



the **SAA** Archaeological record

MARCH 2012 • VOLUME 12 • NUMBER 2







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## **SEE YOU IN MEMPHIS!**

Registration Opens at 2 PM on Wednesday, April 18 in the Convention Center!

Final Program, Abstracts, and much more can be viewed on SAAweb  
([www.saa.org](http://www.saa.org)) in the Annual Meeting Section

# the SAArchaeological record

The Magazine of the Society for American Archaeology

VOLUME 12, No. 2

MARCH 2012

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## EDITOR'S CORNER

Jane Eva Baxter

This issue of *The SAA Archaeological Record* is the last you'll be receiving before the Annual Meeting in Memphis. I'll be at the meeting working on behalf of the magazine, and seeking materials for upcoming issues. If you've organized a session for the meetings (paper or poster presentations) and think the topic might be appropriate for a forum, or if you are an individual presenter and think your paper might be well suited for publication in *The SAA Archaeological Record*, please feel free to contact me in advance of the meetings, and I'll try to stop by your presentation or session. My email is [jbaxter@depaul.edu](mailto:jbaxter@depaul.edu) and I'd be more than happy to hear from you!

The contents of this issue are diverse, but include several items from the SAA and its committees. The report of the Conferencia Intercontinental, an article by the editor of *American Antiquity*, a request for member input on ethics reform from the Committee on Ethics, another contribution to the Careers in Archaeology series by the Public Education Committee, and an article on women directing field projects sponsored by COSWA are all examples of how SAA Committees and volunteers are addressing issues of concern to our diverse membership. I've been working with our committees and volunteers to increase organizational presence in the magazine, both through our regular Volunteer Profile column, and through articles and issues that illustrate the work of our committees to the membership. If you know someone who volunteers for the SAA and would like to see them featured in the volunteer profile column, or if there is an issue relating to the work of the SAA or one of its committees that you'd like to learn more about, please contact me with your suggestions.

Finally, I'd like to thank Debra Martin and Ryan Harrod for the exemplary job they've done as guest editors in this two-part special forum on New Directions in Bioarchaeology. Bioarchaeology has a growing profile in our discipline, and the techniques and perspectives of this area of specialization are pushing archaeological inquiry in exciting new directions. This forum is designed to showcase some of the broad thematic areas where bioarchaeologists are focusing their interests and energies, and offer those of us outside the specialization an excellent introduction to this area of research. Thanks to both Debra and Ryan for suggesting this topic, and for working so diligently to bring an excellent collection of papers together. I am sure you'll enjoy the contributions this month, and in the upcoming May issue.

## SAA Photo Release Policy

*Note from the SAA Board: For many years the Society, like the great majority of journal and book publishers, has had a policy that authors must submit a model release form if they are submitting photographs that contain living, identifiable individuals. Recently John Whittaker contacted the Board expressing his concerns about this policy. As a result the Board, in conjunction with the Publications Committee, reviewed the situation. After this review the Committee and Board reaffirmed the policy. The response to Dr. Whittaker provides details on the basis for this reaffirmation.*

Dear SAA Leadership,

I was writing an article on public archaeology for the Record recently when I discovered an SAA policy that actively works against doing just that, and abridges our rights to free expression. Jane Baxter informed me that SAA policy (not hers) required me to have permission from every person recognizable in a photograph in order to publish it. What an absurdity! As scholars and as free citizens, we take lots of photos of people doing all sorts of things. We cannot ask everyone to grant permission for any possible use, and we should not. People engaged in legal activities in public spaces have no expectation of absolute privacy, and cannot. I feel it is courteous to ask someone's permission to stick a camera in their face, but in some circumstances, this is not possible, and there are often many peripheral folk who happen to be in a photo who cannot always be asked, and often would be surprised and annoyed to be pestered for their name and signature on a legal form. As a responsible scholar, I am committed to protecting the people I study, and not intruding unreasonably, and editors can and should exercise further oversight, but a blanket rule is nonsense and quite contrary to our ideals of free speech and expression. If it is intended to "protect" the subjects, it is

senilely paternalistic. If it is to avoid possible offense and legal action, it is irrationally cowardly. If we treat the subjects in our photographs with respect, and commit no libel, then openly taken photographs in public settings are ethically and legally clean. This bizarre rule works to stifle open interaction with the innumerable individuals in public places, who often are pleased to be inadvertently shown in a news photo. It inhibits our free speech, normal human interaction, and our right to open scholarship and reporting. All SAA members should be concerned about this policy, which strikes at the heart of what we do. If it came from our lawyers, why did no one have the guts to tell them where to stick it? If our professional organization won't stand up for free speech and open scholarship, where do we turn?

I haven't even touched some of the other prohibitions that follow from such a policy. For instance, will the SAA, an organization which claims at least some commitment to social justice, now refuse to print documentation of abuses, for fear of offending criminals?

I ask my society leadership and fellow members to resist such unwarranted and nonsensical restrictions. If we must have a formal policy on publishing photos, let it be a liberal and open one, that respects not only those we study, photograph, or report on, but also our rights, and relies on our dignity and responsibility as humans, rather than an unthinking taboo.

Sincerely,  
 John C. Whittaker  
 Professor, Anthropology Department  
 Grinnell College  
 Grinnell, IA 50112

### Reply to Dr. Whittaker

Thank you for bringing your concerns about photo illustrations in *The SAA Archaeological Record* to the attention of the SAA Board of Directors. We take

seriously your questions about the SAA's long-time policy that requires model releases for any living individuals that can be identified in a photo. We have discussed your concerns with SAA staff, legal advisors, and the Publications Committee, and have researched the author guidelines and policies of other organizations.

