans the globe, starting locally with multiple sessions focused on the nearby World Heritage site of Cahokia, such as "Cahokia 2010: Situating an Ancient Indigenous City in the World." Regionally focused symposia include mortuary ritual in the Southwest, spondylus in South America, ideology in western Mexico, and many more. Old World subjects in Europe, Africa, and Asia are also well represented. One symposium, "Trajectories to Complexity in Woodland Environments," compares Eastern North America and Temperate Europe. Two cross-cultural sessions examine the human response to the Younger Dryas in both the Old World and New World. Several distinguished senior colleagues and influential figures in the development of archaeology will be honored with retrospective symposia.

An unprecedented number of Posters, Poster Sessions, and Forums provide an alternative to the paper presentation format and create opportunities for discussions and networking. Posters allow you to examine the data at your own pace and speak directly with the presenter. This year you can cruise the poster sessions to sample topics as varied as heritage tourism, history of irrigation, geophysical investigations, preparing students, government archaeology, complex hunter-gatherers, archaeological science, and landscape conservation, with geographical coverage of the Northwest, Southeast, Great Lakes,

75th ANNIVERSARY MEETING, continued on page 44



CAHOKIA MOUNDS—MONKS MOUND. COPYRIGHT © ST. LOUIS CONVENTION & VISITORS COMMISSION.

hile in St. Louis this spring for the SAA 75th Anniversary Meeting, be sure to sign up for an SAA tour to the Cahokia Mounds State Historic Site. Cahokia is one of the premiere archaeological sites in the United States and holds the distinction of being listed as a UNESCO World Heritage Site. With over 100 earthen mounds, the site was the largest precolumbian settlement north of central Mexico and center of one of the most densely settled regions in ancient America. Dating from approximately A.D. 900 to 1350, Cahokia was inhabited by almost 15,000 people at its peak. Cahokia's influence spread across the confluence region and throughout Eastern North America; material culture from Cahokia is found as far away as Wisconsin and Louisiana. Cahokia is unique in its standing as the earliest and largest Mississippian center, setting the stage for numerous mound centers constructed across Southeastern North America. However, the Cahokia phenomenon eventually came to an end; during the 1200s population densities at Cahokia began declining, leading to the site's eventual abandonment by A.D. 1350. The reason for this collapse remains unresolved, with explanations ranging from climate change, war, disease, and sociopolitical upheaval.

The most visible cultural feature at Cahokia is the earthen pyramid known today as Monks Mound, the largest prehistoric mound on the North American continent. The mound is uniquely structured with two terraces upon which one if not two other mounds were built. On the summit of Monks Mound, archaeologists have excavated the remains of the largest building in the Mississippian world. Monks Mound lies at the center of the site's community plan and is located on an axis mundi running north to south axis through Mound 72. Within Mound 72, the remains of almost 300 individuals were found, including those of a central individual known as the "Beaded Burial." Monks Mound faces the Grand Plaza, the largest one of four communal plaza areas constructed at the site. Monks Mound and the Grand Plaza were completely enclosed by a 3km. long wooden palisade that was rebuilt four times throughout the history of the site. Later in the 18th century, French priests and Illini Indians occupied the first terrace, and Monks Mound was eventually named after another group of French priests living in the area during the early 19th century.

On the western edge of the site, the ancient Cahokians built a series of circular post structures called Woodhenges. Posts from the various iterations of the Woodhenges align with solar events. Researchers speculate that red cedar posts may have functioned as a calendar during festivities held on the site. Visitors to the site can gain an appreciation for the technological and ritual significance of this feature by walking through a full-scale Woodhenge reconstruction.

Although the most spectacular remains are found within the boundaries of the park, Cahokia was centrally located in a land-scape of mounded architecture that included the next two largest contemporaneous mound sites in North America. Although both the St. Louis and East St. Louis mound groups have been largely destroyed due to modern development practices, the sites on which they stood are visible on a clear day from the top of Monks Mound.

The site's world-class interpretive center with its award-winning orientation show, exhibits, and dioramas, and the excellent gift shop provides the jumping off point for several forms of self-guided tours that allow visitors to experience the Cahokia land-scape at their own pace. Newly acquired iPod Touch tours take visitors through the exhibits and three outside tour trails that include stops at Monks Mound and the Stockade; the Grand Plaza, Twin Mounds and Mound 72; and the Woodhenge reconstruction. iPods may be rented from the Gift Shop for \$5. There are also free cassette tape tours for the three trails available from the information desk and guidebooks for the three trails for \$1 in the gift shop.

Come see for yourself the renowned site that has generated archaeological debate on topics ranging from the rise of social complexity, the nature of political evolution, and the consequences of human impacts on the natural environment. Tours will leave from the headquarters hotel on Friday, April 16 (one tour) and Saturday, April 17 (three tours). Don't miss the opportunity to experience this unique archaeological site and see sweeping vistas of the St. Louis region by climbing the 156 steps to the top of 100 foot-high Monks Mound. To take a virtual tour of the site, visit www.cahokiamounds.org.

JUAN SANTIAGO RENE SCHOBINGER 1928–2009

uan Schobinger (Hans to his friends), died at the age of 81 on July 11, 2009 in Mendoza, Argentina, after a long illness. Hans was an outstanding archaeologist and Americanist, truly a pioneer in the field of high-altitude archaeology in the Andes. In the early 1960s, together with the mountaineer Antonio Beorchia Nigris, he founded the Centro Investigaciones Arqueologicas de Alta Montana (CIADAM) in San Juan, Argentina. In 1963 the group headed by Schobinger recovered the mummy of Cerro El Toro, after excavating at an

altitude of 6,300 meters. In 1985 he, with members of Club Andinista Mendoza, ascended the Aconcagua Mountain and at 5,300 meters of altitude they performed archaeological excavations at the ceremonial Inca site

Hans was born in Lausanne (Switzerland) February 18, 1928. His family moved to Argentina three years later and Hans became an Argentinean citizen in 1954. He did his graduate studies at Facultad Filosofia y Letras

at Universidad Nacional de Buenos Aires (UNBA). Between 1947 and 1951 he received his degree in History and in 1954 he obtained his doctorate in Philosophy with a Thesis on Archaeology of Neuquen Province, with Oswald Menghin his advisor. In 1956 he became Professor of Prehistoric Archaeology at Universidad Nacional de Cuyo (UNC), and later director of the Institute of Archeology and Ethnology and Museum.

Schobinger then became part of the new generation of archeologists that together with Mariano Gambier, Pablo Sacchero, Humberto Lagiglia, and Vicente Aguero Blanch replaced the old generation of figures such as Carlos Rusconi, Salvador Canals Frau and Juan Semper. In his new position, he gave renovated guidance to the Institute's official publication, Anales de Arqueologia y Etnologia, as well as the Museum. In 1994, upon his retirement Schobinger was recognized by the University of Cuyo as Emeritus Professor, and continued serving as researcher for the National Commission on Science and Technology (CONICET).

His legacy is best represented through his multifaceted scientific production that covers such subjects as the history of the Swiss immigrants to Argentina, to books of synthesis on South American Prehistory, Rock Art, prehispanic religion, shamanism in South America, biblical archaeology, and essays on the archaeology of the Middle East and those related to High Altitude Archaeology. Among his best known con-

IN MEMORIAM, continued on page 44

uan Schobinger (Hans para sus amigos) falleció a la edad de 81 años el 11 de Julio de 2009 en Mendoza, Argentina, después de una larga enfermedad. Hans fue un destacado arqueólogo y Americanista, verdadero pionero en el campo de la arqueología de altura en los Andes. En los años 60, junto al andinista Antonio Beorchia Nigris fundó en San Juan, Argentina, el Centro de Investigaciones Arqueológicas de Alta Montana (CIADAM). En 1963 el grupo dirigido por Schobinger recupero la momia del Cerro El Toro, después de haber realizado excava-

ciones a 6.300 metros de altura. En 1985 el con los miembros del Club Andinista de Mendoza ascendieron al Monte Aconcagua y a 5.300 metros de altura realizaron excavaciones arqueológicas en el sitio ceremonial Inca.

Hans había nacido en Lausana (Suiza) el 18 de Febrero de 1928. Tres años después su familia se traslada a Argentina y Hans obtiene su carta de ciudadanía argentina en 1954. Hizo sus estudios universitarios en la Facultad de Filosofía y Letras de la Universidad Nacional

de Buenos Aires (UNBA). Estudio Historia los años 1947 y 1951 y en 1954 obtiene su doctorado en Filosofía con su tesis sobre la Arqueología de la Provincia de Neuquén, bajo la dirección de Osvaldo Menghin. En 1956 obtuvo el cargo de Profesor Titular en la cátedra de Arqueología Prehistórica en la Universidad Nacional de Cuyo (UNC) y posteriormente de Director del Instituto de Arqueología y Etnología y Museo.

Schobinger formó parte de la nueva generación de arqueólogos que junto a los nombres de Mariano Gambier, Pablo Sacchero, Humberto Lagiglia y Vicnte Agüero Blanch reemplazó a las figuras de Carlos Rusconi, Salvador Canals Frau y Juan Semper. En su nuevo cargo imprimió renovadas fuerzas a la publicación oficial del Instituto, Anales de Arqueologia y Etnologia así como al Museo. En 1994, con ocasión de su jubilación Schobinger fue reconocido por la Universidad de Cuyo como Profesor Emérito y continuo ejerciendo como investigador en la Comisión Nacional de Investigación Ciencia y Tecnología (CONICET)

El legado de Schobinger esta muy bien representado en su multifacética producción literaria que cubre temas como la historia de los inmigrantes suizos en Argentina a libros de síntesis sobre Prehistoria Sud Americana, Arte Parietal, Religión Prehispánica, Shamanismo en Sudamérica, arqueología bíblica y ensayos sobre arqueología del Medio Oriente y especialmente aquellas relacionadas con Arqueología de

IN MEMORIAM, continued on page 44



HOW TO WIN THE STUDENT PAPER AWARD AND IMPRESS A CONFERENCE AUDIENCE

Marit K. Munson, Kacy L. Hollenback, and Rebecca Schwendler

Marit Munson, Kacy Hollenback, and Rebecca Schwendler are members of the Student Paper Award Committee.

he SAA Student Paper Award recognizes an outstanding student paper at each year's meeting. It is a great way to gain valuable writing and speaking experience, and professional recognition for your original research. As the tenth anniversary of the award approaches, it seems a good time to provide a few pointers on making your paper as strong as possible—as an award submission and as a presentation at the meetings in St. Louis.

We score papers on a number of criteria: (1) quality of the arguments presented, (2) quality of the data used for support, (3) contribution to broader methodological or theoretical issues in archaeology, (4) contribution to understanding a specific region or topic, (5) quality of the writing and structure, and (6) appropriateness of length, number, and kind of graphics for a 15-minute presentation. Although written papers are submitted to the committee, we evaluate submissions as if they were oral presentations—an important tidbit for students to keep in mind.

Structure

Good organization and clear structure are key for any paper, but even more so for a verbal presentation. Fifteen minutes might fly by for you, but it can be a long time for an audience member to pay attention. Anything you can do to help explain what you are going to say, what you are saying, and what you have said will be helpful.

Your introduction should orient your audience completely—not only to your own research, but also to the broader area and problem. A research paper is not the time to create suspense. Help the audience anticipate what is to come by providing a brief overview of your entire paper. Above all, make sure that you have a clear thesis statement in your introduction. If you are not quite sure what your paper is about, your audience certainly will not be.

The body of your paper should be organized around your argument, with sufficient data for support. It can be difficult to decide what is necessary supporting information and what is extra detail, but making those decisions during the writing and editing process will pay off later. Clear structure will help you

organize your findings, making it easier to keep the audience with you throughout your presentation. If you have three main lines of evidence, use those numbers to your benefit— "The first line of evidence is... Second, paste composition indicates... Third, temper type also suggests...." This might seem repetitive on the written page, but these verbal signposts can be a great help for the listening audience.

When you are ready to conclude your paper, be sure to signal that the end is near. You can literally say, "In conclusion..." or you can be less blatant by pausing and changing your tone of voice a bit. Once your audience knows to listen more carefully, you should recap your work briefly, reminding them what you did and why. Wrap up your conclusions and touch on the implications of your research for the region you work in and the discipline as a whole.

Content

SAA papers are short—just 7 to 8 pages double-spaced. You will need to decide which lines of evidence are most important for your presentation. You might give a brief overview of multiple main points, perhaps referring to another paper that provides more detail. Another possibility is to concentrate on just one point, presenting it in full, acknowledging the other evidence as showing a similar trend, providing additional insight, or whatever the case may be.

Another tip for dealing with length is to keep method and theory sections very brief, unless they are the primary focus of your paper. If your study employs Neutron Activation Analysis of ceramics, for example, there is no need to explain exactly how it works. Instead, give the full name of the technique and a very brief description of the kind of information it provides, then move on to how your results support your larger argument.

One thing that you must include is some indication of why your topic matters. You do not need to spend half of your paper justifying the continued existence of archaeology in a postcolonial world, but you should be able to point out some greater significance. Does your analysis of artifacts from an eighteenth-century privy add to our understanding of foodways in early America? Does tar-

STUDENT AFFAIRS

tar build-up on the teeth of dogs from British Columbia help shed light on the relationship between people and domesticated animals? Even a single sentence placing your findings within the broader discipline will help ensure that your paper is of interest to more than the few people with firsthand knowledge of your topic.

Visuals

Well-chosen visuals will engage your audience and help them follow your arguments more easily. Make sure that each slide is legible and uncluttered, with good contrast between the text and background. Check to ensure that all parts of your slides are sharp and clear and try to use at least 16-point font. A pixellated photo or a map with too many fine lines may be impossible for the audience to read. Be ruthless with your slides. If you find yourself tempted to say "You can't really see this, but..." —then remove the slide or replace it with something better.

Most of all, keep in mind that people need time—as much as a full minute—to make sense of each slide. This is especially true for slides with a lot of data (e.g., graphs and tables). Give the audience time to examine your plots of X-ray fluorescence data or your beautifully rendered geographic information system maps and avoid dense, full-page tables.

Style

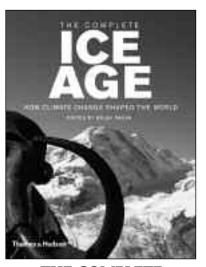
Remember that there is a great deal of difference between written and spoken language. Keep your audience in mind as you write. Use short, declarative sentences and avoid jargon. Those beautiful sentences that you have so carefully crafted on paper can be nearly impenetrable when spoken aloud. Build up complicated ideas in small steps. If you make great intuitive leaps, your audience might be left behind.

Such brief papers are a real balancing act. You need to include all of the necessary information without overwhelming your audience. Edit carefully, for content and clarity. Run your paper by an advisor or trusted friend before you finalize it; he or she may notice a glaring omission or a rambling digression that you have overlooked.

Submit!

Once you have outlined, organized, and edited to perfection, please consider submitting your paper for the SAA Student Paper Award, or encourage others to do so. Award winners receive acknowledgment from the SAA president and more than \$1,000 worth of books and other prizes. All student members of SAA are eligible to participate. The deadline for this year's submissions is January 11, 2010. More information is available on the Student Paper Award page of the SAA website at http://www.saa.org/AbouttheSociety/Awards/StudentPaper-Award/tabid/185/Default.aspx.

Ihames

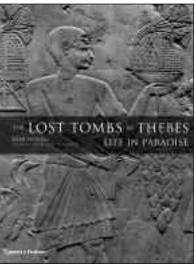


THE COMPLETE ICE AGE Edited by Brian Fagar

Edited by Brian Fagan

Four experts in climate change present a detailed analysis of this critical period

\$40.00 / 240 pages / 192 illustrations



THE LOST TOMBS OF THEBES

Zahi Hawass

Illuminates the mysterious history of these largely inaccessible and highly decorated tombs

\$80.00 / 288 pages / 208 illustrations



Thames & Hudson

thamesandhudsonusa.com Available wherever books are sold

UNDERSTANDING ANCIENT FISHING AND BUTCHERY STRATEGIES OF THE INDUS VALLEY CIVILIZATION

William R. Belcher

William Belcher is an archaeologist with the Joint POW/MIA Accounting Command on Hickam AFB, Hawaii.

n 1989, I was a new graduate student at the University of Wisconsin-Madison, freshly arrived from my master's degree at the University of Maine (my master's thesis concerned the faunal remains, primarily fish, from a Ceramic Period archaeological site off the coast of Maine; Belcher 1988). I was auditing Dr. J. Mark Kenoyer's Archaeology of South Asia course to get ready for my qualifying exams later that year. I arrived early to the classroom and was reading a book on fish osteology. Dr. Kenoyer arrived and saw what I was reading and asked if I wanted to look at some fish bones from Harappa, one of the urban centers of the Indus Valley Civilization in Pakistan. Little did I know at that time, this simple request would launch me on a journey that I am still on—a journey that has taken me to many regions of Pakistan, particularly fishing villages and urban markets.

Background

I began to work on the fish remains from five different archaeological sites in Pakistan, all associated with the Indus Valley Civilization: Merhgarh and Nausharo near the Bolan Pass in Baluchistan, Harappa in the Punjab Province, Balakot along the Makran coast of Baluchistan, and Allahdino along the coast of Sindh Province. Each assemblage had different problems ranging from collection strategies (many were not fine-screened) to preservation, but the core samples for my dissertation research were Harappa and Balakot, since both were excavated in very similar manners and screened through ¹/s-inch mesh (Dales 1975; Meadow 1991).

During the analysis, I began to see patterns of fish skeletal element representation as well as discrete patterns of fish species (Belcher 1991, 2000b, 2003, 2005). Were these patterns related to preservation or perhaps related to some aspect of human behavior? Unfortunately, at that time, very little research or ethnoarchaeology of fisherfolk and fish mongers had been done. It was at this point that I began my doctoral dissertation research in earnest with funding from

the National Science Foundation Dissertation Improvement Grant program, the Fulbright Foundation (administered through the United States Education Foundation in Pakistan), and the Harappa Archaeological Research Project (Belcher 1998). While my research primarily was focused on fieldwork, I was affiliated with the Department of Marine Biology, University of Karachi, where I worked closely with students in marine biology as well as in the Department of Archaeology. I was also affiliated with the Exploration Branch of the Department of Archaeology and Museums, Government of Pakistan. I was allowed access to the faunal collections from the site of Allahdino, which were stored in the Exploration Branch. Informally, I was affiliated with the Department of Marine Fisheries, Government of Pakistan, on the West Wharf area of Karachi. Without the help of these institutions and their students, faculty, and officials, my research would not have been possible or would have taken a much different form and tone.