The SAA policy derives from state and international laws according individuals a "right of privacy." For the most part, these laws do not apply to the photographer, but do apply to organizations publishing the photographs—in this case, the SAA. Although the likelihood of the Society being sued for the misuse of an image is small, the probability is not zero. While the policy does impose some inconvenient restrictions to authors, it does not dramatically restrict the ability of authors to properly illustrate their articles, and does not constitute a violation of the author's right to freedom of expression. In the Board's view, the restrictions that this policy imposes are outweighed by the potential (though small) for a substantial cost to the Society if a suit were to be filed.

We note that most other publishers require model releases, particularly where minors are depicted. The American Anthropological Association is a notable exception, as John Doershuk pointed out to us in his December 15, 2011 communication in support of your position. Our legal sources are confident, however, that their approach would not protect the AAA in the event of a suit, and the AAA would be financially responsible for damages.

While we agree that it should be legal and ethical to publish photos of identifiable adults in demonstrable public places where there cannot be an expectation of privacy, and such photos may indeed enhance a scholarly publication, in practice a number of complications make editorial evaluation on a case-by-case basis impracticable. Among these complications are difficulties in con-



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## LETTERS TO THE EDITOR

firming whether any of the subjects are under the age of 18; whether there is any doubt that the setting is a public place; the fact that each of the 50 states has a different law and international laws vary; and the considerable expense to the society of detailed legal research and advice in producing a more liberal but still legally valid policy.

It is the consensus of the Board that continuation of the existing policy best protects the interests of the Society's members.

W. Fred Limp  
RPA, SAA President

### Letter to the Editor:

I received my January, 2012, *The SAA Archaeological Record* today. As the director of a field school for nearly 30 years at the same site, I read the articles by Morrison, Connell, Boytner, Lerch, and Doelle and Huntley with great interest. All had great ideas! Only one comment is noted for the Connell article at the end of the first paragraph. Rick Perry is governor of Texas. I hope that the good citizens of Florida and their governor, Jeb Bush, do not take umbrage at this slip!

Robert L. Hoover, Ph.D.

### Letter to the Editor

Bethany Morrison's article *More Than Digging Square Holes* (Vol. 12, No. 1 January 2012) illustrates how fieldwork changes students' perspectives by reconnecting them with nature. In reading the special forum on field schools, I could not help but think about other training possibilities, namely **early living skills workshop** events. For example, Backtracks, which operates Rabbitstick (Rexburg Idaho) and Winter Count (Mariposa Arizona), has been offering workshops for 25 years. I am a retired State Archaeologist (Oregon) and I volunteer with Echoes-In-Time (URL below) and teach at four events (Echoes, Rabbitstick, Winter Count, and Buckeye).

A list of events is available at: [http://www.hollowtop.com/Primitive\\_Skills\\_Gatherings.htm](http://www.hollowtop.com/Primitive_Skills_Gatherings.htm)

Some of the best flintknappers in North America teach knapping at events held around the country. Many of the instructors contribute to the Society of Primitive Technology's *Bulletin of Primitive Technology* (BPT). Many spend many hours developing and replicating ancient skills. Sitting down with knappers and making a biface and/or stone tools is the best way to understand lithic debris. Pecking a stone bowl gives one a different perspective on the artifact. Recognizing useful plants broadens survey skills. Making an atlatl and darts, and then using the weapon system makes a dart point found in an archaeological context come alive. Skinning an animal with a stone fragment changes how one looks at that humble flake.

What the students get out of early living skills workshops has been life changing. A hands-on teaching method opens up student perspective on ancient lives. Archaeologists should encourage their students to attend workshop events. The archaeologists may benefit from attending or teaching at events as well. I know I have. Field schools could benefit through developing contacts with individuals who could teach a class in the field.

Dr. Leland Gilson  
Retired State Archaeologist (Oregon)  
[www.oregon-archaeology.com](http://www.oregon-archaeology.com)  
[www.echoes-in-time.com](http://www.echoes-in-time.com)

*Editor's note: Based on this letter, I've asked Dr. Gilson to prepare an article on these workshops for The SAA Archaeological Record. Look for more in an upcoming issue!*

### History of Archaeology Interest Group, by Bernard K. Means

The History of Archaeology Interest Group (HAIG) had a busy year in 2011. A newsletter was introduced in January 2011 and four issues were published in electronic format during the year. These were posted in the Interest Group section of the SAA member's page. Response was very positive from HAIG members to the newsletters. The first issue of volume 2 and the four issues from volume 1 are available at: <http://www.saa.org/HistoryofArchaeologyInterestGroup/tabid/1434/Default.aspx>

The 2012 SAA annual meeting in Memphis will see the HAIG-sponsored Biennial Gordon R. Willey Session on the History of Archaeology. The session is chaired by Anna Lunn and David H. Dye and is entitled "New Deal Archaeology in The Tennessee Valley." The University of Alabama Press has been contacted and is interested in publishing the papers in the session, possibly as part of a new, dedicated series on the history of archaeology.

Speaking of the Biennial Gordon R. Willey Session and the University of Alabama Press, pre-production has begun on a book based in part on the 2010 HAIG-sponsored session on New Deal archaeology. It is expected that *Shovel Ready: Archaeology and Roosevelt's New Deal for America* will be available by Fall 2012.