Field Research: Rivers and Coastlines

My field research focused on the observation of traditional fishing practices as well as cottage-based and market-based butchery. The bulk of my research took place during 13 months between 1993 and 1994 and involved participantobservation, interviews, and sample collection and preparation (Belcher 1998). The archaeological sites of Balakot and Harappa occupy very different environments; the former lies near Sonmiani Bay, along the Makran Coast, while Harappa lies in the interior of the Punjab, near the River Ravi. Thus, my field research had two components: marine coastal and interior riverine. Prior to my departure, there were a few things that I had to do that would ease my acclimation to a South Asian environment. Most importantly, I studied (at the advice of Dr. Kenoyer) Hindi and Urdu for a year. Additionally, I began to change my food habits to include more spices, particularly chilies and onions!



Figure 1. Central seaward area of the Baluch village of Abdur Rheman Goth, Pakistan in 1994. These houses are now used for the storage of fishing gear and areas for net repair.

The riverine component of my research took place while I was a graduate field assistant at Harappa, with my initial work done beginning in 1992 and continuing through 1994 (Belcher 1994a). With Dr. Kenover's help and the assistance of a local school teacher. Nasir Ali Dhillon, I made several contacts with fisher folk. This began a long association with these men and their families. Of particular note is Ghulam Mustufa, who tolerated my inquires and allowed me to fumble and help him fish the large oxbow lakes that form after the monsoon-swollen Ravi recedes back into its bank. Rarely do the fisher folk work the Ravi itself, the main fisheries focus on the oxbow lakes that are more easily harvested with a gill net that is dragged repeatedly through the muddy waters (Belcher 1994a). Also, Baba Yaqoob, an elder in Harappa, taught me how to make and throw a casting net, something that came in handy during all aspects of the field research, especially as a way to "introduce" myself to the local fisher folk. The fishing expeditions also served as a source of fish that were rendered down to obtain a large reference collection of freshwater fishes.

The most extensive fieldwork that I conducted during 1993–1994 was the marine component (Belcher 1994b, 2000a, 2002). I lived alone in a small fishing village for about 10 months. While this may be an onerous task given the cur-

rent political climate, in the early 1990s I had no issues and never felt uncomfortable or unsafe, despite the Spartan tone of my time there. I chose the village of Abdur Rheman Goth (Figures 1 and 2) for a variety of reasons, primarily because it still used a variety of traditional fishing technologies. The fishing strategies, while tied into the urban economy of Karachi, used traditional boats and netting technologies that appear similar to those depicted on Indus Valley Civilization ceramics and other artifacts. Additionally, this village was within the same ecological zone as the site of Balakot, enabling me to study the types of strategies used today to harvest the same fish as found in the archaeological assemblages. It is also important to note that these strategies, except for the use of a gas-powered motor, are similar to the technologies depicted on Indus Valley Civilization ceramics and other artifacts.

My primary informants consisted of a family whose patriarch rarely fished, but I worked closely with his two sons. Most of the participant-observation was done during numerous trips to check the nets throughout the different seasons. There are three main fishing seasons: fall, winter, and the monsoons. During each season, different fishing grounds are used as are different types of nets targeting different species of fish (Figure 3). The bleakest fishing season is win-



Figure 2. Seaward area of the village of Abdur Rheman Goth. During the stormy fall and summer seasons, these traditional Baluch-style fishing vessels are pulled up on shore every afternoon.

ter, when few fish are caught. It is during this season that the fishing grounds are closest to the village to minimize the effort. The most profitable fishing season occurs during the monsoon season; the seas are rough off the village, especially over a major underwater ledge where the waves coalesce. The major fishing grounds during the monsoons are found just seaward of this ledge. One of the most dramatic aspects is crossing this ledge where a 25-foot plus wooden boat will become briefly airborne! In general, two different types of nets were used—a floating gill net and a bottom net. The gill net, depending on the size of the mesh and season, target certain sizes and species, while the bottom net was used to catch lobsters and crabs. These latter crustaceans were sold to the Karachi hotels as the villagers did not eat them due to religious constraints. To the east of the village, near a large sand spit, is a relatively shallow area that is used to harvest sting rays using a large-meshed, bottom net. While the sting rays are not eaten locally, the livers are harvested and rendered down to produce oil that is used to coat the wooden boat hulls. This coating helps waterproof the wood and preserve the boats.

The fishing trips consisted of traveling to the fishing grounds and manually hauling up the nets that were set a day or two earlier. I would record the fish species and their rough sizes as they were hauled out from each fishing ground. As this was before civilian-available GPS units, I triangulated the fishing grounds' locations based on onshore landmarks, the same method that the fisher folk used to navigate these waters.

During the later monsoon season, the fisher folk grew anxious about taking me out; apparently, they were worried about being arrested if I drowned. No amount of arguing would convince them that I would be okay and nothing would happen to them. I had to come up with another solution to get the information I needed. So instead of going on the boats, I interviewed and tallied the fish as the boats arrived back to the village.

In order to study the butchery patterns (Figure 4), I observed the various fish markets in Karachi (Lee Market, Empress Market, West Wharf Market). The markets were complex and dynamic, with each having a specific clientele. West Wharf focused on large-scale sales to hotels and distribution to other markets (this was the main landing area for the large commercial fleet, which differed from small fisheries that I observed in Abdur Rheman Goth); Lee Market focused on local urban dwellers (this was the main market where the fish from Abdur Rhemen Goth would be sold); and Empress Market focused on Pakistanis from the upper economic strata as well as foreign business people, and the consular staff.



Figure 3. During the monsoon season of May through September, the sua fish (Protonibea diachanthus) represents the vast majority of the fish. The sua is available year-round on large-scale boats, but the small-scale fisheries can only catch these fish when the come closer to shore during the monsoons. The small-scale fisheries is a more appropriate analogy for the Indus Valley Tradition coastal fisheries and this information provides an important tool to reconstruct the seasonal patterns at Indus Valley Tradition sites such as Balakot along the Makran coast to the west of this village.

Additionally, I observed local fish butchery in Abdur Rheman Goth that was oriented toward local consumption.

Fish size is an important characteristic in butchery: the larger fish were prepared with the heads as a separate commodity; medium-sized fish were cut into various small pieces with a cleaver; and, small fishes were usually prepared and eaten whole. Additionally, different methods of butchery (such as filleting) were used for higher socioeconomic consumers. Also, there is another sequence used for dry fish preparation and butchery; the most conspicuous butchery pattern is that the preparation for dry fish butchery leaves cutmarks on the medial/interior side of the bones.

I gathered other information through formal and informal interviews. Often I would talk with the old men about fishing before the use of the outboard motor. While we repaired nets or drank copious amounts of milky sweet chai, we talked about nets, boat styles, the diminishing fish populations, the lack of interest in their grandchildren in fishing, fish behavior, winds, and their influence on fishing, and many other topics.

Finally, my last form of information was taken from refuse gathered from the kitchens and trash areas of the village. While my informants complied, many of their wives won-



Figure 4. Using the information gained from village and market ethnoarchaeology allowed me to begin to develop models to interpret the fish remains from sites such as Balakot, along the Makran coast of Pakistan. The dhoter (Pomadasys hasta) neurocrania above represent the vast majority of remains recovered from Balakot.

dered about the strange Angraiz ("Englishman") collecting the trash from their kitchens. This material was used to further refine models based on observations and interviews. Once cleaned, this material was analyzed in the same manner as the archaeological specimens. These materials provided a finer interpretive tool based on its synchronic and singular contextual nature linked with specific, observable human behaviors.

Conclusions

One of the most memorable experiences I have taken away from my ethnoarchaeological research is the willingness of my informants to let me intrude in their lives for several months. I have made many lifetime friends; although I see them infrequently, I still receive occasional letters informing me of the latest village gossip and news. These experiences would have been greatly diminished if I had not taken the advice of Dr. Kenoyer in studying Hindi and Urdu. This small contribution aided greatly in my understanding of the culture and the peoples that I lived and worked with. While

ETHNOARCHAEOLOGY, PART I

I believe that my dissertation research has contributed to some aspects of the ethnoarchaeology of fish butchery and procurement, it was the personal interactions that allowed me to develop models of behavior based on my participantobservation and examination of modern refuse.

Acknowledgments. I would like to thank Sharyn Jones and Andrew Duff for asking me to contribute this article to The SAA Archaeological Record. This body of ethnoarchaeological research is part of the legacy of the UC Berkeley archaeological project at Balakot and the researchers involved in that project, including the late George F. Dales, Richard H. Meadow (Harvard University), and my graduate advisor at UW-Madison, J. Mark Kenoyer. The latter two researchers, along with Rita Wright, now form the co-directors of the Harappa Archaeological Research Project. Additionally, I would like to acknowledge the many officials of the organizations discussed above, particularly the former Director-General of the Department of Archaeology and Museums, Dr. M. Rafique Mughal. Without the help of my friends and informants in Abdur Rheman Goth and Harappa as well as the many fish mongers in the markets of Sahiwal and Karachi, my dissertation research would not have been possible.

References Cited

Belcher, William R.

- 1988 Archaeological Investigations at the Knox Site (30-21), East Penobscot Bay, Maine. M.S. thesis, Institute for Quaternary Studies, University of Maine, Orono.
- 1991 Fish Resources in an Early Urban Context at Harappa. In
 Harappa Excavations 1986–1990: a Multidisciplinary
 Approach to Third Millennium Urbanism, edited by R.H.
 Meadow, pp. 107–120. Prehistory Press, Madison.
- 1994a Riverine Fisheries and Habitat Exploitation of the Indus Valley Tradition: An Example from Harappa, Pakistan. In South Asian Archaeology 1993, edited by A. Parpola and P. Koskikallio, pp. 71–80. Annales Academiae Scientiarum Fennicae, Series B, Vol. 271. Suomalainen Tiedeakatemia, Helsinki.
- Butchery Practices and the Ethnoarchaeology of South
 Asian Fisherfolk. In Fish Exploitation in the Past, edited by
 W. Van Neer, pp. 169–176. Annales du Musee Royal de
 l'Afrique Centrale, Sciences Zoologiques No. 274. Tervuren, Belgium.
- 1998 Fish Exploitation of the Baluchistan and Indus Valley Traditions: an Ethnoarchaeological Approach to the Study of Fish Remains. Ph.D. Dissertation, Department of Anthropology, University of Wisconsin-Madison, Madison.
- 2000a The Ethnoarchaeology of a Baluch Fishing Village. In *Archaeology of Seafaring: The Indian Ocean in the Ancient Period*, edited by Himanshu Prabha Ray, pp. 22–50. Indian Council of Historical Research and Pragati Publications, Delhi.

- 2000b Marine Subsistence of the Indus Valley Tradition: Fish Remains from Balakot (Pakistan). In South Asian Archaeology 1997 (Volume I), edited by M. Taddei and G. De Marco, pp. 3–16. Istituto Italiano per l'Africa e l'Orientale, Rome (released in 2002).
- 2003 Fishing Exploitation of the Indus Valley Tradition. In Indus Ethnobiology. New Perspectives, edited by S. Weber and W.R. Belcher, pp. 95–174. Lexington Books, Lanham, Maryland.
- 2005 Marine exploitation in the third millennium BC: the eastern coast of Pakistan. *Paleoorient*. 31:1:79–85 (CNRS Editions 2005).

Dales, George F.

1975 The Balakot Project: Four Years of Excavation in Pakistan. *Man and Environment* 3:45–53.

Meadow, Richard H. (editor)

1991 Harappa Excavations 1986–1990: A Multidisciplinary Approach to Third Millennium Urbanism. Prehistory Press, Madison, Wisconsin.

MILLERSTROM, from page 25 <

- de la Culture et du Patrimoine. Ministère de la Culture de Polynésie française. Tahiti.
- 2005 Archaeological research on ritual architecture in the Northern Marquesas Islands in 2003. Bilan de la recherche archéologique en Polynésie française 2003–2004. Tahiti.

Millerstrom, Sidsel, and E. Edwards

Stone sculptures of the Marquesas Islands (French Polynesia). In Easter Island in Pacific Context, South Seas Symposium, edited by C. M. Stevenson, G. Lee, and F. J.
 Morin, pp. 55–62. Proceedings of the Fourth International Conference on Easter Island and East Polynesia, University of New Mexico, Albuquerque, 5–10 August 1997. Easter Island Foundation, Los Osos, California.

Petard, Paul

1986 *Plantes utiles de Polynésie, Ra'au Tahiti*. Haere po no Tahiti. Papeete Tahiti, French Polynesia.

Rolett, Berry Vladimir

1998 Hanamiai: Prehistory Colonization and Cultural Change in the Marquesas Islands (East Polynesia). Yale University Publications in Anthropology Number Eighty-one. Department of Anthropology and The Peabody Museum, New Haven. Connecticut.

Tautain, M.

1897 Notes sur les constructions et monuments des Marquises. *L'Anthropologie* 8(1):538–558, 667–678.

Walsh, D. S. and B. Biggs

1966 Proto-Polynesian Word list I. Linguistic Society of New Zealand, Auckland.

SAILING AT ONCE IN SEVERAL SEAS

DIGGING AND I-WITNESSING IN LAU

Sharyn Jones

Sharyn Jones is an Assistant Professor in the Department of Anthropology at the University of Alabama at Birmingham.

he anthropology of the Pacific Islands has long benefited from both rich ethnographic literature and a vibrant living community engaged in all manner of lifeways, ranging from modern to "traditional." The region is ripe with opportunity to participate in anthropological archaeology and ethnoarchaeology. Nevertheless, "there is a lot more than native life to plunge into if one is to attempt [a] total emersion approach to ethnography.... It is a question of living a multiplex life: sailing at once in several seas" (Geertz 1988:77). Clifford Geertz wrote this in reference to Malinowski's work, pointing out the inherent difficulty in navigating the complex position of the anthropologist as ethnographer, scientist, and writer. For the ethnoarchaeologist, the situation is even more layered: we are part-time ethnographers and archaeologists and full-time members of the community we study. We are witness to multiple layers of otherness, the material correlates of human actions in the past and present, quotidian rituals, symbolic meanings, and a glimpse of the emic perspective. Finally, we must make sense of this dizzying array of information and translate it for our colleagues and the public in a way that is intelligible and comprehensive. The contribution is well worth the struggle, since, as Susan Kus suggests in her article (in the next issue), "both an archaeologically informed ethnography and anthropologically informed archaeology" are critical for creating a dialogue and advancing our discipline.

Within the region of Remote Oceania, anthropology has a tradition of exploring the connections between the past and the present (e.g., Hocart 1929; Kirch and Green 1987, 2001; Sahlins 1962). The high level of historical continuity in many Pacific Island communities contributes excitement and complexity to the experience of working in this area. If one has an interest in bringing the archaeological past we study to life, it is possible to explore a range of archaeological questions and test new hypotheses as well as assumptions that are often taken for granted by archaeologists (Jones 2009a). In this article I discuss some of what I have learned while

exploring and attempting to straddle the past/present and us/them in Fiji's Lau Island Group. These experiences have provided insights into economic activities, an ideology incorporating landscape and seascape, traditional ecological knowledge (TEK), and potential shifts in these issues over time. Moreover, I have come to look at archaeology differently as a result of working in Lau and living with people that I study, who are also the descendents of the community who occupied the archaeological past I seek to understand.

Being trained as an archaeologist, my research in the somewhat isolated Lau Group initially focused on archaeological survey, excavation and the interpretation of patterns revealed in fragmentary pieces of the past, such as pottery, midden, and domestic architecture. My first field season in Lau was eye-opening, leading me to turn to ethnoarchaeology because I simply could not focus solely on the past in this life-filled environment. Within the village, human actions were dripping with meaning and the intensity of the community's interactions seemed like fertile ground to explore Lauan lifeways in the present and the past. After a short time I was admitted into the primarily female spaces and allowed to observe and eventually participate in most domestic activities as well as the female-directed task of inshore fishing. With economics, kinship, subsistence, and material culture before me in rich textured detail, it became impossible to interpret the past without recognizing and documenting the present (Figure 1). To understand the meaning of material things and archaeologically represented culture as it relates to my primary focus areas of the domestic and the ecological, I now feel that ethnography is necessary—whether explicitly stated (preferably), or quietly entrenched in our interpretations of the past. Some argue that the use of ethnography in this context is a crutch or an impediment to the scientific, objective analysis of the past. I suggest that a close historical association between past and present makes for stronger inferences and an explicit base of comparison. Ethnoarchaeological research documents some of the fluidity and complexity of



Figure 1. A woman cooking fish and taro leaves over the hearth in her kitchen, Tubou Village, Lakeba, Lau Group (photo courtesy of Michael Hanson).

contemporary social relations and heightens awareness of human behaviors that could have occurred, in order to explain archaeological patterns and material variation.

Economics in Central Lau

Fiji's Lau Group was first inhabited over 3,000 years ago by the Lapita peoples (Best 2002; Nunn et al. 2004), the ancestors of the modern occupants of these islands. The Lapita culture complex is identifiable by distinctive dentate stamped pottery and related stone and shell tool assemblages, the archaeological markers of the "seafaring pottery making farmers" who first inhabited Remote Oceania (Lilly 2006:5). Since 2000, I have conducted archaeological, ethnographic, and marine biological research on four islands in Central Lau: Lakeba, Nayau, Aiwa Levu, and Aiwa Lailai (Figure 2).

Lauan people rely on subsistence economics, producing the vast majority of their foods locally. Today inshore fishes form the primary animal protein portion of the diet, while domestic animals make up less than 10 percent of the food consumed by any given household. Fisherwomen, adolescents, and men exploit the inshore area on a daily basis (Figure 3). Fisher folk primarily focus on capturing boney fish, and collect shellfish in smaller quantities. Children contribute an important labor component to inshore food production, assisting with almost all the fishing tasks. For the youngest children, ranging in age from about five to seven, the majority of their time on the reef is spent gathering invertebrates and placing the captured fish into baskets for transport. Lauans use a mixture of methods and technologies on the reef, such as hooks and hand lines, microfiber nets, and

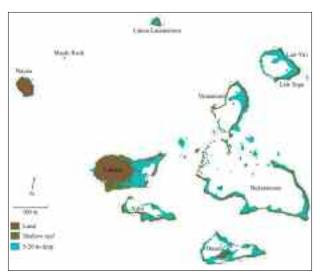


Figure 2. Map of the study area and Lauan seascape, Lau Group, Fiji.

spears. Fishing in groups of four to a dozen people with nets is the most productive and reliable form of inshore exploitation, producing hundreds or even thousands of relatively small fishes (total length is 20–30 cm, on average) in just a few hours. My ethnographic observations and interviews suggest that Lauans plan their fishing trips and make decisions about marine exploitation based on a number of considerations, including natural factors (weather, moon phase, tides, water depth, currents, and local environmental variations), accessible technologies, the number and relative ranks of people in the fishing party, and the fish targeted (generally based on preference and/or availability). Together these considerations structure behaviors and ultimately affect household and individual eating patterns.

For example, the number of people in the fishing party determines the areas of the reef that are exploited and the taxa targeted. The party's makeup, including the gender and rank of the members, also influences how the catch is divided up and how many people receive portions. When a group brings their catch on shore, distribution begins immediately. A pile of fish is created for each of the participants and the owners of the technologies used; the piles are organized according to rank. Depending on the composition of the group and their preferences, the fish may be scaled and gutted on the beach, or simply taken away by the members of the fishing party to their respective households. As a result, the physical archaeological imprints of fish processing in domestic spaces are sometimes lacking. When fish are gutted and scaled on the beach or on the reef at low tide, this is rarely done in the same place. These observations indicate that Lauan behavior



Figure 3. Women and children fishing in the inshore area on Lakeba.

relating to fishing and foodways is the result of a number of interrelated natural and social issues including: the environment, access to technologies, group dynamics, hierarchy, and food preference. Moreover, the ethnoarchaeological implications of these findings suggest that evidence of fish processing is unlikely to be found in a domestic setting and there may be no predictable central place for processing.

Landscape, Seascape, and Environmental Dynamics

A historical ecological approach is well suited to the Lauan culture context where indigenous traditions emphasize a deep connection between humans and their environments, especially land and seascapes, which are imbued with meaning. The islands and terrestrial landscapes in the study area are dwarfed by the sea and the reefs that enfold them, as illustrated in Figure 2. This vast seascape presents a striking image of sea, reef, and land that is a natural part of the worldview of every Lau Islander. The seascape contributes to each person's identity through one's degree of association with it. Two primary moieties are recognized in any village, the "land people" (the yavusa vanua are farmers, the descendents of the original cultivators) and the "sea people" (the yavusa wai are the master-fisherpeople and descendents of the chiefly line). Women of sea people descent keep much of the TEK. They hold a wealth of information about marine ecology and biota, and have intimate knowledge of the natural order as well as changes and fluctuations in the system. According to my interlocutors, the sea people have always been the primary Lauan fisherfolk, and are considered to be the best at fishing and seafaring.

Lauans often travel to fish on reefs near their islands. The enormous reef system of Bukatatanoa is located 11 miles east of Lakeba and is five times the size of the reefs surrounding that island. Bukatatanoa includes an area of shallow water with reef enclosing a lagoon; it is a well-known fishing ground that is visited almost daily. Although marine areas in close proximity to the villages are the most frequently exploited, Lauans do not consider the sea to be a barrier. Indeed, they utilize a variety of environments and frequently move beyond their home shores as they manage and utilize their marine resources. Ancestral kin-based claims regulate the use of such natural reef structures, in the same way that people mark and exploit the terrestrial landscape, including gardens and tracts of coconut palms. The pattern of use and the importance of nearby reefs were likely part of the past, as an array of ethnohistorical documents and indigenous histories suggest.

Working in and with a contemporary community has taught me that while tradition is conservative it also accommodates change. Lauans are constantly adapting, exploring options, and acting in ways that serve the community and individual interests. Both seasonal and stochastic regional climatic fluctuations (Allen 2006) have undoubtedly affected and been incorporated into Lauan lifeways and ideologies, regardless of whether these environmental dynamics have left physical and/or archaeological evidence. In this unpredictable environment, people are flexible and open to change. D'Arcy (2006) has argued that the flexibility of the Islanders of Remote Oceania has allowed these people to survive and to adapt to a vast group of varied island landscapes and seascapes. Based on ethnoarchaeological data from Lau, I would add that the flexibility of the Lauan people and their diverse environments have allowed for an opportunistic subsistence system rooted in relative abundance and diversity. That is, Lauans cope with uncertainty through an accommodating attitude and an arsenal of technologies and fishing methods that produce a large and often predictable return from a wide variety of marine resources. Climatic-induced variation in the local availability of a marine species does not disrupt a food system where people enjoy virtually all sea foods, including seaweeds, invertebrates, and boney fishes. Rules of tenure for the reef and offshore areas, and traditional management systems may also add to the productive administration of variable resources; these likely offset natural and human-induced environmental shifts.

Archaeologically the flexibility of Lauan subsistence systems is evident in a broad range of resources exploited over almost three thousand years of occupation on the study islands (Jones 2009b). Indeed, there appears to be continuity in the

harvest of these people who are not tethered to a particular set of resources. Archaeological excavations on the study islands have produced assemblages that include between 28 and 32 different fish taxa in any given site, representing a total of 50 different species of boney fishes. My ethnographic studies reveal that 112 species of fishes are regularly exploited in the contemporary villages, while marine biological surveys documented just over 200 species of boney fishes. The species identified through each of these lines of evidence overlap considerably, suggesting continuity in the available resources, past and present, and continuity in the way that marine resources have been exploited throughout Lauan history. Undoubtedly, more research is needed to confirm my initial observations and the conclusions, but ethnoarchaeology has helped me identify archaeological and zooarchaeological questions that may be tested with additional data.

Conclusions

Like many anthropologists I am interested in understanding how traditions evolve and how everyday rituals create meaning and contribute to social reproduction. Lauans straddle two worlds: they are well aware of and engage in the world system and yet they choose to live in a more traditional setting, physically, ideologically, and verbally juxtaposing the village life with that of the towns and cities. In the process of living they redefine tradition and what it means to be Lauan in an ever-changing world. Social order and social space are maintained by adherence to tradition but at the same time a certain amount of flexibility allows for innovations and reinterpretation of traditions; examples can be seen in fishing, eating, and household orientation and organization.

In sum, my ethnoarchaeological explorations have illuminated a number of social issues that may not have been detectable from an archaeological perspective alone. First, the social environment extends well beyond the physical landscape and includes seascape; these physical aspects of the environment mark ecological and social divisions, shape worldview, and contribute to a person's identity. Second, the female realm begins in the village, domestic spaces, and the kitchen, but extends beyond the village and into the inshore area of the sea. Third, the Lau Islanders are flexible and open to change as they actively maintain, engage in, and re-create tradition. Fourth, traditional ecological knowledge (TEK) facilitates this flexibility through an understanding of the natural world and the interrelations of human and environment. Fifth and finally, archaeologists are well positioned to sail at once in several seas and to contribute to our discipline on many levels. Our data and sensitivities have the ability to

expand ethnographic understandings of alterity, deep time, historical continuity and discontinuity, material culture, and the historical ecological interactions between people and the environment.

References Cited

Allen, Melinda S.

2006 New ideas about late Holocene climate variability in the Central Pacific. *Current Anthropology* 47:521–535.

Best, S. B.

2002 Lapita: A View From the East. New Zealand Archaeological Monograph 24. New Zealand Archaeological Association Publications. Auckland Museum, Auckland.

D'Arcy, Paul

2006 The People of the Sea: Environment, Identity, and History in Oceania. University of Hawaïi Press, Honolulu.

Geertz, Clifford

1988 Works and Lives: The Anthropologist as Author. Stanford University Press, Stanford.

Hocart, A. M.

1929 *The Lau Islands, Fiji*. B. P. Bishop Museum Bulletin 62. Bishop Museum Press, Honolulu.

Jones, Sharyn

2009a Food and Gender in Fiji: Ethnoarchaeological Explorations. Lexington Books/ Rowman and Littlefield, New York.

2009b A Long-Term Perspective on Biodiversity and Marine Resource Exploitation in Fiji's Lau Group. *Pacific Science* 63(4): 617–648.

Kirch, Patrick V., and Roger C. Green

1987 History, Phylogeny, and Evolution in Polynesia. Current Anthropology 28:431–456.

2001 Hawaiki, Ancestral Polynesia: An Essay in Historical Anthropology. Cambridge University Press, Cambridge.

Lilly, Ian (editor)

2006 Archaeology of Oceania: Australia, and the Pacific Islands. Blackwell Publishing, Oxford.

Nunn, P. D., R. Kumar, S. Matararaba, T. Ishimura, J. Seeto, S. Rayawa, S. Kuruyawa, A. Nasila, B. Oloni, A. R. Ram, P. Saunivalu, P. Singh, and E. Tegu

2004 Early Lapita settlement site at Bourewa, Southwest Viti Levu Island, Fiji. Archaeology in Oceania 39:139–143.

Sahlins, Marshall D.

1962 Moala: Culture and Nature on a Fijian Island. University of Michigan Press, Ann Arbor.

SHELL MIDDENS IN A PACIFIC ISLAND VILLAGE

BARAULU, ROVIANA LAGOON, WESTERN SALOMON ISLANDS

Carola Flores

Carola Flores is a doctoral student at the University of California, Santa Barbara.

hell middens are ubiquitous coastline features as humans have used and deposited shell around coastal settlements for millennia. The widespread geographical distribution of shell middens is perhaps surpassed by the diversity of shellfish deposition patterns among coastal sites. Ethnoarchaeology provides a useful tool to improve archaeological understanding of shell midden variability (Binford 1980). Why do shellfish mounds have different sizes, shapes, locations, and component cultural remains? Answers to this question may be related to the different uses for shellfish and for the piles made from them. While it is important to make parsimonious interpretations of ethnographic examples in archaeological interpretations, careful observation of living systems will always be a contribution.

Baraulu is a village of approximately 600 people, located on the shores of Roviana Lagoon, Western Salomon Islands. It is about 4.5 hectares and located on elevated terrain, about 3 m above sea level. Houses are aligned around the edge of the promontory looking inside the village, and at the center there is a large clear space of about half a hectare. Inside this space there is the community hall where religious events such as night praying and special ceremonies take place.

People from Baraulu have a mixed diet of marine and terrestrial resources. Marine resources include wild products obtained by fishing and gathering, and terrestrial resources are exploited from coconut plantations and orchards located a few meters to a few kilometers away from the village. Together with gardening, shellfish gathering is one of the main female activities. Shellfish are mainly collected for subsistence and for sale in small markets (Figure 1). The main species collected are in mangroves and include the mangrove clams: *Anadara granosa* (blood cockle) and *Polymesoda* spp. (mud clam), locally named *Riki* and *Deo*, respectively (Aswani and Weiant 2004). Clam habitats are distributed around 2–3 km away from the village, a distance that women travel in paddle canoes.

As a preliminary approach to understanding shell midden formation and spatial patterns of deposition around islander villages, during August 2008 I administered a questionnaire to clam collectors and conducted a nonsystematic observation of shell mounds around Baraulu village. By combining questionnaires and observations I was able to identify a pattern of shell deposition. This data is particular to the context of Baraulu village and relates to the use of shellfish after consumption and the spatial distribution of shellfish deposition around the village.

A random sample of 25 women who gather shellfish was selected for interviews; this sample was drawn from a total of 50 potential households. They were asked about clam species preference, use, and depositional locations of shells, among many other topics (e.g., parent's origins, foraging patterns, perception about clam abundance through time, marine protected areas, local management, and effects of these practices). From the questionnaire I learned that Baraulu women gather clams (*Riki* and *Deo*) up to three times a week, especially during the *masa rane* (day low tide) season from May to August, collecting approximately 30 kilos (25 kilos per bag) total per excursion (Figure 2). Women interviewed said that they prefer *Deo* over *Riki*, mainly due to their taste and accessibility. When people prepare for religion-communal events, more clams are collected more frequently.

A null hypothesis regarding shellfish deposition was that shells discarded around Baraulu represented a complete sample of the shells consumed by the villagers. Two observations undermined this hypothesis. The first was that during gathering journeys, a few clams were cooked, eaten and discarded at the place of collection. The second was that some shells are sold at the market and are not consumed by the Baraulu villagers, specially *Riki*, which is used for necklaces and as shell-money by inhabitants of other islands (Aswani and Sheppard 2003). These two observations imply that although about 90 percent of collected shells were dis-



Figure 1. Local market where women sell clam shells, several hours (paddling) away from Baraulu village, Solomon Islands.

carded around the village, any shell mound excavation around it would yield fewer shells than were consumed by villagers in the past, and in particular the abundance of *Riki* in the past would be underestimated.

In the village I identified four main areas of shellfish accumulation, where 99 percent of the shells deposited were clams. These areas are sea cliffs, wharfs, shores, and kitchens (Figure 3). With the exception of kitchens, all the shell deposition areas are located on the backside of the village, toward the sea, while places toward the central communal space stay clean and free of midden (Figure 4). Although in the questionnaires women did not mention specific reasons for preferring one or another area for shell deposition, some highlighted the use of the same place over and over due to specific characteristics. For example, clams shells in the kitchen are readily accessible for later domestic uses (such as scrapers), on the shore the shells are easy to clean out, and on the wharf they are later used as building material. I also found that the type of shellfish discarded in one place or another is not always the same. Riki shells were saved to sell in the market, and small Deo shells were left in the kitchen for use as spoons or scrapers for potatoes and coconuts. Shells not sold or used as utensils were discarded in the four places mentioned above.

From the questionnaire data, I was unable to determine any specific rules regarding who contributes to or uses disposal areas. With the exception of kitchens, located around hous-



Figure 2. Baskets containing Deo shells collected in a day.

es, a common spatial factor identified was proximity among houses, cliffs, and wharfs. Since houses inhabited by relatives are clustered in space, a potential connection may exist between cliffs and wharfs neighboring different family locations (Beck and Hill 2004). Hence, shells deposited around kitchens, cliffs, and wharfs may constitute a potentially reliable archeological context for examining a given household's behavior.

Interestingly, some areas of shell disposal can be determined through the secondary use of shellfish as artifacts, rather than their primary use as food. Unexpectedly, kitchen sites of disposal are directly associated with the use of shells as utensils and not with the consumption of shellfish. On the other hand, wharf sites can be associated with shell use as construction material. The only sites directly related to shellfish disposal and shellfish consumption are cliffs. Important post-depositional processes affecting these potential archaeological sites are storms, cliff erosion, and kitchen cleaning, thus restricting potential archaeological insights into sources of variability in shell mound or midden formation.

In sum, three useful ethnoarchaeological insights are derived from observations around Baraulu village and the subsequent questionnaire data from women clam-collectors. First, there is a clear pattern of shellfish accumulation around the edge of the village and distributed in different types of sites, some of which would not be preserved over the long-term (such as shells discarded on the shore). Second, shellfish deposition sites have different characteristics based on the secondary use of shells as kitchen utensils or building material. Finally, the location of these shell disposal sites seems to be related to household distribution and the overall village settlement pattern. For example, religious-communal ceremonies occur at the center of the village, a place that stays clean. The trash from these ceremonies is discarded on the periphery of the village (S. Aswani, personal communication, 2009).



Figure 3. Shellfish accumulation on a cliff near Baraulu village.

The archaeological implications of the preliminary ethnoarchaeological observations outlined above provide an interesting combination of static observations with dynamic explanations about shell-mound formation and distribution around an islander village. Coastal settlements are highly diverse due to several factors such as different degrees of mobility, subsistence strategies, social organization, and population size. Therefore, differences and similarities may arise in the ways people discard their trash. Baraulu village provides one example of that variability. The village is a sedentary communal society that is highly dependent on marine resources. In this context, women are the main shellfish collectors and shellfish species are deposited in the village differentially. To what degree can spatial patterns of shellfish mound deposition and composition be taken as an indicator of familiar and communal social organization? While my preliminary study is not expansive enough to answer this question, it does provide a view into the complex relationship between shellfish disposal patterns and the social and cultural features of the society that uses them.

Acknowledgments. This work was carried out and funded by the project "Rural Development and Community-Based Resource Management in the Salomon Island" directed by Dr. Shankar Aswani, University of California Santa Barbara.



Figure 4. Aerial view of Baraulu village.

References Cited

Aswani, Shankar, and Peter Sheppard

2003 The Archaeology and Ethnohistory of Exchange in Precolonial and Colonial Roviana—Gifts, Commodities, and Inalienable Possessions. Current Anthropology 44:S51–S78.

Aswani, Shankar, and Pam Weiant

2004 Scientific Evaluation in Women's Participatory Management: Monitoring Marine Invertebrate Refugia in the Solomon Islands. *Human Organization* 63(3):301–319.

Beck, Margaret E., and Matthew E. Hill

2004 Rubbish, Relative and Residence: The Family Use of Midden. Journal of Archaeological Method and Theory 11(3):297–333.

Binford, Lewis R.

1980 Willow Smoke and Dogs Tails—Hunter-Gatherer Settlement Systems and Archaeological Site Formation. American Antiquity 45(1):4–20.