Finally, HAIG will be holding its interest group meeting Friday, April 20, at 8 am, in Memphis. I invite all SAA attendees to join us in our meeting.



## IN BRIEF

**Tobi A. Brimsek**

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

### Communications and SAA

On a regular basis, the topic of this column has been about receiving and sending electronic communications to and from SAA. In order to make sure that you do receive communications from the Society, we wanted to share the list below that outlines from where you may receive the basic electronic correspondence from the Society. Of course, there are also periodic staff changes and president rotations, but these emails will keep you in the loop now.

Email Address	Content
tobi_a_brimsek@saa.org	Administrative announcements (including renewal information) from the executive director
fred_limp@saa.org	Emails from the SAA President (also including renewal information)
meetings@saa.org	Registration confirmations, acceptance letters
elections@vote-now.com	Election ballots and follow-ups

### Contacting SAA

You may address emails to a number of departmental addresses:

advertising@saa.org	gov_affairs@saa.org
headquarters@saa.org	meetings@saa.org
membership@saa.org	publications@saa.org
public_edu@saa.org	webmaster@saa.org
thesaapress@saa.org	

Or to specific staff members:

tobi\_brimsek@saa.org—executive director (please note that this email goes directly to Tobi Brimsek; tobi\_a\_brimsek is routed through the membership coordinator)  
 david\_lindsay@saa.org—manager, Government Affairs  
 maureen\_malloy@saa.org—manager, Education and Outreach  
 john\_neikirk@saa.org—manager, Publications  
 megghan\_tyler@saa.org—manager, Membership and Marketing  
 cheng\_zhang@saa.org—manager, Information Services  
 shelly\_adams@saa.org—coordinator, Financial and Administrative Services  
 Lorenzo\_cabrera@saa.org—coordinator, Membership and Marketing

### And About Those Spam Filters

Staff has continued to observe that emails sent from SAA's departmental mailboxes and those generated from our database are not always reaching some destinations due to the more sophisticated spam filters in use. The Society would appreciate it if you would set your filters to accept emails from a few different addresses within SAA or check your junk mail boxes if you do not seem to be hearing from SAA.

### New Faces in Memphis

In the spring/summer of 2011, we had a few staff transitions. There are three new staff who will be in Memphis experiencing the annual meeting for the first time: Cheng Zhang, manager, Information Services who will be running registration; Shelley Adams, coordinator, Financial and Administrative Services who will be running the Staff Office and spending time in the SAA booth; and Lorenzo Cabrera, coordinator, Membership and Marketing, who will be in the SAA booth and taking a turn in the Staff Office as well. If you have been corresponding with these staff, stop by and say hello onsite in Memphis.

### Coming Soon for Members Only!

Currently in production are simultaneous digital versions of both *American Antiquity* and *Latin American Antiquity* for member subscribers only. Another reason to keep your email current is that SAA will notify you, as a member subscriber, when the digital version of the journal or journals to which you subscribe are available online! Once production is complete, the digital versions will be available likely before the print copies!

## SAA LLEGA A LATINOAMÉRICA:

### LA CONFERENCIA INTERCONTINENTAL

**Barbara Arroyo, Tomas Mendizabal,  
and Dan Sandweiss**

*A solicitud de los autores, estos se citan en orden alfabético  
ya que todos contribuyeron de igual forma.*

La Junta Directiva de la SAA decidió en enero del 2010 patrocinar la primera Conferencia Intercontinental. Esta se hizo como parte de un esfuerzo concertado para involucrar a arqueólogos latinoamericanos en el quehacer de la sociedad además de llevar la SAA a Latinoamérica. Las reglas fueron claras: hacer la conferencia en un país de Latinoamérica (Panamá para la primera), usar el castellano como el idioma oficial, mantener los costos al mínimo para motivar la participación, presentar todas las ponencias en una sesión plenaria, incluir carteles y utilizar un proceso de “revisión por pares” para seleccionar las ponencias y carteles más adecuados según el tema.

La presidente de la SAA Meg Conkey en aquel momento le pidió a Dan Sandweiss y Bárbara Arroyo planear y organizar la Conferencia en cercana colaboración con la Directora Ejecutiva Tobi Brimsek y su equipo. Bárbara trajo a Tomás Mendizábal para completar el equipo como organizador local. La Conferencia fue anunciada públicamente en la reunión anual de la sociedad en St. Louis en 2010.

Inicialmente se intentó organizar para Julio del 2011, pero el equipo de la Conferencia decidió posponer el evento hasta enero de 2012 para tener suficiente tiempo para planear y escapar de la temporada de huracanes en Panamá. Desde el inicio de 2011, Tobi y Tomás estaban completamente comprometidos en encontrar el lugar adecuado para realizar la conferencia así como el hotel donde alojar a los participantes. Al mismo tiempo, Dan y Bárbara juntaban el comité de la conferencia para revisar las propuestas de ponencias y carteles. El comité completo incluyó 17 arqueólogos latinoamericanos, dos norteamericanos y un europeo, representando a las comunidades profesionales de 19 países latinoamericanos y Estados Unidos.

## BRINGING SAA TO LATIN AMERICA

### THE INTERCONTINENTAL CONFERENCE

**Barbara Arroyo, Tomas Mendizabal,  
and Dan Sandweiss**

*By their request, the three authors of this article are listed alphabetically by last name rather than by any convention listing “senior” and “junior” authors in the order of the weight of their respective contributions.*

As part of a concerted effort to engage Latin American archaeologists more fully in the life of the Society, and to bring the SAA to this part of the world, the SAA Board decided in January 2010 to sponsor the first ever Conferencia Intercontinental. The ground rules were simple: hold the Conferencia in a Latin American country (Panama for the first one), conduct all proceedings in Spanish, keep costs to a minimum to encourage participation, deliver all papers in plenary session, include posters, and use a peer-review process to select the most appropriate papers and posters for presentation.

SAA President Meg Conkey asked Dan Sandweiss and Bárbara Arroyo to plan and run the Conferencia in close collaboration with SAA Executive Director Tobi Brimsek and her staff. Bárbara soon brought in Tomás Mendizabal to round out the team as local chair. The Conferencia was announced publicly at the 2010 Annual Meeting in St. Louis.

Initially intended for July 2011, the Conferencia team decided to postpone the event until January 2012 to allow sufficient time for planning and to avoid the hurricane season in Panama. By early 2011, Tobi and Tomás were deeply engaged in finding an appropriate venue and hotel in Panama. At the same time, Dan and Bárbara were putting together a Conferencia Committee to review paper and poster proposals. The full committee included 17 Latin American archaeologists, two North American archaeologists, and a European archaeologist representing the professional communities of 19 Latin American countries and the United States.

Three themes were selected for the Conferencia: (1) Interregional Interaction in the Americas between Two or More National Areas; (2) Sustainable Archaeological Tourism; and (3)





*Figura 1: Fred Limp presenta el Reconocimiento Presidencial de la SAA por los arreglos locales al Coordinador Tomás Mendizabal. (Fred Limp Presents the SAA Presidential Recognition Award to Local Arrangements Chair Tomas Mendizabal.)*

Se seleccionaron tres temas para la Conferencia: (1) Interacción Interregional en las Américas entre dos o más Áreas Nacionales; (2) Turismo Arqueológico Sostenible; y (3) Descubrimientos Recientes. El horario permitió incluir 36 charlas y 12 carteles. La convocatoria para participar se envió a inicios del 2011 con una fecha de entrega de propuestas en junio del mismo año. Se recibieron tres veces más propuestas de las que se podían incluir y el equipo completo evaluó las propuestas para ayudar en la selección final. Esta se fundamentó en la relación de las ponencias al tema, el interés más allá de las áreas locales y la distribución entre los países de Latinoamérica. Fue muy difícil escoger entre tantos resúmenes de calidad. Las decisiones se enviaron en julio 2011.

La parte final del programa fue la invitación de un prominente arqueólogo latinoamericano para presentar la ponencia inaugural. El arqueólogo chileno, Lautaro Núñez aceptó nuestra solicitud. Él abrió la conferencia la noche del viernes 13 en el Centro de Convenciones ATLAPA con una charla conmovedora titulada “En Torno a la Proyección Social de las Investigaciones Arqueológicas en Latinoamérica”. Previa a la presentación magistral el presidente de la SAA, Fred Limp, presentó los Premios Presidenciales—en castellano—a los tres autores de esta nota por su trabajo en la organización de esta conferencia. La presentación del profesor Núñez fue seguida por una generosa recepción.

Latest Discoveries. The schedule allowed for 36 talks and 12 posters. The call for abstracts went out in early 2011 with a due date of mid-June of that year. We received about three times as many submissions as spaces available and the full committee evaluated the proposals to aid in final selection based on adherence to the themes, interest beyond local areas, and distribution among the various Latin American nations. It was very difficult to choose among so many good abstracts. Decisions were sent out in July, 2011.

The final piece of the program was the invitation to a leading Latin American archaeologist to present the keynote speech at the opening session. Chilean archaeologist Lautaro Núñez accepted our request. He opened the Conferencia on the evening of Friday January 13 in the ATLAPA Convention Center with a moving talk “On The Social Projection of Archaeological Investigations in Latin America.” Preceding the talk, SAA President Fred Limp presented Presidential Recognition Awards—in Spanish—to the three authors of this note for their work in organizing the Conferencia. Prof. Núñez’s talk was followed by a lavish reception.

On Saturday January 14 and Sunday morning January 15, the Conferencia proceeded in ATLAPA with six plenary sessions of oral presentations and an early evening poster session. One session was devoted to Sustainable Archaeological Tourism, two to Interregional Interaction, and three to latest discoveries. Four of the presenters were unable to attend at the last minute, leaving room for a lively, engaged discussion between the speakers and audience members from around the Americas.



*Figura 2: Tobi Brimsek a cargo de la Mesa Informativa y de Registro de la SAA mientras platicaba con Barbara Arroyo Co-organizadora de la Conferencia y Chris Dore disfrutando de una taza de café. (Tobi Brimsek staffs the SAA Table while speaking to Conferencia Co-organizer Barbara Arroyo while Chris Dore enjoys a cup of coffee.)*

## LA CONFERENCIA INTERCONTINENTAL



*Figura 3: Los asistentes de la Conferencia disfrutaron de 36 presentaciones orales como parte del programa de la reunión. (Conferencia attendees enjoyed 36 oral presentations as part of the meeting program.)*

El sábado 14 y la mañana del domingo 15 de enero se realizó la conferencia en ATLAPA, con seis sesiones plenarias de presentaciones orales y una sesión vespertina de carteles. Una sesión estuvo dedicada al Turismo Arqueológico Sostenible, dos a la Interacción Interregional y tres a los descubrimientos recientes. A última hora, cuatro de los presentadores no pudieron asistir, permitiendo el espacio para una discusión interesante entre los ponentes y la audiencia de alrededor de América. Las futuras reuniones deberán incluir tiempo de discusión para cada sesión.