FISHERMEN'S SHRINES IN THE NORTHERN MARQUESAS ISLANDS, FRENCH POLYNESIA

Sidsel Millerstrom

Sidsel Millerstrom is with the Oceanic Archaeology Lab, Archaeological Research Facilities, at the University of California, Berkeley

uring recent archaeological surveys of shrines and temples in the northern Marquesan archipelago, 19 fishermen's complexes were documented. As a result, two reports were published in Tahiti, French Polynesia (Millerstrom 2003a, 2005). In this paper I wish to examine these fishermen's sites in the context of the ethnographic literature along with observing current practices and beliefs. I am especially interested in architectural variation and components of the sleeping houses (paepae hiamoe) versus the shrines (ahu/me'ae). While all the fishermen's complexes were considered sacred, identifying some of the shrines is challenging. Marquesan sleeping houses from the late-prehistoric/early-historic period (approximately 1600 to European contact in the 1790s) are relatively uniform throughout the islands; however, the ritual complexes are among the most difficult prehistoric architecture to recognize. Several archaeologists have struggled with the dilemma of distinguishing between the two (e.g., Kellum-Ottino 1971; Millerstrom 2003a, 2003b; Rolett 1998). One of the problems is, perhaps as Linton (1925:35) observed, that on Nuku Hiva, the largest island in the northern archipelago, the ahu/me'ae features closely resemble domestic houses. I do not expect to resolve these problems in such a short essay, but I wish to highlight some of the issues involved. Obviously, more information on fishing practices is needed since the ethnographic material is relatively limited and fragmented.

Fishing outside the open bays always contains an element of uncertainty and danger because of the rugged terrain. The Marquesas Archipelago, situated in the eastern part of the Pacific Ocean, consists of eight volcanic islands that were previously inhabited, a number of islets, and a few surfbeaten rocks. Dramatic ridges towering up to 1,200 meters above sea level characterize the islands. The archipelago is distinguished by jagged peaks, deep, and sometimes narrow valleys, fertile amphitheater like valleys, as well as high cliffs that fall abruptly into the sea. At times, devastating cyclones ravage the archipelago. Due to the cold Humboldt Current from Antarctica that sweeps the coast of South America, protective coral reefs are mostly lacking.

Tautain (1897), a French administrator, Handy (1923), an anthropologist, and Linton (1925) all noted the fishermen complexes. Only Handy elaborated on the architecture and the social aspects of the fishermen. Linton (1925:41), who documented hundreds of archaeological sites during his fieldwork in the early 1920s, offered only a few paragraphs on fishermen's shrines. He wrote, "fishing was a community enterprise and attended with elaborate taboos and religious observances" (1925:41). In the Marquesas, the fishermen shrines were sanctuaries belonging to a professional class (Linton 1925; Handy 1923, 1927). Linton writes: "Each community had a sacred place for its fishermen that was built on the edge of the sea" (1925:41). This shows that the fishermen had a certain social status. Handy (1923:164-65) noted that the sanctuaries consisted of a sleeping place, cook house, a house for nets and fishing paraphernalia, a house shrine where rites were performed, and an area for the canoes. According to Linton (1925:41), most of the fishermen's complexes were destroyed in the 1920s.

Discussion

On Nuku Hiva, we worked in the valleys of Hatihe'u, Anaho, Ha'atuatua, and Ho'oumi where nine structures were documented. Eight structures were recorded on Ua Pou in the valleys of Hakahetau, Hakahau, Hakamai'i, Hakamoui, Hakanahi Bay, and on Vaiaehi shore. Two sites were recorded on Ua Huka in the valleys of Hokatu and Ha'avei (Table 1). The local inhabitants know the location of most of the old fishermen's sites but many of the names are now forgotten. Nevertheless, names of places that contain the word "ahu" or "me'ae" indicate that the complex is a shrine (Dordillon 1931; Linton 1925). Thus far, three of the complexes have been identified as shrines. How can we identify the remaining shrines?

Research elsewhere demonstrates that a shrine contains one or several of the following features: petroglyphs, anthropomorphic sculptures, special trees, worked slabs of red or yellow volcanic tuff, upright stones, a fully paved platform or terrace, and branch coral (Millerstrom 2003b). As in Polynesia,

Table 1. Distribution and Characteristics of Fishermen's Sites

Island/location/site	Length	Width	Height	Surface	Space cell	Courses of stones	Upright stone	Comments and characteristics
UA POU								
Hakanahi Bay, northeast side	9.6*	4.5	.6	43.2	1	1-2	2	Cliff, beach, hau, coral
Hakanahi Bay, northwest side	6.7	3.3	.6	22,1	2	1-4	3	Inland, ridge, pukatea, beach-rock
Vaiaehi Shore, west side	6.0	4.0	.7	24.0	1	1-3	j	Beach, coral, reddish brown tuff, beach
Vaiaehi Shore, east side	3.7	2.5	-4	9.3	1	1	?	Beach, red tuff, coral block
Hakamoui Bay northwest side	18.9	6.6	1.7	124.8	1	1-3	,	Cliff face, beach, pavement
Paepae Tiupe, Hakamoui Bay, northwest side	7.4	6.8	2.7	50.6	2	8	,	Cliff, yellowish red tuff
Hakahau Bay, A'ahuti, northwest side	30.0	11.8	2.4	354.0	1	3-4	j	Beach, megalithic boulders,
Anahoa Bay, east side	7.1	3.5	.73	24.9	2	1-2	ż	Cliff, beach, mi'o
NUKU HIVA								
Hatihe'u, Te Ahu Matanui, west side	è	j	,	,	ķ	,	ż	Shrine, beach
Hatihe'u, Te Ahu Pa'aoa, east side	19.5	13.5	2.0	263.3	į	3	ż	Shrine, beach, polishing stone
Anaho, Me'ae Te Hahaeotetai/Atatai	14.7	11.7	2.0	172.0	1	3	è	Shrine, beach, anthropomorphic sculpture, coral heads
Anaho Bay, west side	5.4	4.9	.34	26.5	1	1	ż	Cliff, beach, beach-rock
Anaho-Ha'atuatua beach	è	j	,	,	ķ	,	ż	Beach, petroglyphs
Anaho/Ha'atuatua trail	4.6	,	.2	;	1	1	j	Cliff, petroglyphs (concentric circles),
Ha'atuatua Bay, southeast side	8.0	6.0	-4	42.0	2	1	j	Petroglyphs (circles), tamanu, Polishing stones, petroglyphs
Hakapu'uvai Valley Hakapa'a	7.9	3.8	-35	30.02	2	1-3	1	North east facing wall is partly submerged in the sea
Ho'oumi, southeast side of bay	è	j	,	,	1	1	ż	Beach, mostly destroyed
UA HUKA								
Hokatu Valley	,	j	,	}	è	;	,	Anthropomorphic figure, petroglyphs (circles), polishing grooves
Ha'avei Valley	è	,	,	,	,	,	ż	Petroglyph (lobster)

^{*}All measurements are in meters

for instance, stone uprights placed in shrines served as a backrest or marked the place of honor for important chiefs or the firstborn son of a chief. They also represented important deified ancestors. In Tahiti, stone uprights placed in the court of shrine structures served as "memorial stone for departed chief" (Henry 1928:135) or as back rests for gods (Emory 1933:16–20). Red volcanic stones or red objects signified status since the color red was considered sacred and associated with the chiefly class throughout Polynesia (Burrows 1938; Handy 1927). In places where these characteristics occurred on fishermen complexes, we can infer that most of the structures served as both shrines and sleeping areas.

A unique structure is situated on the northwest side of Hakanahi Bay, an uninhabited valley on Ua Pou. It is built on the inland valley flat close to a mountain ridge. The round and rough angular basaltic stones used in the construction are of poor quality. Three basalt uprights are placed in the northern section facing the sea. Several large clusters of, some 25–30 m tall, poatea trees (Ochroma pyramidale), also referred to as balsa, are growing around the structure.

According to local residents the *poatea*, a lightweight wood, was used in fishing equipment such as fishing floats, canoe outriggers, and rafts (see also Petard 1986:222–223). Because of the upright stones and its location, it is clear that this structure was linked to the fishermen and that it had religious significance in the past.

Most, but not all of the structures were built against a steep cliff presumably for protection against the elements. But there were other forces at work. The structure consists of a dry stone masonry foundation; the top surface is divided in two, sometimes three sections. While the paved front part was a place to socialize and work, the unpaved section in the rear was for sleeping. In some cases one end of the sleeping area was paved and the space was reserved for sacred objects. A structure of perishable material was built over the sleeping area with the back part of the roof reaching the ground. The spatial organization adhered to important Marquesan social rules. Since a person's head was considered taboo, the body had to be oriented towards the back of the house so that no one could step over the head.

It is interesting how powerful the old sacred sites still are in the minds of some of the Marquesans. In Hatihe'u Valley, there are remains of two fishermen's shrines, one on each side of the bay. Te Ahu Matanui (the temple of large eye[s], face, or genealogy), the shrine on the western side of the bay is located on the beach west of Puhi'oho River. Te Ahu Pa'aoa (the temple of the dolphin) is situated on the east side by a river by the same name. A gravel road cuts through the middle of the shrine. About 30 years ago a house was built on top of the fishermen's shrine to hold the village's community freezer. However, the freezer never worked. According to some of the local inhabitants, the reason for this was that the house was built on sacred ground. The old freezer house was eventually modified to a private home.

The only house complex located on a cliff overlooking the ocean is *paepae* Tiupe, Hakamoui Bay. Toti Teikiehuupoka's father, then 80 years old, referred to the *paepae* as a "tapu fishermen place." He once found a whale tooth necklace on the platform (Toti Teikiehu'upoka, personal communication, Nov. 19, 2003). A fishermen's shrine is located on the beach below. That structure was mostly destroyed in the 1946 tsunami.

Local residents told me that in the past most bays contained two shrines, one at each end of the bay. The data suggests that the number of shrines in each valley depended on the size of the bay and the tribe as well as environmental conditions favorable to fishing. If more than one tribe occupied a valley, fishing rights in the bay were divided and each tribe had a shrine for their fishermen (Handy 1923:164–180). The size of the fishermen's shrines varies greatly. Surface areas range from 9.3 to 354 square meters (Table 1). Four of the complexes have a surface area above 100 square meters. The large complexes are probably associated with the big tribes occupying the largest valleys. Some of the smaller shrines are located in isolated and uninhabited valleys. Several of the shrines are too damaged to measure.

A total of 45 individual petroglyphs and anthropomorphic sculptures were recorded on six fishermen's shrines. Images consist of circles, concentric circles, and a lobster. It is interesting to note that most of the images of sea creatures, such as sharks, whale, octopus, dolphins, turtles, and general fish shapes are found inland and linked to elite domestic houses, tribal ceremonial centers, or placed on isolated boulders (Millerstrom 1997, 2003b:32, Table 3.3). While 11.1 percent of the figures represent anthropomorphs, 86.7 percent depict geometric motifs (e.g., circles and concentric circles). Island wide, a total of 66.3 percent are geometric and 22.7 are anthropomorphs. The emphasis on circular geometric

motifs is also prevalent in early historic Marquesan tattoos and woodcarvings. The motifs are referred to as *mata*. *Mata*, a Proto-Polynesian taxeme refers to eye, face, genealogy, and ancestors (Dordillion 1931; Handy 1923; Walsh and Biggs 1966). The emphasis on the *mata* figures may have been a way to honor and venerate ancestors. The Polynesians' concern with genealogy (*mata*) was strong. Genealogy linked them with their ancestors and defined their social position to their chief. Since the chiefs were believed to descend from the gods, these figures were most likely a way to link the people and their actions to their land, time and space, power, history, ancestors, god and goddesses, and with the spirit world.

Anthropomorphic sculptures (*tiki*) represent important deified ancestors (Handy 1927:93). They were made in both stone and wood (Millerstrom and Edwards 1998:51–62). The miniature (17.5cm) *tiki* found wedged in the paved floor in Hokatu Valley, Ua Huka, probably was a portable fisherman's god. When they were not used in rites they were placed in the ground near the shrines. Fishermen would bring a *tiki* god when they ventured out on a fishing expedition. They believed that the image was imbued with power that would protect them and bring good luck. When it was put in the sea the god would return to land on its own accord (Barrow 1979:81, 75–77; Handy 1923:238–239).

In addition to tamanu (Calophyllum inophyllum), and in one case puatea trees (discussed above), mi'o (Thespesia populnea), also known as Pacific rosewood, grow near some platforms, some with large trunks. Tamanu trees and banyans (Artocarpus altilis), which are considered sacred, are among the trees that often are found near tribal shrine sites. Tamanu, a hard wood, was used in canoe construction and mi'o was used in paddles (Handy 1923:157–159).

Given the criteria discussed thus far, most of the structures can be classified as shrines. With regards to the morphology of the architecture, there are no clear divisions between the sleeping houses and a shrine except those platforms that have a fully paved surface, and/or anthropomorphic art and upright stones (Figures 1 and 2). Undoubtedly, the fishermen's structures had layers of meaning and uses. In Polynesia the divisions between the sacred and the profane were often blurred.

Clearly much work remains to be done. Some of the interesting topics for future examination include the spatial and interspatial distribution of archaeological art, how the fishermen's complexes in the islands of Ua Pou and Ua Huka compare to the ones in Nuku Hiva, formal interviews with local

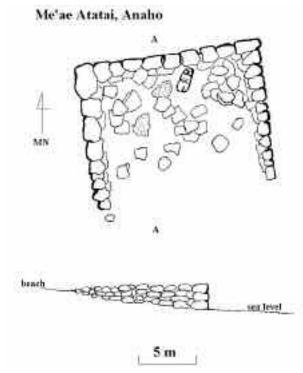


Figure 1. Me'ae Tehahaoetetai, better known as Atatai, Anaho Bay, Nuku Hiva.

fishermen, and exploring past fishing practices with those of today. No cooking houses or canoe sheds were detected during our survey. Thus, it would be of great interest to excavate some of the complexes to identify the general morphology of the various structures and their interspatial relationships. The research is considered work-in-progress and future field investigation will need to include additional surveys on Ua Huka and Ua Pou.

Acknowledgments. Several people in the Marquesas went out of their way to assist me on this project. I especially wish to acknowledge Pascal Teikima'akautoua, Hakahetau, Hubert Pati, Hakatao, Toti Teikiehu'upoko, Hakahau, Debora Kimitete, Taiohae, and Yvonne Katupa, Hatihe'u. I thank them for their cooperation and friendship.

References Cited

Barrow, Terence

1979 The Art of Tahiti and the Neighbouring Society, Austral and Cook Islands. Thames and Hudson, London.

Burrows, E. G

1938 Western Polynesia; A study in Cultural Differentiation. Ethnologiska Studier 7. Utgivarer Walter Kaudern, Sweden.



Figure 2. Tioka Puhetini, a local guide and cultural historian, with a newly discovered anthropomorphic statue (tiki).

Dordillon, Mgr. René Ildefonse

1931 Grammaire et Dictionnaire de la Langue des Iles Marquises. Imprimerie Belin Freres, Paris.

Emory, Kenneth P.

1933 Stone Remains in the Society Islands. B. P. Bishop Museum Bulletin 116, Honolulu.

Handy, E. S. Craighill

1923 *The Native Culture in the Marquesas.* B. P. Bishop Museum Bulletin 9, Honolulu.

1927 Polynesian Religion. B. P. Bishop Museum Bulletin 34, Honolulu.

Henry, Teuira

1928 Ancient Tahiti. B. P. Bishop Museum Bulletin 48, Honolulu.

Kellum-Ottino, M.

1971 Archéologie d'une vallée des iles Marquises, evolution des structures de l'habitat a Hane, Ua Huka. Société des Océanistes, No 26. Musée de l'Homme, Paris.

Linton, Ralph

1925 Archaeology of the Marquesas Islands. B. P. Bishop Museum Bulletin 23, Honolulu.

Millerstrom, Sidsel

1997 Carved and Painted Rock Images in the Marquesas Islands, French Polynesia. Archaeology of Oceania 32(3):181–196.

2003a Ritual architecture in the Northern Marquesas Archipelago. Bilan de la recherche archéologique en Polynésie française 2001–2002. Tahiti.

2003b Gravures rupestres et archéologie de l'habitat de Hatiheu à Nuku Hiva, Polynésie. Translated from English to French by Marie-Thérèse Jacquier. Cahiers du Patrimoine, Service

MILLERSTROM, continued on page 14



IN DEFENSE OF THE DATABASE

Angela H. Keller

Angela Keller is a Senior Archaeologist with AECOM and an Instructor at the University of California, Riverside.

atabases are not sexy. They are the computing equivalent of sensible shoes: necessary, practical, and trenchantly uncool. While geographical information systems (GIS) and other computer-based technologies have achieved a white-hot cachet in archaeology, database design remains as unpopular as ever. Few archaeology articles and books address the fundamentals of data management (e.g., Bagg 1992; Lock 2003; McPherron and Dibble 2002), and even fewer database design courses are offered by anthropology departments across the country. The continuing neglect of database design—as a scholarly topic and a curriculum component—encourages the use of ad hoc and insecure data management systems, and is ultimately detrimental to our research.

Why Databases?

Summarizing the results from an NSF-sponsored workshop on the preservation of digital archaeological data, Keith Kintigh (2006:567) proclaimed a "pressing need" for archaeologists to develop an "information infrastructure that will allow us to archive, access, integrate, and mine disparate data sets." This year (2009), an entire issue of The SAA Archaeological Record (9:2) was devoted to an examination of "International Curation Standards" and the measures various museums and public agencies have instituted to contain both the physical and digital data generated by archaeological research. Each year, archaeologists generate a vast array of incompatible digital data. Even within individual projects, multiple and inconsistent data sets are often created using a variety of software, from text editors and spreadsheets to photo archives and database programs. The task of integrating today's archaeological data is formidable. Ultimately, well-structured databases are the key to creating compatible digital data. Our databases need not be identical from site to site, but they should be structurally sound and well documented. If we are to heed Kintigh's call for digital data integration, we must address any lingering resistance to databases in archaeology.

Unfortunately, database design continues to have the reputation of being not only boring but also impossibly technical. Thus, despite any perceived benefits of a proper database system, many archaeologists continue to use spreadsheets and other less-secure forms of data storage for their data. Over the past decade, though, commercial database platforms have become increasingly user-friendly, if not entirely intuitive. Long gone are the days of rigid coding, awkward user interfaces, and copious code writing that practically required a computer science degree. Through the use of clever wizards and vastly improved help functions, today's "desktop" database programs (such as industry-leaders *Microsoft Access* and *FileMaker Pro*) allow even minimally trained users to create simple databases.