Se dieron presentaciones sobre la arqueología, predominantemente del período Prehispánico, de casi todos los países de Latinoamérica. Quedó claro, tanto por las ponencias como por los intercambios subsiguientes, lo apasionante y relevante de la temática escogida. El turismo arqueológico sostenible se hace cada día, no sólo más factible, sino que es un tema con el que los arqueólogos debemos lidiar cada vez más obligatoriamente, incluyendo en nuestros proyectos a las comunidades locales y sus intereses, tal y como lo comprobaron los presentadores. Los ponentes del tema de las interacciones interregionales mostraron lo crucial de esta temática en cimentar una visión más completa de las culturas del mundo Prehispánico, que no vivían en el aislamiento sino inmersas en complejas redes de intercambio de bienes e ideas, al contrario de lo que afirman todavía muchas de las narrativas populares y “oficiales” en el continente. Los últimos descubrimientos reflejaron la gran dinámica de la investigación arqueológica, la multitud de los enfoques teóricos y metodológicos aplicados, la alta calidad de los trabajos de investigación en la región, y el arduo y necesario trabajo que espera a la colaboración entre arqueólogos y gobiernos locales para la curaduría de las colecciones recientemente traídas a la luz. Es nuestra impresión que la Conferencia demostró un vigoroso estado de salud de la arqueología en Latinoamérica y su brillante futuro.

↪ CONFERENCIA INTERNACIONAL, continued on page 14

Future meetings should definitely include planned discussion time for each session.

The presentations covered the archaeology of almost all the countries in Latin America. Most were on the prehispanic period, with some on historical archaeology topics. It was clear from the papers and the subsequent exchanges that the selected themes were both relevant and engaging. Sustainable Archaeological Tourism is becoming more doable every day, and it is a practice that all archaeologists should strive to accomplish by integrating our projects with local community interests—as the Conferencia presenters for this theme so nicely illustrated. Participants in the Inter-regional Interaction sessions showed how crucial this theme is to ground a more comprehensive vision of a Prehispanic world immersed in a complex network of exchange of goods and ideas, contrary to many popular and “official” narratives in the Americas.

The presentations on Latest Discoveries reflected the great dynamism of recent archaeological investigation, the multitude of theoretical lenses and applied methodologies, the high quality of regional projects, and the arduous but necessary collaborative work that awaits both archaeologists and local governments in the curation of recently recovered collections. It is our impression that the Conferencia demonstrated both a vigorous state of health and a brilliant future for archaeology in Latin America.

In all, around 100 people from 19 countries attended the Conferencia. Post-conference feedback was strongly positive about the event, providing important suggestions for improvement and urging that the Conferencia be offered on a regular basis but in different venues. It is also clear from the Conferencia and the survey results that one of the most successful outcomes of the event was the rare opportunity to establish personal contacts between professionals from all the Americas.



*Figura 4: Doce carteles ofrecieron temas para una amena conversación entre los asistentes. (Twelve Posters provided topics for lively conversation among attendees.)*



## VOLUNTEER PROFILE: Dan Sandweiss



When I sat down to write my volunteer profile, I searched the web for a pithy, out-of-copyright quotation on volunteering to start this piece. There are lots; most say something to the effect that volunteering makes one a better person (try: <http://www.energizeinc.com/reflect/quote1s.html>). I like to think this is so, but the honest truth is that I volunteer for the SAA because I enjoy it. SAA committees let me combine two things I both enjoy and care about deeply: Latin American archaeology and organizing actions and events. The latter passion is the dangerous one—I served on and chaired so many committees at my institution that for my sins, I have been damned to life as an administrator.

I joined SAA in 1980 as a new grad student and began attending the annual meetings in 1983. However, I got my first “archaeological volunteering” fix outside the Society by organizing the archaeology brown bags at Yale as an undergrad in 1978–79 and at Cornell as a grad student from 1980–83 and 1985–86. During that time, I first combined Latin American archaeology and organization by founding the Northeast Conference on Andean Archaeology and Ethnohistory and running the first meeting at Cornell in 1982. I’ve helped with five other versions, most recently the 30<sup>th</sup> NCAAE at the RS Peabody Museum in Andover, MA—where the SAA was founded in 1935. As a spin-off of the NCAAE, in 1987 I began the peer-reviewed, interannual publication series *Andean Past*, now edited by my colleague Monica Barnes. I’ve since co-organized other, one-off meetings such as the 2002 Dumbarton Oaks Pre-Columbian symposium on El Niño, Catastrophism, and Culture Change in Ancient America with Jeff Quilter.

Although I began organizing symposia for the SAA annual meeting in 1986, I was a slow starter in volunteering for committees—probably because I didn’t know how to do it. My first assignment was as assistant editor for *Andean South America* in 1998 for the abortive attempt to resurrect *Current*

Research on SAAWeb. That is still a gap that needs filling. I next served on the Program Committee for the 2003 Annual Meeting, at which time I was invited to join the Committee on the Americas (2003–2009, Chair 2005–2008). Since its founding in the 1990s by Dick Drennan, COA has been an excellent bridge between Latin and North American archaeologists who serve jointly on the committee. During my time on COA, highlights included two symposia and an open session on the practice of archaeology in different parts of Latin America (Peru, Central America, and Peru again) and the establishment of the Award for Excellence in Latin American and Caribbean Archaeology. Working with the members of COA has been an enriching experience that helped extend my network of friends and colleagues throughout the hemisphere.

To complete my confession, I served on the SAA Press Editorial Board from 2005–2008 and the *Latin American Antiquity* Editorial Advisory Board from 2008 to present, chaired the SAA’s *Latin American Antiquity* Editor Search Task Force in 2009, and have participated in COA’s Advisory Committee and the Publication Committee since 2009. Over the past two years, I served as Special Advisor to the SAA Board, working closely with Bárbara Arroyo, Tomás Mendizabal, Tobi Brimsek, and Fred Limp to organize the Conferencia Intercontinental that took place in Panama City, Panama in mid-January. The Conferencia was the first SAA-sponsored meeting run in Latin America, in Spanish, designed by the Board to continue building bridges between archaeologists of the Americas.

All of these volunteer activities have been enjoyable and personally rewarding. Even if they haven’t made me a better person, they have certainly let me rub elbows with many great folks who share a passion for the past and a desire to serve. If you share those traits, volunteering for the SAA is about as much fun as you can have legally and in public.





# SURVEY OF PROFESSIONAL OPINIONS REGARDING THE PEOPLING OF THE AMERICAS

Amber D. Wheat

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Within the peer-reviewed literature concerning the peopling of the New World, there are numerous debates that are discussed persistently. Claims often are referred to as being “accepted” or “rejected” by a majority, sometimes a vast majority, of researchers. For instance, the status of an archaeological site as “pre-Clovis” in age has long been the source of many debates. Researchers commonly assert that some sites are accepted (or rejected) as pre-Clovis by a majority of researchers. For example, Grayson (2004:379) stated, “the majority of archaeologists now seem to agree that Monte Verde has met the stringent excavation, dating, and reporting criteria that have long been in place for evaluating such sites” (emphasis added). Similarly, Anderson (2005:32) argued, “while not all of these sites are universally accepted as early Paleoindian in age, most researchers accept that pre-Clovis occupations are increasingly probable” (emphasis added).

This tendency to appeal to broad authority occurs in other topics relating to the human colonization of the Americas as well. Another debate concerns the number of migrations that took place in the occupation of the Americas. Christy Turner (2002:135) stated, “most workers in archaeology, linguistics, physical anthropology, and more recently, genetics, favor a few migrations rather than many” (emphasis added).

Although some of these assessments of hypothesis statements may in fact be true, without quantifiable evidence these claims are essentially assertions and arguments from authority and opinion. Nevertheless, determining the number of researchers that accept or reject a claim is possible and can be quantified. Thus, this paper sets out to assess the percentage of researchers that “accept or reject” a claim pertaining to the peopling of the Americas.

A web-based survey was provided to individuals who have contributed data or models relating to the peopling of the Americas through peer-reviewed publications and/or professional presentations. These survey participants were identified through a literature and keyword search of archaeological and physical

anthropological journals and a search of the program for the 2011 Society for American Archaeology (SAA) annual meeting. This latter search assisted in locating the names of individuals who are graduate students without publications, but are involved in relevant current research.

E-mail addresses of selected individuals were obtained through professional society directories and from personal contacts with people conducting research in these areas. The survey was provided electronically via a website provided by the Qualtrics survey program ([www.qualtrics.com](http://www.qualtrics.com)). A total of 215 individuals were contacted via e-mail. Nineteen questions comprised the survey.

## Survey Results

A total of 145 survey invitees started the survey, and 132 individuals completed the survey to the last question (whether they answered each question or not). More than 80 percent of the participants identified themselves as conducting the majority of their research in archaeology ( $n = 117$ ; 171 invitations were sent to archaeologists). The remainder of participants identified as genetic anthropologists ( $n = 11$ ; 17 genetic anthropologists were solicited), skeletal biologists ( $n = 3$ ; 10 invitations were sent), linguists ( $n = 2$ ), and 15 others who conduct research in other areas, such as ecology and geology, were solicited to take the survey; however, “other” was not given as an option of research (Table 1). Of the 145 respondents, 130 identified their current employment status (Table 2). There was some bias in this question, as some employment options, such as museum curation, were not included as response options. However, the majority of the survey participants (89) were employed in a university academic position.

Six of the survey questions pertained to the acceptance or rejection of assertions of pre-Clovis dates for six sites: Meadowcroft, Monte Verde, Topper, Cactus Hill, Paisley Cave, and Debra L. Friedkin (formerly Buttermilk Creek). Three response choices of agree, neither agree nor disagree, or disagree were given, and

**Table 1. Number of Individuals Contacted and Number of Survey Responders in Each Research Area.**

Research area	Number of responders in research area (% of total responders)	Total number of individuals contacted in research area
Archaeology	117 (88)	171
Biological anthropology– skeletal biology	3 (2)	10
Biological anthropology– molecular research	11 (8)	17
Linguistics	2 (2)	2
Other	NA	15
TOTAL	133	215

(12 did not respond to question)

results are presented in Figure 1. A major research article (Waters et al. 2011) on the Friedkin site was published during the time period in which the survey was administered, and so responses to the survey question associated with the site have been excluded from analysis on account of biased responses that could have occurred as a result of the publication. Of the five remaining sites, Monte Verde has the greatest rate of acceptance as a pre-Clovis site with 67 percent accepting it as pre-Clovis, 10 percent rejecting its dating, and 23 percent neither agreeing nor disagreeing that it is a pre-Clovis site. Paisley Cave was the second most accepted pre-Clovis site, with 43 percent acceptance. Topper had the highest number of rejections, with 37 percent disagreeing with its dating as a pre-Clovis site, 15 percent accepting it as pre-Clovis, and 48 percent neither agreeing nor disagreeing.