What's Wrong with Spreadsheets?

Over the past decade, I have assisted in the design of several archaeological database systems and, more recently, I have instructed undergraduate and graduate students in database design. In that time, my single greatest challenge has been convincing fellow archaeologists that proper relational databases are different from, and significantly better than, spreadsheet-type programs (e.g., Excel, QuattroPro, Lotus) for the purposes of entering, storing, and manipulating data. Many archaeologists have come to rely on spreadsheets for data management, and can see little benefit in converting their data to a relational database system that would require them to tackle yet another set of computing skills. This is quite understandable, but ultimately shortsighted.

Spreadsheets are incredibly useful tools for analyzing and presenting numerical data like budgets and sales forecasts, but they are truly terrible tools for data management, and they are notoriously error prone (Panko 1998; Wailgum 2007). One of the most obvious weaknesses of spreadsheets is painfully familiar to anyone who has ever sorted a column of data in a spreadsheet only to find that the *rest* of the data were not sorted, leaving a sadly jumbled mess. Such an unfortunate accident is simply not possible within a relational database environment, where data



Figure 1. Photograph of a shell artifact which can be dynamically linked to an artifact database (scale in millimeters).

are always meaningfully related and cannot be inadvertently disassociated (i.e., columns cannot be sorted independently). Unlike spreadsheet programs, database programs are specifically designed to store and manipulate data efficiently and securely. Not surprisingly, then, relational databases are significantly better at data management than spreadsheets in a number of ways:

- data entry can be customized to be more efficient and less error prone,
- data storage is more secure and less likely to be accidentally corrupted,
- redundant and potentially incompatible data can be reduced or eliminated,
- the structure of the database itself encourages the storage of more metadata,
- data sets are more analytically flexible, allowing for novel manipulations while leaving the underlying data intact,
- data transfer and direct linking with GIS and statistical packages is straightforward,
- all kinds of data, from digital photographs (Figure 1) to field

- notes, can be stored and linked in one system, minimizing data loss and archiving complications,
- data can be shared and updated simultaneously by multiple users over a network or via the web, and
- a well-structured database system is easily integrated with other electronic data sets, increasing the potential for meaningful data sharing across projects.

These are the most obvious of the benefits that databases provide relative to spreadsheets. Many of these benefits are inherent in the relational database structure, which constrains and specifies data in ways that spreadsheets cannot. Using spreadsheet programs, most of us make multiple spreadsheet pages to logically organize our data into manageable pieces. These many spreadsheets, unlike the tables in a relational database, cannot be linked or referentially constrained, and they tend to multiply at a dizzying pace. For example, I recently constructed a database system for a multiyear archaeological project for which the staff had created over 130 distinct spreadsheets to manage the basic field data. The integrated database for this same project condensed the plethora of spreadsheets into ten tables, all linked to one another and therefore usable as a single, coherent unit. In the future, the database can be easily expanded to include analytical tables as they are created by the various specialists.

Using the original spreadsheets, a project-wide analysis of things like burial goods, special features, or construction episodes required hand inspecting dozens of separate spreadsheets and often led to incompatible results. With the new database, project-wide analyses can be completed quickly and accurately using one integrated data set. Furthermore, distinct "views" or "slices" of the data (e.g., queries, reports, data-entry forms), tailored to the needs of different analysts, can exist simultaneously without altering the underlying data.

At this point, even the most intransigent spreadsheet devotees may be convinced that databases are worth investigating, but you may still be wondering what is so *relational* about relational databases, and why is a relational structure so valuable?

What is a Relational Database?

Many database designers will tell you that a database is relational if it contains multiple data tables that are linked (related) to one another, but that is not exactly true. Although most properly constructed relational databases do contain multiple linked tables, a database with only one table can also be perfectly relational, if it conforms to the *relational model* developed by Edgar F. Codd, the father of modern database design. While working for IBM in the late 1960s, Codd combined set theory and information technology to develop a more efficient and secure model

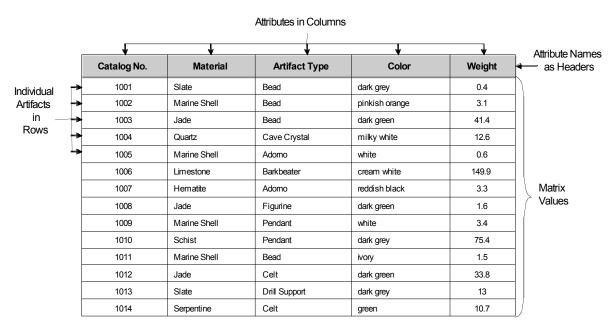


Figure 2. The components of a relational matrix, also known simply as a relation. Note that this relation is not complete, and many attributes are not present.

for storing data: the *relation* (Codd 1970). Codd's relation is a set of values, organized into a matrix of rows and columns, for which meaningful and constraining relationships pertain between all the values based upon their position within the matrix (Figure 2).

In a properly structured relation, each row must describe a single entity (such as an artifact) that is uniquely identifiable (in this case, by way of a catalog number). Each cell must contain a single, non-composite value that may not be repeated elsewhere in the same row. This means that we cannot, for example, record the color *and* the material composition of an artifact in the same cell, and further that we should record color only once. Additionally, all of the values in the same row of a relation must pertain to the same defined item (e.g., observations concerning an individual artifact), and all of the values in the same column must record the same kind of information for each item (e.g., the weight of an artifact).²

Thus, in a relational database, the position of a particular piece of data matters. This means that a significant amount of information *about* the data (metadata) is stored simply by virtue of the database structure itself. We know, without having to write it down every time, that all of the entries in the column "color" contain information about the color, and only the color, of an artifact. We also know that all of the values in a single row contain information about the specified artifact, and no other item.

The same cannot be said for spreadsheets, in which different types of information (values *and* sums of values, for instance) are routinely stored in the same rows and columns.

With their specific constraints and meaningful arrangements, relational databases are fundamentally different from other data-storage systems like paper forms, text files, and spreadsheets. Although a handful of lists, forms, and *Excel* files might constitute an archaeological data set, those disparate bits of data are not a proper relational database. A relational database consists of not just a bunch of data, but also the *logical structure* within which the data are securely stored. Creating that logical structure is the essence of database design. Whereas working with spreadsheets is often rather haphazard, more like writing on a "scratch pad" (Waligum 2007), working with a database platform requires an initial planning and design stage before any data are entered.

The initial database design stage is the stumbling block that often frustrates archaeologists new to databases. Still, I suggest that it is the one step that all archaeologists should complete, and with which all archaeology students should be familiar. When building new databases, we have the opportunity to think critically about the kinds of data we will collect, the manner in which those data will be recorded, and the kinds of questions that can (and cannot) be answered with our data. Ultimately, even if we decide to hire professional designers to create our

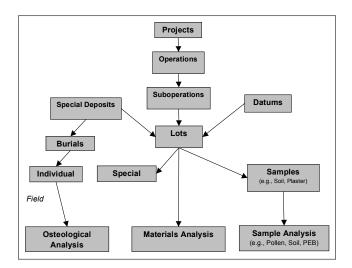


Figure 3. A simple ER diagram for an archaeological database. Entities are represented by rectangles and relationships by arrows.

database systems, we should still complete the initial design process which requires that we think deeply about our data, our questions, and our preconceptions.

Data Modeling: Entities and Relationships

The first step in designing a database, for any purpose, is constructing a simplified model of the universe about which we wish to record information. For archaeologists, our data universe usually consists of distinct field and laboratory settings where we collect complementary sets of data. Within this universe, we must decide which pieces of information to record: we must create a data model. At this stage, many professional database developers create diagrams (often hand drawn) using the entity-relationship data modeling techniques proposed by Peter Chen (1976).3 Figure 3 is a simplified entity-relationship (ER) diagram for an archaeological project. The entities are the labeled boxes and the relationships are the lines joining them (relating them) to one another. Entities are the principal features about which data are collected, such as projects, excavation units, burials, and artifacts. A more detailed ER diagram (Figure 4) might also include elements detailing the nature of the relationships between entities (represented as diamonds), as well as some or all of the attributes (represented as ovals) that define the entities. Initially, though, most database developers prefer to work with simplified ER diagrams of entity boxes and lines, and then "diagram the attributes separately, since they exist at a different level of detail" (Riordan 2005:22).

In the final database, the things that we have diagramed as entities typically become one or more discrete data *tables*, which are

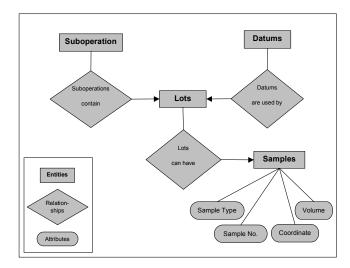


Figure 4. A portion of the ER diagram from Figure 3, with relationships and some attributes diagrammed. Entities are represented by rectangles, relationships by diamonds, and attributes by ovals.

linked via formal relationships, or *joins* (Figure 5). You will notice that in the *Access* relationship diagram, the joining lines are annotated with little ones (1) and infinity symbols (∞). These are the standard symbols that most database developers use to define the kinds of relationships that pertain between entities. Most relationships are $1-\infty$ (one to many), but they can also be $\infty-\infty$ (many to many) and, rarely, 1–1 (one to one). These relationship types are fundamentally semiotic, that is, they reflect the meaningful relationships between defined entities. The meaning of the entities and their relationships is not inherent in the database software, but rather, in our own understanding of what the entities are and how they relate to one another. Thus, the easiest way to understand the nature of a relationship between any two entities is simply to put them together in a sentence, as demonstrated in the diamonds in Figure 4.

Data Modeling: Attributes and Values

After the initial ER diagramming, most designers model the specifics of the data: the *attributes* and *values*. Attributes are classes of data (e.g., color, length, form, usewear) and values are the allowable responses for the given attributes (e.g., white, 10.4 mm, spatulate, grinding). The attributes will eventually become what are called *fields* in most database platforms, and they will look like columns of values with the name of the attribute at the top (see Figure 2). Enumerating the various attributes and values for a given entity is perhaps the most difficult task of database design, and one that will likely continue throughout the project. Every attribute, variable, and nuance that exists in the real world cannot be captured. No matter how careful our recov-

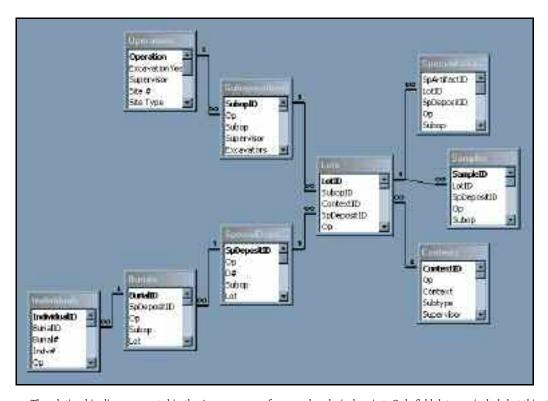


Figure 5. The relationship diagram created in the Access program for an archaeological project. Only field data are included at this stage.

ery and recording methods, documenting "every potentially available piece of information" is "impossible" and, ultimately, counterproductive (Chen 1976:11). We will, for example, routinely record the color and texture of soil, but rarely the smell or taste. To develop a useful data set, we must create a simplified model of the actual world that includes information relevant to our research objectives.

Most archaeologists will recognize the various entities, relationships, attributes, and values in the examples provided. Quite often, we package our data in this manner whether they are initially recorded in notebooks, standardized forms, or electronic formats. Much of the initial design process, then, is relatively straightforward. Our traditionally identified categories of data (e.g., projects, operations, burials, datums) are reproduced as distinct entities that will become tables, and the relationships between those tables also follow our logic. At the attribute level, though, most field recording systems display one feature that does not conform to relational database structure: redundancy.

Reducing Redundancy/Increasing Flexibility

Redundancy is not an intrinsically bad thing. When using paper

forms, redundancy is a very good thing. Recording the same information in multiple places and in multiple ways is an important safeguard against the inevitable mistakes that human beings make. When creating electronic data, though, redundancy typically leads to confusion. In a properly constructed database, most redundant data become unnecessary as information can be stored once, automatically checked against the rest of the data, and then accessed in innumerable ways. In relational databases, by reducing redundancy we create more efficient and more analytically flexible data sets.

Using Codd's relational principles outlined above, redundant data can be systematically eliminated from the data model. In the process, some kinds of data must be removed to separate-but-linked tables, creating the linked-table structure for which relational databases are known. In very general terms, the relational model entails two basic principles that necessitate the separation of data into discrete tables. In most cases, these two principles will help you decide what to take apart and what to keep together when designing a relational database.

Principle 1: Apples & Oranges. We all know the old adage warning against comparing apples and oranges. Similarly, data that are

Artifacts Table

Catalog No.	Material	Artifact Type	Color	Weight
1001	Slate	Bead	dark grey	0.4
1002	Marine Shell	Bead	pinkish orange	3.1
1003	Jade	Bead	dark green	41.4
1004	Quartz	Cave Crystal	milky white	12.6
1005	Marine Shell	Adorno	white	0.6
1006	Limestone	Barkbeater	cream white	149.9

Modifications Table

Catalo	og No.	Mod Key	Modification Type	Location	Description		
10	003	236	Polishing	entire	all surfaces ground and polished to a high sheen		
10	003	237	Perforation	longitudinally	large perforation running down the length of the cylinder to create a tube bead		
10	003	238	Stringwear	perforation ends	rounded and broken perforation margins, grooves worn on one side, incipient fractures radiating from grooves		

Figure 6. Simplified Artifacts and Modifications tables linked by Catalog Number. For clarity, all of the entries in the Modifications table are not shown, only those for Catalog No. 1003.

as conceptually dissimilar as apples are to oranges should not be placed in the same table. Therefore, data about the various entities previously defined in our ER diagrams must be stored separately. As a corollary, *only* data concerning a defined entity should exist in that entity's table. For example, data about the recovery context (e.g., lot) of an artifact should not be stored in the Artifacts table, but rather in a separate Lots table.

Principle 2: Asked & Answered. Due to the popularity legalthemed television shows, I imagine that many of you have heard the courtroom objection, "Objection Your Honor, asked and answered," meaning that the opposing counsel is asking the same question over and over again, maybe in a slightly different form, but ultimately to ill effect. In database design, as well, we try not to ask the same questions repeatedly in the same data row (or record). When there may be more than one answer to a question we would like to ask—such as "What kinds of usewear does this stone tool display?" or "What kinds of decorative designs does this pot retain?"—then we should place those multiple answers in a separate table so as not to ask the same question multiple times in the same record. Thus, repeating data, such as descriptions of several instances of modification on a single artifact, are best modeled in a separate Modifications table linked to the main Artifacts table (Figure 6).

By creating ER diagrams and following these principles, anyone can begin to create a structurally sound data model, although the mechanics of building a working database are beyond the scope of this article. Still, the most significant intellectual work occurs in the initial design stage. If one clearly understands the basic principles of database design, the actual construction of the database can be left to a database specialist.

Conclusion

Although I believe that we should all be using proper databases, simply creating an electronic database will not make an inherently better data set. Certainly, the electronic medium allows for rapid and novel data analysis, but our data are not necessarily more accurate or meaningful simply because they are electronic (Agrawal 2002). When creating databases, we often feel that we are creating more objective pictures of the world than existed previously, but this is an illusion. A well-designed database will reduce the number of technical errors in a data set, but it cannot fix fundamental conceptual or logical errors.

As the primary authors of the archaeological record, we must take the time to thoughtfully construct databases that are logical, consistent, and meticulously documented such that other researchers will be able to understand them with little pream-

INTERFACES

ble. We must consider why we are recording what we are recording, as well as what we are leaving out in the process. Further, we must think about how our recovery and recording procedures affect our questions, our data, and our thoughts about the past (Hodder 2000). These are the deeper questions that conscientious database design entails. Ultimately, these basic methodological and epistemological questions are the reason that I believe every archaeologist and archaeological student should work through the initial stages of database design.

Databases may still be uncool, but simple database design is no longer technically impossible for the average archaeologist. Given the proper instruction, most of our graduate students should be able to master rudimentary database development. Just as many anthropology programs now offer discipline-specific GIS classes, we should also be teaching database design and data management skills for archaeologists. Certainly, *Access* is no more complicated than GIS programs like ESRI's *Arch Info*, which is itself a type of graphical database. If we feel that our students need to learn how to run their own GIS projects, I suggest that we should also give them the database design skills to collect, store, and manipulate the data necessary for those projects and anything else they may choose to explore.

References Cited

Agrawal, Arun

2002 Indigenous Knowledge and the Politics of Classification. International Social Science Journal 54 (173):287–297.

Bagg, Janet

1992 Introduction to Database Systems for Anthropologists. Bulletin of Information on Computing and Anthropology (BICA), Issue No. 8.

Chen, Peter Pin-Shan

1976 The entity-relationship model—toward a unified view of data.

**ACM Transactions on Database Systems (TODS) 1(1):9–36.

Codd, Edgar F.

1970 A Relational Model of Data for Large Shared Data Banks. Communications of the ACM 13(6):377–387.

Hodder, Ian

2000 Developing a Reflexive Method in Archaeology. In Towards a Reflexive Method in Archaeology: The Example of Çatalhöyük, edited by Ian Hodder, pp. 3–14. British Institute of Archaeology at Ankara, Monograph No. 28. McDonald Institute for Archaeological Research, Cambridge, England.

Kintigh, Keith W.

2006 The Promise and the Challenge of Archaeological Data Integration. American Antiquity 71(3):567–578.

Lock, Gary

2003 Using Computers in Archaeology: Towards Virtual Pasts. Routledge, New York.

McPherron, Shannon P., and Harold L. Dibble

2002 Using Computers in Archaeology: A Practical Guide. McGraw-Hill, Boston. Panko, Rayomond R.

1998 What We Know About Spreadsheet Errors. Journal of End User Computing 10(2):15–21. Revised 2008, available online, http://panko.shidler.hawaii.edu: 80/SSR/Mypapers /what-know.htm

Riordan, Rebecca M.

2005 Designing Effective Database Systems. Addison-Wesley, Upper Saddle River, New Jersey.

Wailgum, Thomas

2007 Eight of the Worst Spreadsheet Blunders. CIO: IT Drilldown. Article available online, http://www.cio.com/ article/131500/Eight_of_the_Worst_ Spreadsheet_Blunders, published 8/17/2007, accessed 9/15/2008.

Notes

- 1. Although other database models exist, most desktop database software, including the *Access* and *FileMaker Pro* programs, are based on the relational model. Therefore, most of our databases will be relational in structure, and most will be normalized following the Normal Forms defined by E. F. Codd (see Note 2). In some instances, a dimensional or other model may be more appropriate, but those typically can be constructed using any standard relational database software package (Riordan 2005:107–110).
- 2. For readers interested in the specifics of relational theory, the rules that I have outlined are a summation of E. F. Codd's First, Second, and Third Normal Forms (Codd 1970). There are more normalization forms, but the first three are the ones that apply to all types of relations. For a further introduction to normalization theory and database design, see Rebecca Riordan's (2005) excellent book.
- 3. Note that the database terms *relation* and *relationship* refer to very different things. A relation, as defined by Codd (1970), is a matrix of specifically defined values. A relationship, as defined by Chen (1976), is a meaningful link between two entities (sets of data), that are often structured as relations.



NOMADS AND COMMANDERS

WELCOMING GENERATION X

Lawrence E. Moore

Larry Moore is an Environmental Protection Specialist, US Army Garrison, Presidio of Monterey, California.

enerational models of social change are common today. I'll relate one to archaeology. Winograd and Hais (2008) recently argued that the emerging millennial generation (Table 1) will transform American society and politics, and dominate these for most of the twenty-first century. Their claim is based on the premise that the millennials are like the G.I. generation of World War II fame as they are both civic minded heroic generations. I have no argument with this claim other than it comes early in the generational secession process. The G.I. generation was led and mentored by their next elders, the Lost Generation. Likewise, the millennials will be led and mentored by Generation X (in Europe called Baby Busters or the Seventies Generation). Thus, we need to understand the Xers as they are transitioning into senior leadership roles. This essay briefly summarizes their generational type and outlines what can be expected of them as leaders; it also recognizes the mythological relationship between Gen X and Indiana Jones.

The Generations Model

Strauss and Howe (1991, 1997) provide a model of four generational archetypes that rotate over approximately 80 years. The types are idealist, reactive, civic, and adaptive (Table 1); they are also known as prophets, nomads, heroes, and artists. Gen X is the reactive nomad type. Different endowments characterize the four types. Idealists focus on principles, religion, and education. Reactive generations focus on survival, pragmatism, and liberty. Civics focus on community building, technology, and affluence. Adaptive generations promote pluralism, social justice, and expertise. Civics and Adaptives are collectivists focused on social cooperation. Idealists and Reactives are individualists pursuing self interests. In academia, Idealists moralize a complicated world, Reactives simplify it into manageable fragments, Civics offer simplistic grand narratives, Adaptives add complexity and nuance to simple grand narratives, and the cycle repeats. Since the European colonization of America there have been 19 generations living through five rotations that have influenced American culture and history. Table 1 lists recent ones of interest to archaeology.

As sociological concepts, generational types assist in understanding collective history and individual behavior. Civil War historians often contrast the leadership styles of Robert E. Lee and Ulysses S. Grant. It is useful to know that the former was an Idealist (Transcendentalist) and the latter a Reactive (Gilded) because it informs why they did what they did. Lee initiated campaigns into enemy territory (Antietam, Gettysburg) in the belief that a victory there would be symbolic enough to end the war. Grant preferred to use his larger force in sustained engagement until his smaller opponent was subdued (Vicksburg, Petersburg). The generational types of Lee and Grant reflect the leadership styles of Boomers (values driven) and Xers (pragmatic) that are nearly opposites.

Reactives are Free Agents

Reactive generations are the roughest in American history; they are the "bad" generations, using that word in all its variations. They generally come of age during moralistic culture wars and they suffer economic hardship most of their adult lives; many live a boom and bust life. Gen Xers have been caught in the midst of age-graded wage stagnation. Despite economic growth, the standard of living for a 30 year old in the year 2000 was much less than it was for a 30 year old in 1970 because real median income (inflation adjusted) has stagnated in the United States since the 1970s and personal savings rates have hit lows not seen since the Great Depression; meanwhile, household debt ratios have risen to new highs (Kemenetz 2006; Krugman 2007:124-152; Mooney 2008; O'Shaughnessy 2008; Strauss and Howe 1997:236). The tough economic times that Reactives live through, and the culture wars they try to avoid, casts them as survivalists, bottom-line realists, and scrappy innovators and entrepreneurs. Their values are in stark contrast to prior generations: a career is not the most important thing in their lives, they cannot imagine working for the same company or in the same line of work for their entire lives, they expect to be respected, they are reluctant to commit to much of anything, and they expect to get as much as they give (Peters 2001:48-49).

Table 1. Recent generations with their types and examples.

Name	Туре	Birth years	Examples
Transcendentalist	idealist	1792-1821	Charles Darwin, Herbert Spencer, Henry Schoolcraft, Lewis H. Morgan, E. G. Squier,
			Abraham Lincoln, Susan B. Anthony
Gilded	reactive	1822-1842	Daniel Brinton, Edward B. Tylor, Albert S. Gatschet, Hubert H. Bancroft, Samuel Clemens, Louisa May Alcott
Progressive*	adaptive	1843-1859	Sigmund Freud, William H. Holmes, Franz Boas, C. B. Moore, Woodrow Wilson,
		,,,	Arthur Conan Doyle, William H. Jackson
Missionary	idealist	1860-1882	Alfred L. Kroeber, Hetty Goldman, Howard Carter, H. B. Hawes, Edgar Lee Hewitt,
·			Franklin D. Roosevelt, Julia Morgan
Lost	reactive	1883-1900	Ruth Benedict, Edward Sapir, Alfred. V. Kidder, Ann A. Morris, Winifred Lamb, Dorothy A. Garrod,
			Neil Judd, Luther Cressman, William C. Holden, Carl Guthe
G. I.	civic	1901-1924	Waldo Wedel, Betty Meggars, James Griffin, Mary Leakey, Kathleen Kenyon, Gordon Willey,
			James Ford, Bruce Goff
Silent	adaptive	1925-1942	James Deetz, Cynthia Irwin-Williams, Lewis Binford, Alice B. Kehoe, Thomas King, Dean Snow, James N. Hill, Mark Leone
Boomers**	idealist	1943-1960	Linda Cordell, Ian Hodder, Deborah Pearsall, Kenneth Ames, Michael Shanks, Alison Wylie,
		3 13 3	Michael J. O'Brien
Gen X	reactive	1961-1981	John Kanter, Andrew Duff, Laurie Wilkie, Cornelius Holtorf, Kelly Dixon, Shannon Dawdy,
			Troy Lovata, Julie Schablitsky
Millennials	civic	1982-2002	Female celebrities currently reign: Mandy Moore, Scarlett Johansson, Paris Hilton, Lindsay Lohan,
			Britney Spears, Miley Cyrus
Homeland	adaptive	2002-	Toddlers and elementary school kids

Adapted from Strauss and Howe (1997).

As survivalists Xers are not beholden to any moral agenda other than individualism and eclecticism. Unattached as they are to the agendas of their next elders they are called nihilists which, of course, is inaccurate because what they are doing is not engaging in the culture wars of their elders; they are apathetic toward and tired of those crusades. The generational tiff between Boomers and Xers is real. The former look upon the latter as amoral slackers too focused on rascally fun ("These losers will run society some day? God forbid!"). Xers view Boomers as hypocritical culture warriors too incompetent to manage society ("Will they ever shut up and stop arguing?"). Living in the wake of the Boomers has not been pleasant; so they write about it (Coupland 1991; Gordinier 2008) waiting for their turn at leadership.

Xers have already made lasting impressions on American culture and archaeology. First and foremost, they are interested in having fun. Xers are simplifying the complicated moral world of the Boomers and they are focusing on enjoyable learning experiences. To them, archaeology is fun—it's not a moral crusade, it will not change the world, and debating its status as a science is a wasted effort. Xers are also extremely physical, giving America extreme sports, bungee jumping, snow boarding, and the now popular fist pump. Within the generation there is gender parity in terms of employment; in historical archaeology,

employed women may outnumber men. Gen Xers are also the most tattooed and pierced generation in American history. Colorado archaeologists are having fun with it (http://www.coloradoarchaeologists.org/Funstuff.htm, accessed July 26, 2008). As strong romantics Gen Xers are changing popular culture toward super athletic and pleasantly plump characters because curves, firm or soft, are more appealing than rational slimness and angularity. In archaeology Xers live up to their nomadic ways. They embrace the life of shovel bumming with a sense of irony, caricature, and nobility (de Boer 2004). The shovel bum novel Swamp (Pachinco 1997) is both a great description of contemporary CRM archaeology and of the lifestyle of low income Gen Xers. Their hard-hitting commercialism is seen in companies like Amazon, eBay, Google, Yahoo, and Dell, all founded by Gen Xers. What the entrepreneurs of these companies did was take something that already existed for corporations and made it efficiently available to individuals because their focus is on personal satisfaction, fun, and survival. As it is done today, archaeological research could not be done without the services of companies like these.

Previous reactive generations offer clues to what Gen Xers may be like in senior leadership roles. American presidents George Washington, John Adams, Grant, Hays, Garfield, Arthur, Cleveland, B. Harrison, Truman, and Eisenhower were all Reactives.

^{*}No heroic generation emerged from the Civil War possibly because it ended with everyone feeling tragic; the Millennials could fizzle out as well.

**The post WWII baby boom was a spike in the birth rate from 1946 to 1964; the Strauss and Howe model defines generations based on social cohort differences not changes in birth rates.

Table 2. Mythical characters and generational types.

Idealists / Prophets Jesus, Mohammed, Moses, Dumbledore, Gandalf, Obi-Wan Kenobi	Reactives / Nomads Huck Finn, Indiana Jones, Lara Croft, Sam Spade, Snape, Aragon, Han Solo
Adaptives / Artists	Civics / Heroes
Buddha, Confucius, Merlin, Yoda,	Superman, Batman, Wonder Woman,
Sherlock Holmes, James Bond	Harry Potter, Frodo, Luke Skywalker

The traits that connect them are pragmatism, fiscal conservatism, and a low tolerance for risk taking while in office. They were also generally unpretentious. These presidents had had prior military service and several had been generals. They all took their leadership roles during or directly after American culture was in secular crisis (the Revolution, the Civil War, and the Depression-WW II). Since September 11, 2001, America has again been in secular crisis and the midlife reactive generation is standing up. Additionally, Reactives attaining high office fairly young may tend toward autocracy (Sarah Palin, Michelle Rhee) that likely moderates with age. The nomadic type also has its flamboyant characters such as Barack Obama, George Custer, and Sir Mortimer Wheeler.

Reactives are best understood as Nomads and Commanders with keen analytical, management, and writing skills. Nomads wander geography, but also the mind, the soul, and the heart. As they have no cultural agenda other than survival they are not wedded to any theory or methodology. Nomads will pursue concepts that are productive toward planned goals; they will even abandon useful concepts in the desire to experiment with others. Previous reactive scientists include biologists Alfred Wallace, Thomas Huxley, Julian Huxley, and Francis Galton, economists Friedrich Hayek and Karl Polanyi, and geographer Carl Sauer. There is nothing wrong with being classified with these thinkers even as some of them pursued concepts that are generally unacceptable today (Social Darwinism, eugenics). More than other generations, nomads explore all corners of life, its wonderful pleasures (Mae West) and its darkest powers (Adolf Hitler).

The Lost Generation of archaeologists left a strong imprint on the profession, most notably because they were the core group of journeymen who founded the SAA (c.f., Guthe 1967). They also established the basic outlines of regional chronological sequences and provided richly described reports. Their theories are largely forgotten and their methods and categories (the Direct Historical Approach, the Pecos Classification System, and the Midwestern Taxonomic System) are embedded in today's research. A roll call of the generation provides a few famous mentors and many forgotten ones: V. Gordon Childe, A.

V. Kidder, W. C. McKern, Frank H. H. Roberts, William Duncan Strong, Ann Morris, William Albright, Gertrude Caton-Thompson, Raymond Dart, Dorothy Garrod, Winifred Lamb, Matthew Stirling, Helge Instad, and many more. The Gen X legacy will be similar to the Lost: unpretentious, generally non-ideological, and grounded in data. Archaeology will take a strong pragmatic turn in the next few years.

Reactive Mythology

Reactive generations are also the source for America's most iconic archaeologist, Indiana Jones, whose plotline places him within the Lost Generation (Table 2). This icon combines several reactive traits. From the Gilded Generation Indy takes the cowboy and gunfighter images, the nomadic lost souls of the Old West (Wild Bill Hickock, Buffalo Bill Cody, and Wyatt Earp). From the Lost Generation he takes the images of adventurers and explorers (F. A. Mitchell-Hedges, Roy Chapman Andrews) and blends them with characters from Lost mystery writers (Agatha Christie, Raymond Chandler, and Dasheill Hammett). As an anti-hero Indy is an Archaeologist-Detective and Archaeologist-Adventurer (Holtorf 2007: themes A and D). He is Hammett's Sam Spade but not Arthur C. Doyle's Sherlock Holmes (an adaptive character). Indy, of course, does not reflect the full range of reactive traits. In the Indy movies he is mostly a nomad. There are brief scenes where his commander side is shown but it is not the focus of the movies. Action movies with reactive main characters do best commercially when the nomadic image is emphasized.

Modern Western mythology has provided audiences with several stories—Harry Potter, Lord of the Rings, and Star Wars—that typecast the reactive commander role. In these apocalyptic tales the young civic heroes always come in teams with a team leader (Harry Potter/Hermione/Ron; Frodo/Sam/Merry/Pippin; Luke Skywalker/Princess Leia). These heroes are the focus of the stories and their exploits are legend. However, they cannot succeed without help from the next elder generation, as mentors, teachers, and leaders (Snape/Hagrid/the Dark Arts teachers; Aragon/Arwen/Boromir/Gimli/Legoas; Han Solo/Chewie/robots). In the commander role Reactives are often military officers or peo-

ple of action but they can also be teachers and defenders of culture (Holtorf 2007: themes R and C). Reactives live nomadic and dangerous lives while young; they may even be iconoclasts. They mature into careful, pragmatic, and conservative leaders who enable the younger civic heroes to greatness.

Every generation has a sociological function, its mythic destiny, and they can succeed or fail. Heroic generations provide the critical mass that pushes a crisis-laden society to greatness; afterwards, they are the builders of a new society. Adaptives are the social reformers who spread elegance and grace through society, and yet they may compromise it through indecision. Idealists are culture warriors who polarize and potentially destroy society; from within their chaos comes a visionary offering a new moral order. Reactives wander a cultural wasteland and then they redeem it, assisting its rebirth. For Generation X history has charged them with the task of demonstrating that Americans can still enjoy "life, liberty, and the pursuit of happiness" without letting the world fly to pieces, without bankrupting the nation, and without squandering scarce global resources. They get to do the dirty work, have a little fun, and help the heroic kids behind them (Howe and Strauss 1993:228).

The Eternal Return

America in the '00s has been a fearful place. Since 9/11 we have been afraid of terrorists, of blue and red states, of our inept leaders, and of the economy. Two Boomer presidencies (Clinton and Bush Jr.) have wracked the culture off its moorings, letting it flounder in a crisis of confidence. The economy is in systemic crisis. The collapse of the Bush administration in 2006 sent the conservative movement into shock and Boomers everywhere are anxious because the failure of one part suggests the failure of the whole generation that believed it could change the world. They are, actually, living out their destiny as culture warriors who may be destroyers. Mythology helps to sway the fears because during the apocalypse there is always a prophet giving moral courage and guidance to the younger generations. Harry, Frodo, and Luke all had steely eyed gray-haired champions to look up too (Dumbledore, Gandalf, Obi-Wan Kenobi). This gray champion has yet to emerge from the Boomer generation. History suggests that he or she will as they always have in the past (Franklin D. Roosevelt, Abraham Lincoln, and Benjamin Franklin). This secular crisis is far from over. There is time for a Boomer to stand up, deliver a vision of a new moral order, and complete a generation's destiny.

Gen Xers are also doing their part; they are entering upper management positions and tenured professorships. They bring to archaeology pragmatism, flexibility, fiscal conservatism, and keen analytical abilities. They are unpretentious and mostly non-ideological. They are not culture warriors but are redeemers of culture. Nearly 80 years after the creation of SAA, Reactives are

here again to assist in the reinvention of archaeology, something that millenials will fully materialize. As it stands now CRM is the part that needs the most help. It, like life in general for Gen Xers, is a swamp of inequity and foolishness that needs redemption. Gen Xers can do it as it is their destiny. Welcome back Indy.

References Cited

Coupland, Douglas

1991 Generation X: Tales for an Accelerated Culture. St Martin's Press, New York.

de Boer, Trent

2004 Shovel Bum. Comix of Archaeological Field Life. Altamira Press, Walnut Creek, CA.

Gordinier, Jeff

2008 X Saves the World: How Generation X Got the Shaft but Can Still Keep Everything from Sucking. Viking, New York.

Guthe, Carl

1967 Reflections on the Founding of the Society for American Archaeology. American Antiquity 32(4):433–440.

Holtorf, Cornelius

2007 Archaeology is a Brand: The Meaning of Archaeology in Contemporary Popular Culture. Left Coast Press, Walnut Creek, California

Howe, Neil and Bill Strauss

1993 13^{th} Gen: Abort, Retry, Ignore, Fail? Vintage Books, New York. Kemenetz, Anya

2006 Generation Debt: Why Now is a Terrible Time to be Young. Riverhead Books, New York.

Krugman, Paul

2007 The Conscience of a Liberal. W. W. Norton and Company, New York.

Mooney, Nan

2008 (Not) Keeping Up With Our Parents: The Decline of the Professional Middle Class. Beacon Press, New York.

O'Shaughnessy, Lynn

2008 Debt-squeezed Gen X saves little. *USAToday*, June 27, 2008. http://www.usatoday.com/money/perfi/retirement/2008-05-19-generation-x-retirement_N.htm?loc=interstitialskip (accessed July 26, 2008).