Following the questions pertaining to the pre-Clovis sites, participants were given the opportunity to list other sites not included in the survey that they accept as pre-Clovis. Sixty participants responded and the top five most mentioned sites were Swan Point ( $n = 10$ ), Schaefer ( $n = 9$ ), Heboir ( $n = 9$ ), Page-Ladson ( $n = 8$ ), and Gualt/Buttermilk Creek ( $n = 7$ ); note that Buttermilk Creek was recently renamed Debra L. Friedkin, reinforcing the decision to exclude it from analysis.

One hundred twenty-eight responses were obtained for the question that asked, “When do you think people first arrived in the Americas?” Fifty-eight percent chose before 15,000 cal year B.P., while 42 percent chose after 15,000 cal year B.P. When just examining the archaeologist’s responses a slight majority of the

**Table 2. Number of Survey Responders in Each Area of Employment.**

Current Employment	Number of responders in employment area (% of total responders)
Academia	89 (68)
CRM	23 (18)
Student	18 (14)
TOTAL	130

(15 did not respond to question)

111 archaeologists favor an earlier arrival (56 percent) over a later arrival (44 percent). In contrast, of the remaining 17 responses from individuals from other disciplines, 71 percent favored an earlier arrival. In other words, archaeologists that responded to the survey were less likely to accept an earlier arrival than those individuals of another discipline.

Figure 2 shows the results of the survey question in which participants designated the number of discrete human migratory events that took place into the Americas during the Late Pleistocene. The majority of respondents (35 percent) chose “more than four,” followed by 28 percent choosing the “two migrations” response. Of the archaeologists that answered this question ( $n = 106$ ), 39 percent argued for two migrations, and 37 percent argued for more than four migrations. The genetic anthropologists ( $n = 8$ ) had a different opinion, with 50 percent arguing for one migration, and 25 percent arguing for two and three migrations. “Migration” was not explicitly defined, and so there may be some ambiguity in how survey participants defined a migratory event, which in turn may have influenced the differences in responses between groups.

Related to the question about migratory events, a follow-up question was asked about the migratory route or routes used by humans to travel into the Americas during the Pleistocene. Each respondent could select multiple answers for this question, and 129 individuals responded.

An overwhelming majority (86 percent) selected “coastal migration,” and “Interior passage migration (Ice free corridor)” was chosen by 65 percent of participants.

Tied to both the timing of entry into the Americas, the survey asked participants to identify the major cause for the extinction of Pleistocene megafauna. Sixty-three percent of the participants favored “a combination of factors.” Of the 112 archaeologists that responded to this question, only one person chose “A comet/asteroid impact” as a response: a recent theory that has itself generated appreciable controversy (Buchanan et al. 2008; Firestone et al. 2007; Kerr 2008, 2010).

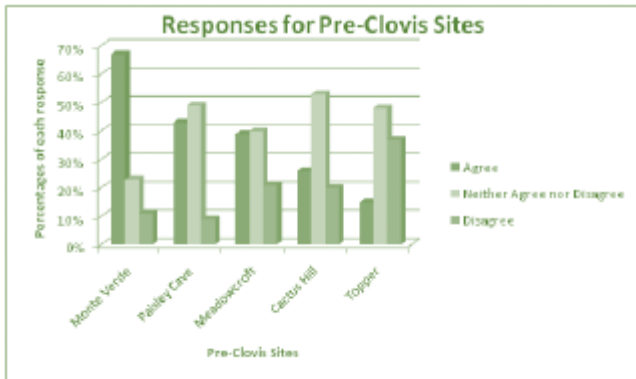


Figure 1. Survey responses regarding the acceptance of archaeological sites as having components dating to before Clovis (i.e., pre-Clovis sites).

The last three questions of the survey pertained to the Beringian Standstill Hypothesis (Tamm et al. 2007), which proposes that New World populations were isolated from their Old World source populations for a long period of time (10,000–20,000 years) creating distinct mitochondrial and Y-chromosome haplotypes not seen in the Old World source population (Anderson 2010; Kemp and Schurr 2010; Meltzer 2009; Tamm et al. 2007). This was a filtered set of questions so that only those participants that were actually aware of the hypothesis were asked further questions. Therefore, the first question asked, “Are you aware of the Beringian Standstill hypothesis?” Of the 129 respondents that answered the question, 73 of them chose “yes” as their response and were subsequently directed to answer two more questions. The first stated, “The Beringian Standstill hypothesis is correct.” Of the 73 total respondents, 67 percent chose “neither