Pachinco, Joe

1997 Swamp. Superstition Street Press, Berkeley, California.

Peters, Sharon

2001 Gen X in the Newsroom: Expectations, Attitudes Don't Fit Traditional Culture. Media Management Center, Northwestern University, Evanston, Illinois.

Strauss, William and Neil Howe

1991 Generations: The History of America's Future, 1584 to 2069. William Morrow, New York.

1997 The Fourth Turning: An American Prophecy. Broadway Books, New York.

Winograd, Morley, and Michael D. Hais

2008 Millennial Makeover: MySpace, YouTube, and the Future of American Politics. Rutgers University Press, Piscataway, New Jersey.

36



MONEY MATTERS

Paul D. Welch

Paul D. Welch is the Treasurer for the Society for American Archaeology.

he accompanying financial statements for 2008 present a financial picture that looks darker than the reality. On paper, the SAA ended 2008 with lower net assets than we had at the end of 2007. However, that paper loss was due solely to declines in the value of our endowments and reserve fund investments (declines that have now been erased—see below). If we had sold those investments at the end of 2008 the loss would have become "realized." We did not sell any of the investments so the loss was "unrealized," i.e., it existed only on paper. When we remove the unrealized loss from the picture, we ended the year with an allocatable surplus of \$249,685. The primary reasons for the surplus were that the Vancouver meeting was the largest we ever had, and we had a corresponding peak in the number of SAA members during 2008 (membership dues and the annual meeting are our two largest sources of revenue). In short, financially 2008 was a good year for the SAA in all respects save for the on-paper loss in the value of our investments. I also want to note that new, considerably more stringent auditing standards came into effect for the 2008 year, and once again the SAA came through the audit with a clean report.

This is a good time to provide an update on how the national economy has affected the SAA over the past year. Last fall, as banks and other financial institutions were digging themselves into deep stratigraphic pits, I wrote in this column about the steps SAA was taking to safeguard our finances. Those steps were entirely successful, but as the national economy worsened during the winter we became concerned about how this would affect attendance at the annual meeting in Atlanta, the number of dues-paying members for the year, and hence our ability to avoid an operating loss in 2009. In light of that concern, the Board set aside a large part of the 2008 allocatable surplus, to use if 2009 revenue fell short of expectations. The 2009 fiscal year is not over yet, but so far it does not look like we will need to make use of that set-aside. Revenue for the year is in fact running slightly below the budget forecast, but so are expenses. Meanwhile, our investments (endowments and reserve fund) have done well since a low point in March. For example, the reserve fund, our "rainy day money," now has the highest balance ever. This balance equals about 73 percent of the 2009 expense budget, roughly the same percentage that the fund had in spring 2007 before the stock market began to wobble and swoon.

As for the SAA endowments (Native American Scholarship, Public Education, and General Endowment), hundreds of SAA members have made contributions or pledges as part of our "Dig Deep" drive to raise \$500,000 before the 75th Anniversary meeting in St. Louis. We are tantalizingly short of that goal, and there are many SAA members who have not yet contributed. So get out those checkbooks and donate to your favorite endowment. Any contribution, no matter how large or small, will enable you to wear one of the coveted, green Dig Deep buttons at the St. Louis meeting!



SAA's 75th Anniversary Meeting April 14-18, 2010

The Annual Meeting section of SAAweb offers the *latest* information about SAA's upcoming 75th Anniversary Meeting in St. Louis.

www.saa.org/annualmeeting

You'll find information about:

- Renaissance St. Louis Grand (Headquarters Hotel)
- Hampton Inn Gateway Arch (Student Hotel)
- Film Fest 7.5
- And much more!

Advance Registration will also be available on SAAweb in December.

Come Celebrate With SAA!!!

SOCIETY FOR AMERICAN ARCHAEOLOGY

BALANCE SHEETS

ASSETS

	Decem	ber 31,
*	2008	2007
CURRENT ASSETS Cash and Cash Equivalents Accounts Receivable, Net	\$ 1,928,361	\$ 2,022,531 24,298
Pledges Receivable, Current Portion	34,030	18,105
Accrued Interest Receivable	11,413	3,076
Prepaid Expenses, Current Portion	42,518	60,767
Total Current Assets	2,016,322	2,128,777
PREPAID EXPENSES, Net of Current Portion	2,160	
PLEDGES RECEIVABLE, Net of Current Portion	42,680	72,485
INVESTMENTS	1,605,728	1,742,243
PROPERTY AND EQUIPMENT, Net	69,206	60,758
DEPOSITS	6,076	6,076
	\$ 3,742,172	\$ 4,010,339
LIABILITIES AND NET ASSETS		
CURRENT LIABILITIES		
Accounts Payable and Accrued Expenses	\$ 43,900	\$ 22,650
Deferred Revenue		
Membership Dues, Current Portion	397,274	465,094
Subscriptions Meetings and Other	168,746 285,406	162,089 379,397
Meetings and Other	851,426	1,006,580
Total Current Liabilities	895,326	1,029,230
DEFERRED MEMBERSHIP DUES, Net of Current Portion	36,233	38,512
Total Liabilities	931,559	1,067,742
NET ASSETS	331,333	1,007,142
Unrestricted		
Undesignated	1,601,616	1,685,990
Board-Designated	489,278	532,330
Unrealized Loss on Temporarily Restricted Net Assets	(7,049)	
	2,083,845	2,218,320
Temporarily Restricted	83,448	115,278
Permanently Restricted	643,320	608,999
Total Net Assets	2,810,613	2,942,597
	\$ 3,742,172	\$ 4,010,339

SOCIETY FOR AMERICAN ARCHAEOLOGY

STATEMENTS OF ACTIVITIES

STROKER STRO			30	2008	Year Ended December 31,	ecember 31,	20	2007		
\$ 750,656 \$ 750,656 \$ 750,656 \$ 712,225 \$ 750,656 \$ 712,225 \$ 712,225 \$ 712,225 \$ 72,225 \$ 750,656 \$ 712,225 \$ 72,226 \$ 72,226 \$ 72,226 \$ 72,226 \$ 72,226 \$ 72,020 <th>-</th> <th>Unrestricted</th> <th>Temporarily Restricted</th> <th>Permanently Restricted</th> <th>Total</th> <th>Unrestricted</th> <th>Temporarily Restricted</th> <th>Permanently Restricted</th> <th>Total</th> <th>le le</th>	-	Unrestricted	Temporarily Restricted	Permanently Restricted	Total	Unrestricted	Temporarily Restricted	Permanently Restricted	Total	le le
556,819 556,819 556,049 277,296 11,079 286,049 11,079 11,079 280,049 11,079 11,079 240,910 8,389 (12,684) 7,786 1,532,171 240,910 5,016 1,532,171 (133,501) 34,321 1,42,085 1,542,085 1,542,085 120,040 342,010 221,429 1,437,020 340,240 342,010 221,429 1,144,012 1,148,075 1,148,075 1,174,012 1,174,012 1,148,005 1,147,090 390,563 1,174,012 1,148,005 1,472,090 1,174,012 1,174,012 1,1472,090 1,472,090 1,154,475 1,101,671 1,101,671 1,101,671 1,101,671 101,671 34,321 (131,984) 364,340 2,218,320 1,15,278 1,185,399 1,853,980	REVENUE AND SUPPORT Membership Dues				\$ 750,626	\$ 712,225			8	712,225
11,720	Armusi Meeting	596,819			596,819	568,049			36	568,049
11,079	Publications	277,250			277,250	283,828			8	283,828
142,085	Public Programs and Services	8/0,11			6/0,11	7,788		= 000	- 1	7,788
1,500 1,50	Organization and Administration Member Bronzens and Services	(134,686)	(112,807)	34,387	(2/13,1/2)	240,910	31,057	104,328	6	376,295
142,085	Awards	2,000			2,000	5,016			-	5,016
1,532,171 (133,501) 34,321 1,432,991 1,837,020 299,667 320,340 340,240 340,240 340,010 340,240 340,010	Net Assets Released from Restriction -	100	000				1000 00			
142,085 142,085 120,040 299,657 320,390 340,240 340,240 342,010 221,429 194,317 158,552 15,671 1,174,012 1,174,012 13,777 1,174,012 1,174,012 1,148,205 300,945 370,018 292,588 20,945 320,945 31,887 390,963 320,945 320,475 1,564,975 1,472,690 1,472,690 (101,671) 101,671 34,321 (131,984) 364,340 2,218,320 115,278 608,999 2,942,597 1,853,980	Total Revenue and Support	1,532,171	(133,501)	34,321	1,432,991	1,837,020	28,057	104,328	1,96	1,969,405
142,085 120,040 299,657 320,240 340,240 340,240 221,429 194,317 158,552 157,671 1,174,012 1,148,205 370,018 370,018 20,945 320,963 390,963 324,75 1,564,975 1,472,690 (101,671) 101,671 (134,475) (131,887) 2,218,320 115,278 608,999 2,942,597 1,853,980	EXPENSES									
299,667 120,040 299,667 320,390 340,240 340,240 221,429 194,317 158,552 157,671 12,049 13,777 1,174,012 1,146,205 370,018 20,945 390,963 370,018 282,588 20,945 31,887 390,963 324,475 (101,671) 101,671 34,321 (131,984) 364,340 2,218,320 115,278 608,999 2,942,597 1,853,980	Program Services	****							,	
340,240 340,	Membership	142,085			142,085	120,040			27	20,040
221,429 340,240 342,010 240,240 342,010 251,429 194,317 15,049 11,174,012 1,148,205 370,018 20,945 390,963 324,475 1,564,975 101,671 34,321 (131,984) 364,340 (134,475) (31,830) 34,321 (131,984) 364,340 2,218,320 115,278 608,999 2,942,597 1,853,980	Annual Meeting	299,667			299,657	320,390			88	320,390
158,552 158,552 157,671 12,049 12,049 13,777 1,174,012 1,174,012 1,148,205 370,018 20,945 320,475 20,945 320,945 324,475 1,564,975 1,472,690 (101,671) 101,671 101,671 (134,475) (31,830) 34,321 (131,984) 364,340 2,218,320 115,278 608,999 2,942,597 1,853,980	Publications	340,240			340,240	342,010			ð	342,010
158,552	Public Programs and Services	221,429			221,429	194,317		-	\$	194,317
12,049	Member Programs and Services	158,552			158,552	157,671			1	157,671
1,174,012 1,148,205 370,016 20,945 390,963 1,564,975 1,564,975 (132,804) (133,501) 34,321 (131,984) 364,340 (134,475) (31,830) 34,321 (131,984) 364,340 2,218,320 115,278 608,999 2,942,597 1,853,980	Awards	12,049			12,049	13,777				13,777
370,018 370,018 292,588 20,945 30,945 31,887 390,963 324,475 1,564,975 1,564,975 1,472,690 (101,671) 101,671 34,321 (131,984) 364,340 (134,475) (31,830) 34,321 (131,984) 364,340 2,218,320 115,278 608,999 2,942,597 1,853,980		1,174,012			1,174,012	1,148,205			1,1	,148,205
20,945 31,887 390,963 324,475 1,564,975 1,472,690 (32,804) (133,501) (101,671) 101,671 (134,475) (31,830) 34,321 (131,984) 364,340 2,218,320 115,278 608,989 2,942,597 1,853,980	Supporting Services Management and General	370.018		٠	370.018	990 598			. 6	200 F88
390,963 384,475 1,564,975 1,564,975 (32,804) (133,501) 34,321 (131,984) 364,340 (101,671) 101,671 34,321 (131,984) 364,340 (134,475) (31,830) 34,321 (131,984) 384,340 2,218,320 115,278 608,989 2,942,597 1,853,980	Membership Development	20,945			20,945	31,887				31,887
1,564,975 1,564,975 1,472,680 (32,804) (133,501) 34,321 (131,984) 364,340 (101,671) 101,671 34,321 (131,984) 364,340 2,218,320 115,278 608,989 2,942,597 1,853,980		390,963			390,963	324,475			25	324,475
(32,804) (133,501) 34,321 (131,984) 364,340 (101,671) 101,671 (134,475) (31,830) 34,321 (131,984) 364,340 2,218,320 115,278 608,989 2,942,597 1,853,980	Total Expenses	1,564,975			1,564,975	1,472,690			1,47	472,680
(134,475) (31,830) 34,321 (131,984) 364,340 Year 2,218,320 115,278 608,999 2,942,597 1,853,980	CHANGE IN NET ASSETS BEFORE ADOPTION OF FSP 117-1	(32,804)	(133,501)	34,321	(131,984)	364,340	28,067	104,328	#	496,725
(134,475) (31,830) 34,321 (131,984) 364,340 Year 2,218,320 115,278 608,999 2,942,597 1,853,980	Adoption of FSP 117-1	(101,671)	101,671							
Year 2,218,320 115,278 608,999 2,942,597 1,853,980	CHANGE IN NET ASSETS	(134,475)	(31,830)	34,321	(131,984)	364,340	28,057	104,328	*	496,725
	NET ASSETS, Beginning of Year	2,218,320	115,278	608,999	2,942,597	1,853,980	87,221	504,671	2.4	2,445,872
\$ 2,083,845 \$ 83,448 \$ 643,320 \$ 2,810,613 \$ 2,218,320 \$	NET ASSETS, End of Year	\$ 2,083,845	\$ 83,448	\$ 643,320	\$ 2,810,613	\$ 2,218,320	\$ 115,278	\$ 608,999	\$ 2,9	2,942,597



POSITIONS OPEN

POSITION: ASSISTANT PROFESSOR LOCATION: MADISON, WISCONSIN

The University of Wisconsin-Madison, College of Letters & Science invites applications for a tenure-track position at the Assistant Professor level in the area of East and Southeast Asian Archaeology and Early History, beginning August 2010. Qualified applicants from any Social Science or Humanities discipline—including but not limited to Anthropology, Archaeology, Art History, History—are encouraged to apply. Tenure home will reside within the department best suited to the applicant's area of interest. Ph.D. is required prior to the start of the appointment. Applicants must demonstrate excellence in research, teaching, and service. Applicants who are actively involved in archeological excavations, or are involved in the primary analysis of excavated materials, will be given priority. Active field project and teaching experience preferred. Responsibilities include teaching East and Southeast Asian archaeology and early history at the undergraduate and graduate level, performing scholarly research, participation in faculty governance activities, and performing University and professional service as appropriate. Applications, including a statement of research interests and goals, curriculum vitae, sample syllabi, teaching evaluations, three letters of recommendation, writing samples (minimum length: an article or dissertation/book chapter) and other relevant materials should be sent to Chair, Archaeology Search Committee, Dept. of Anthropology, UW-Madison, 1180 Observatory Drive, 5240 Social Sciences Bldg., Madison, WI 53706. Applications should reach the Committee by Dec. 11, 2009 for consideration. Unless confidentiality is requested in writing, information regarding applicants must be released upon request. Finalists cannot be guaranteed confidentiality. AA/EOE. Women and minorities are urged to apply.

POSITION: ASSISTANT PROFESSOR LOCATION: MADISON, WISCONSIN

University of Wisconsin-Madison: The Dept. of Anthropology invites applications for a tenure-track position at the Assistant Professor level beginning August 2010. We seek an anthropological archaeologist who focuses on the New World (North, Central, or South America) and has research interests that complement those of the current archaeology faculty and institutional resources. Candidates with training and research experience in one or more fields of archaeometry (e.g., materials analysis, archaeological chemistry, geoarchaeology, etc.) or palaeoethnobotany will be given priority, but the position is open to outstanding candidates who work on contemporary archaeological issues from other methodological perspectives. Ph.D. required prior to start of appointment. Active field project and teaching experience preferred. Applications, including a statement of research interests and goals, curriculum vitae, sample syllabi, teaching evaluations, three letters of recommendation, writing samples (minimum length: an article or dissertation/book chapter), and other relevant materials should be sent to Chair, Archaeology Search Committee, Dept. of Anthropology, UW-Madison, 1180 Observatory Drive, 5240 Social Sciences Bldg., Madison, WI 53706. The successful candidate will teach two courses per semester in undergraduate and/or graduate level archaeology, develop an active research program, and perform standard advising and service in the Department and University. First consideration will be given to applications received by December 11, 2009. Salary range is competitive. Unless confidentiality is requested in writing, information regarding applicants must be released upon request. Finalists cannot be guaranteed confidentiality. AA/EOE

POSITION: ASSISTANT OR ASSOCIATE PROFESSOR

LOCATION: RENO, NEVADA

The University of Nevada, Reno, Department of Anthropology is seeking candidates for Assistant or Associate Professor, Prehistoric Archaeology, Executive Director of Sundance Archaeological Research Fund—Tenure-track faculty involved in research and graduate teaching and mentoring typically teach two courses each semester; Executive Director of Sundance Archaeological Research Fund and Director of threemonth Paleoindian archaeological field research program each summer; other duties include advising undergraduate and graduate students; helping review and develop undergraduate and graduate curricula; carrying out research and publishing results; serving on department and university committees; engaging in public outreach and service activities. Required: Ph.D. in anthropology or archaeology at the time of employment; specialization in environmental archaeology of Prehistoric North America; a record of publication and grant writing in the research. Preferred: Expertise in lithic analysis; a geographical focus on the earliest cultures of the American West and interest in a second geographical area; project management experience; ability and willingness to teach introductory and advanced level courses in archaeology; interests that complement those of existing faculty. How to www.unrsearch.com/applicants/Central?quickFind=54118; the application process is electronic. Attach letter of application, current curriculum vita, and a list of the names, email/postal addresses, and telephone numbers of three academic references. For additional information, contact Verla Jackson, Search Coordinator, Department of Anthropology/0096, University of Nevada, Reno, Reno, NV 89557. Application review begins on December 01, 2009 and will continue

POSITIONS OPEN

until the position is filled. EEO/AA. Women and under-represented groups are encouraged to apply.

POSITION: VISITING SCHOLAR LOCATION: CARBONDALE, ILLINOIS

Southern Illinois University Carbondale, Center for Archaeological Investigations, seeks its 2010-2011 Visiting Scholar (VS). The VS organizes and conducts an archaeological conference at SIUC, resulting in an edited volume of selected papers. VS assembles and edits conference volumes while in residence. The successful candidate is also expected to pursue his/her research and teach one seminar in his/her specialty. Elevenmonth term appointment as a Visiting Scholar. Qualifications: Ph.D. in Anthropology or related discipline with specialization in archaeology. Degree must be completed by August 16, 2010. VS selected on the basis of a 5-page proposal outlining the nature and structure of the conference and on the strength of vita and references. Pre-application inquiries recommended. Closing date: February 1, 2010. Send letter, vitae, list of references, and proposal to: Dr. Heather Lapham, CAI, Faner 3479— Mail Code 4527, Southern Illinois University Carbondale, 1000 Faner Drive, Carbondale, IL 62901; Tel: (618) 453-5031; E-mail: hlapham@siu.edu. SIUC is an affirmative action/equal opportunity employer that strives to enhance its ability to develop a diverse faculty and staff and to increase its potential to serve a diverse student population. All applications are welcomed and encouraged and will receive consideration.

POSITION: LECTURER IN ARCHAEOLOGY LOCATION: UNIVERSITY PARK, PA

The Department of Anthropology at The Pennsylvania State University invites applications for a one-year, full-time, fixed term appointment as lecturer in archaeology, beginning August 16, 2010. Ph.D. required; teaching experience, and documentation of high course evaluations necessary; experience in the

development of online courses desirable. The successful candidate will teach three courses per semester, including an introductory survey course, method and theory, New World (Mesoamerican and North American) prehistory, introduction to anthropology, an intermediatelevel undergraduate course in an area of their own specialization or interest, and develop an online course in archaeology for a general audience. Renewal of contract for subsequent years may be considered. Electronic submission of applications is strongly preferred. Applicants should send a cover letter, curriculum vitae, evidence of exceptional teaching experience and skills, and names and contact details of three references by email to fmaring@la.psu.edu by January 8, 2010. If unable to send electronically, applications can be mailed to Fave Maring, Department of Anthropology, The Pennsylvania State University, 414 Carpenter Building, University Park, PA 16802. Penn State is committed to affirmative action, equal opportunity, and the diversity of its workforce.

POSITION: SENIOR ARCHAEOLOGIST/FIELD DIRECTOR LOCATION: PHOENIX, AZ

EPG seeks senior archaeologist/director for our Phoenix office. Applicants should possess:

Masters degree or Ph.D. in anthropology with a specialty in archaeology, related subfield or commensurate experience; extensive experience (survey/excavation) within the Southwest/California (experience in other western states is desirable); already permitted or able to be permitted in this region, with the ability to be permitted in other surrounding states a plus; experience directing cultural resource staff and large field crew; able to complete all phases of archaeological projects (with minimal supervision), including Class I and Class III work, as well as data recovery; able to review documents for technical accuracy/completeness; excellent written/verbal communication skills. Salary is BOE and requires extensive travel. This is a salaried position with comprehensive benefits. EPG is an interdisciplinary environmental consulting company and a leader in environmental and natural resource planning; regulatory compliance; landscape architecture; visual, cultural, and biological resource management; and related disciplines. We are a team of 100+ planners, landscape architects, and environmental professionals, located in Phoenix (headquarters), Salt Lake City, Tucson, Las Vegas, Cheyenne, and Boise. Please visit our website www.epgaz.com. Mail/email a cover letter and current CV with references to: EPG, Inc., 4141 N. 32nd Street, Suite 102, Phoenix, AZ 85018; jobs@epgaz.com

POSITION: ASSISTANT PROFESSOR LOCATION: PORTALES, NM

Eastern New Mexico University seeks applications for a full-time, tenure-track Assistant Professor of Anthropology position beginning August 2010. We seek a Southwest archaeologist specializing in ceramic analysis, preferably a materialist with an active research agenda. The successful candidate must be willing to run a summer field school in alternate summers. Candidates must have a Ph.D. completed by August 2010. Our program has a strong graduate component, and candidates must be willing to help supervise Master's theses. Applicants should submit a faculty application, letter of interest outlining qualifications, current curriculum vitae, transcripts (unofficial for application purposes), and contact information for three references to: Search Committee, Department of Anthropology and Applied Archaeology, Human Resources Station #21, Eastern New Mexico University, Portales, NM, 88130. Review of applicants will begin January 4, 2010. ENMU is an Affirmative Action/Equal Opportunity Employer. Applicants must pass a pre-employment background check. For more information go to http//www.enmu.edu.

00

POSITIONS OPEN

POSITION: ASSISTANT PROFESSOR LOCATION: BOSTON, MA

Boston University's Department of Archaeology announces a tenure-track opening for an Assistant Professor in Mesoamerican Archaeology effective September 1, 2010; regional and period specializations open (pending budgetary approval). Ph.D. is required, together with an ongoing research program. Candidates should be prepared to teach general archaeology courses in addition to courses in their special field at both the undergraduate and graduate levels. Application letter, curriculum vita, published paper or sample of writing, and the names of three referees should be sent by December 1, 2009 to: Professor Mary C. Beaudry, Boston University, Archaeology Department, 675 Commonwealth Avenue, Boston, MA 02215-1406. Affirmative Action/ Equal Opportunity Employer.

POSITION: ASSOCIATE OR FULL PROFESSOR LOCATION: EVANSTON, IL

Northwestern University Department of Anthropology invites applications for a senior position in the archaeology of complex societies, at the rank of tenured associate or full professor, to begin in Fall 2011. Geographical area and methodological focus open. Research on either historic or prehistoric periods will be considered. Candidates should have a strong record of publication and research, external grants, mentoring graduate and undergraduate students, and a commitment to a four-field approach in anthropology. Minorities and women are especially encouraged to apply. The deadline for the submission of application materials is March 1, 2010. Send a letter of application, a vita, and the names of three referees to: Elizabeth Brumfiel, Chair, Archaeology Search Committee, Department of Anthropology, Northwestern University, 1810 Hinman Ave, Evanston, IL, 60208-1310. EOE/AAE.

POSITION: ASSISTANT PROFESSOR LOCATION: GARDEN CITY, NY

The Adelphi University Department of Anthropology invites applicants for a North American archaeologist, trained in four-field approach, with research and teaching interests in New World prehistory and environmental archaeology focus to teach archaeology courses at all undergraduate levels, conduct archaeological fieldwork, laboratory analysis, and engage students in research projects. Ability to offer graduate Environmental Studies Program courses preferred. Ph.D., excellence in teaching, record of publication, active research program and commitment to involve students in research required. Expectation to develop/maintain program of fundable research and publication. Apply online at: http://www.adelphi.edu/ positions/faculty AA/EEO.

CALENDAR

2009

DECEMBER 2-6

The 108th Annual Meeting of the American Anthropological Association will be held in Philadelphia, Pennsylvania. This year's theme is "The End/s of Anthropology." For more information, please visit www.aaanet.org/meetings/index.cfm

2010

January 8–9

The 11th biennial Southwest Symposium will be held in Hermosillo, Sonora, Mexico. The meeting's theme is "Building Transnational Archaeologies." For more information, please visit http://sw-symposium.binghamton.edu.

FEBRUARY 20-21

The 38th Annual Midwest Conference on Andean and Amazonian Archaeology and Ethnohistory will be hosted by Indiana University–Purdue University Fort Wayne. The conference is free and open to the public, but registration is required. Abstracts are due no later than January 29, 2010. Please visit the website for conference registration, the call for papers, abstract submissions, and accommodations information: http://www.ipfw.edu/anthropology/MWCA AAE/Welcome.html. For more information, contact Richard Sutter (e-mail: SutterR@ipfw.edu).

APRIL 14–18

The 75th Anniversary Meeting of the Society for American Archaeology will be held in St. Louis, Missouri. For more information, please visit www.saa.org and read *The SAA Archaeological Record*.



NEWS & NOTES

1th Southwest Symposium, Hermosillo, Sonora, México: Building Transnational Archaeologies. The 11th biennial Southwest Symposium will be held in Hermosillo, Sonora, México January 8th and 9th 2010, co-organized by Elisa Villalpando (Centro INAH Sonora) and Randall H. McGuire (Binghamton University). In the tradition of past meetings, the 11th Southwest Symposium will provide a forum for archaeologists and other scholars to discuss innovative ideas and to develop networks for anthropological research in the U.S. Southwest and Mexican Northwest. The theme of this year's symposium is Building Transnational Archaeologies.

The boundaries of the U.S., México, and Indian Nations, cross cut the Southwest/Northwest The 11th Southwest Symposium will further discussions of how to transform these national archaeologies into transnational archaeologies. Transnational archaeologies reach beyond or transcend boundaries and they do so in numerous ways. They imply a broad vision of historical and cultural processes that is not artificially limited by political, cultural, or linguistic borders. They necessarily entail a multi-sited archaeology where researchers work in different "nations". They stand strong when their foundations rest on collaborations across cultural groups. They require archaeologists to reexamine the contributions that archaeology can make to society. They expand the archaeology of the Southwest/Northwest linguistically, culturally and regionally.

The 11th Southwest Symposium will have four presented sessions and a series of themed poster sessions on transnational topics. The four presented sessions are: West and North México, A.D. 1450 to A.D. 1540: The Lost Century, Collaborating Across Cultures, and

Archaeology and Society. These sessions are by invitation only. Themed Poster Sessions are open to anyone. They include: Violence in the Southwest/Northwest, Coastal Archaeology, Relations between the Southwest/Northwest and Mesoamerica, Cliff Dwellings, and Contract Archaeology. In addition, there will be a general session open to any theme. For more information about the conference and transportation options from Tucson, visit the symposium web site at http://swsymposium.binghamton.edu/index.html.

Ifred Vincent Kidder Award: Call for Nominations. The Alfred Vincent Kidder Award for Eminence in the field of American Archaeology is given every two years by the American Anthropological Association to an outstanding archaeologist specializing in the archaeology of the Americas. The award is given alternately to specialists in Mesoamerican archaeology and the archaeology of the Southwestern U.S., as these regions were both central to the pioneering work of A.V. Kidder.

The award is presented by the AAA but managed by the Archaeology Division of the AAA. We are now seeking nominations for a specialist in the Southwestern U.S. for the 2010 award. A nomination should consist of: (1) A detailed letter of nomination, explicitly describing the qualifications and accomplishments of the nominee; (2) a complete CV for the nominee; and (3) up to two additional supporting letters (however, supporting letters or letters of recommendation are not required; more than two will not be considered). Send nomination materials to the Archaeology Division Secretary. We prefer that you send the materials as PDF files attached to an email, with the subject line saying "Kidder nomination." However, you may send paper copies via surface mail. The nomination

materials will be forwarded to the independent Kidder Award committee. Nomination materials should go to: Prof. James Skibo, Anthropology Program, Campus Box 4640, Illinois State University, Normal, IL 61790-4640, jmskibo@ilstu.edu. The deadline for nominations is February 10, 2010. If you have questions, contact the AD president, Janet Levy, at jelevy@uncc.edu or 704-687-4282. The award will be presented at the 2010 AAA annual meeting in New Orleans.

CHILD CARE AT THE MEETING

SAA is pleased to announce the availability of child care during SAA's 75th Anniversary Meeting. This service will be provided by Accent on Children's Arrangements, Inc. For complete information on registration, schedule, and fees, please follow the link in the Annual Meeting section of SAAweb (www.saa.org/annualmeeting) or check out the Preliminary Program (available in December).

75TH ANNIVERSARY MEETING

75th ANNIVERSARY MEETING, from page 5 🖘

Mesoamerica, and elsewhere. Forums have really caught on this year. A sampling of Forum titles gives you some idea of the diverse topics offered: "Science in Support of Archaeology. What is State-of-the-Art?", "Saving the Planet and Archaeology!", "International Indigenous Archaeology," "Reflecting Critically on the Goals and Methods of Archaeological Practice," and many others. The innovative electronic symposia continue this year, with topics such as "The Canvas of Space: Method and Theory of Spatial Investigations in the 21st Century."

Much anticipated special events enliven the meetings, some established and others unique to the 75th anniversary. The Ethics Bowl returns again and there will be a Silent Auction to benefit Native American scholarships. In honor of the anniversary meeting, new this year is the 7.5 Film Fest. Films of no more than 7.5 minutes in length will screen in the Exhibit Hall

Friday and compete in a number of categories. The top films will receive awards at the Business Meeting Friday evening. Get the video camera out because you still have until February 26, 2010 to submit (see the SAA website or *The SAA Archaeological Record* for submission details). Saturday evening, the anniversary celebration opens with a Native American performance, followed by a dance with DJ, cash bar, and anniversary cake and coffee! Several important sessions are scheduled for Sunday. If you missed the organized tours, you will still have time to see Cahokia in the afternoon.

These special events, the geographical scope and intellectual breadth of the presentations, and the opportunity to talk archaeology with old friends and new acquaintances will make the 75th Anniversary Meeting a memorable affair. This is the one meeting you will not want to miss. The Program Committee is still planning the schedule, but you will soon be able to review it in the Preliminary Program. Meet you in St. Louis!

IN MEMORIAM, from page 7 🖘

tributions are The Ancient Americans: A Reference Guide to the Art, Culture, and History of PreColumbian North and South America (2 vols, Sharp Reference, Armonk, New York 2001); The First Americans (Erdmans, Grand Rapids, Michigan 1994); El Santuario Incaico del Cerro Aconcagua (Ediunc, Mendoza 2001); Prehistoria de Sud America (Editorial Labor, Barcelona, 1984 with several editions).

In May of this year, on the occasion of the IV Jornadas Arqueologicas Cuyanas in Mendoza, I had the opportunity to share with Hans what became his last days. There, he not only addressed the students and archaeologists in general about his most recent accomplishments, but he also was an alert commentator as usual, providing new insights to those young people who were delivering their preliminary research conclusions. Indeed, his presence was always deeply felt. With Hans disappears a crucial link of that pioneer generation of modern Latin-American archaeology.

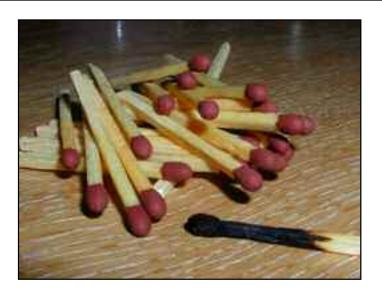
Mario A. Rivera (with additional notes provided by Roberto Bárcena and Maria Rosario Prieto) IN MEMORIAM, from page 7 <

Altura. Entre sus contribuciones mas conocidas se cuenta The Ancient Americans: A Reference Guide to the Art, Culture, and History of Pre Columbian North and South America (2 volúmenes, Sharp Reference, Armonk, New York 2001); The First Americans (Erdmans, Grand Rapids, Michigan 1994); El Santuario Incaico del Cerro Aconcagua (Ediunc, Mendoza 2001); Prehistoria de Sud América (Editorial Labor, Barcelona, 1984, con varias ediciones).

En Mayo de este año con ocasión de la IV Jornadas Arqueológicas Cuyanas en Mendoza tuve la oportunidad de compartir con Hans lo que serian sus últimos días. Allí, Hans no solo se dirigió a los estudiantes y arqueólogos en general comunicando sus mas recientes resultados sino también participó activamente siendo un ávido comentarista prodigando, como era su costumbre, nuevos aportes a aquellos jóvenes que en este evento comunicaban las conclusiones preliminares de sus investigaciones. Sin duda su presencia será profundamente sentida. Con Hans desaparece un eslabón crucial de esa generación pionera de la moderna arqueología Latino Americana.

Mario A. Rivera (con notas adicionales de Roberto Bárcena y María Rosario Prieto)

We're NOT Playing with Matches!



\$90,000 can be added to the SAA endowments before the end of the year – but only with your help.

The time has come to get on board and help us successfully close out the campaign to "Give the SAA a Gift on Its 75th." The following individuals and organizations have agreed to match the first \$45,000 in new gifts made to the campaign after September 1, 2009. This is the time when your gift really matters.

Anonymous \$15,000 Desert Archaeology, Inc. \$15,000 Statistical Research, Inc. \$15,000

Match it or lose it! Our matching gift donors are serious – they want to see their SAA colleagues step up and invest in the SAA's future. If we don't raise at least \$45,000 in new gifts, we lose the matching gifts as well.

The campaign to "Give the SAA a Gift on its 75th" will end at the upcoming 2010 annual meeting. **Double the impact of your giving and help insure we receive these matching gifts by making your our generous donation today!**

How to Give

Make your donation on your renewal form, or donate on-line at www.saa.org. A multi-year pledge is also an option.

Now more than ever, every gift will make a difference for the SAA and for American archaeology in the 75 years to come!

Contact Tobi Brimsek at 202-789-8200 with any questions.





The paper used in this publication meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper).

Printed on recycled paper.

Society for American Archaeota 980 Second Street NE #12 Washington DC 20002 USA

Non-profit Org.
U.S. Postage
PAID
St. Joseph, MI
Permit 38

VOLUNTEERS! SAA NEEDS YOU NEXT APRIL!

Would you like the opportunity to meet people interested in archaeology, have fun, and save money? Then apply to be an SAA volunteer!

Volunteers are crucial to all on-site meeting services, and we are currently looking for people to assist the SAA staff at the 75th Anniversary Meeting in St. Louis, MO, April 14–18, 2010.

In return for just 12 hours of your time, you will receive:

- Complimentary meeting registration
- A \$5 stipend per shift
- Expedited Registration Packet Pick-up

Streamlined training approach this year! In response to volunteer feedback, SAA will be eliminating the Wednesday volunteer orientation meeting. Training will be provided both on-the-job and through detailed and targeted manuals sent to you electronically prior to the meeting. As always, SAA staff will be on hand to assist you with any questions or concerns you may have!

For details and a volunteer application, please go to SAAweb (www.saa.org) or contact Meghan Tyler at SAA (900 Second St. NE #12, Washington, DC, 20002-3560, phone [202] 789-8200, fax (202) 789-0284, e-mail Meghan_Tyler@saa.org). Applications are accepted on a first-come, first-serve basis through February 12, 2010, so contact us soon to take advantage of this great opportunity.

See you in St. Louis!