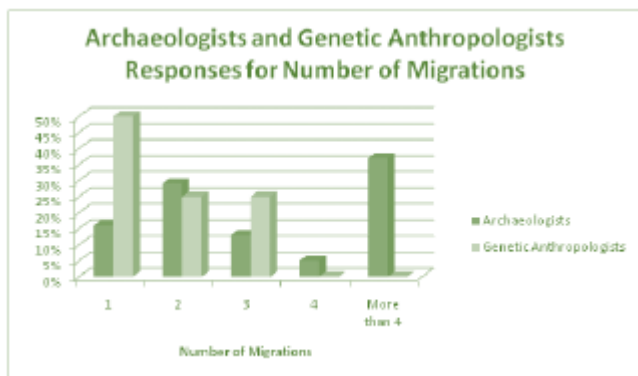


Figure 2. Responses of archaeologists versus genetic anthropologists regarding the number of migratory events thought to have occurred in the colonization of the Americas.

agree nor disagree,” 23 percent agreed, and 10 percent disagreed. The last question, “do you think the Beringian Standstill hypothesis is an adequate explanation for the biological and linguistic diversity of the New World?” was answered by 71 of the 73 respondents. Forty-eight percent of the respondents were undecided, and 32 percent did not think the hypothesis offers an adequate explanation, while 20 percent did. When only looking at the responses from those participants that conduct the most research in archaeology (i.e., individuals that indicated their research pertained to archaeology;  $n = 60$ ), 50 percent chose “undecided,” 33 percent chose “no,” and 17 percent chose “yes.” This was very different from the respondents that conduct the most research in genetic anthropology ( $n = 8$ ). Fifty percent of the genetic anthropologists chose “yes” 38 percent chose “undecided,” and 13 percent chose “no” as their response to the last question (Figure 3).

**Implications of the Survey**

The results of this study indicate that a variety of views exist about the peopling of the Americas. While scientific results are not determined by popularity, an examination of general consensus surrounding major topics of inquiry regarding the peopling of the Americas is informative and relates to how researchers decide which scientific questions should be pursued. Thus, this paper succeeds in its stated goal of quantifying the opinions of researchers concerning particular topics of regular debate.

Despite qualitative arguments made by Anderson (2005:32) and Grayson (2004:379) that asserted a majority of researchers accept a pre-Clovis occupation of the Americas, the survey indicated that this acceptance is dependent on the site under consideration. Monte Verde is the most widely accepted with 67 percent of survey respondents supporting a pre-Clovis occupation. It is apparent that the majority of the researchers sampled is unsure or have yet to form an opinion about the “pre-Clovis” assignment of the four other sites analyzed. In fact, for each of these sites higher percentages of participants chose “neither agree nor disagree” over the “agree” and “disagree” choices, with some sites, such as Topper, receiving very little acceptance among respondents. Results also show that there is a nearly direct relationship between the number of researchers accepting a site as Pre-Clovis and extent of detailed publications available for that site, with the possible exception of Paisley Cave (Adovasio and Carlisle 1988; Adovasio et al. 1990; Adovasio et al. 1978; Dillehay 1989, 1997; Dillehay and Collins 1991; Dillehay et al. 2008; Grayson 2004).

Although Turner (2002:135) stated that “most workers in archaeology, linguistics, physical anthropology, and more recently, genetics, favor a few migrations rather than many” (emphasis



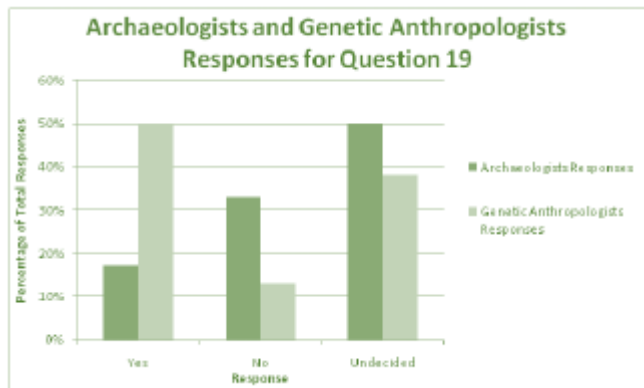


Figure 3. Responses of archaeologists versus genetic anthropologists regarding the adequacy of the Beringian Standstill Hypothesis as an explanation for the biological and linguistic diversity of the New World.

added), the current survey suggests that this is not the case. In fact, 35 percent of researchers favor more than four migrations, while only 28 percent of respondents favor two migrations. Moreover, archaeologists tended to be split in their support of “two migrations” and “more than four,” while 50 percent of the genetic anthropologists chose “one migration.” This high degree of support for “one migration” among geneticists echoes the current genetic research that argues for a single founder event giving rise to all genetic diversity in New World indigenous populations, therefore making more than one migration (from a genetic perspective) unlikely (Kemp and Schurr 2010; Tamm et al. 2007).

The researchers were able to choose more than one answer for the migration route question, and the two most popular answers were the coastal migration and the interior passage migration. A coastal migration route was the most supported by researchers (86 percent in the sample), which is especially interesting, as this model has gained significant ground only in the last three decades (Fladmark 1983). These responses are consistent with the most current archaeological and genetic data. If the single migration argument is accepted, the approximate timing for entrance into the Americas that is consistent with genetic data is 15,000–20,000 cal yr B.P.; this was prior to the inferred opening of (and therefore passage through) the ice-free Mackenzie Corridor (Kemp and Schurr 2010; Mandryk et al. 2001; Meltzer 2009), and would be consistent with a Pacific coast migration. However, the archaeological evidence, notably the presence of early sites in the Nenana Valley ca. 14,000 years ago (Hoffecker et al. 1993; Powers and Hoffecker 1989), is likely the reason why a majority of participants also agree with inland migration through the Mackenzie Corridor, which became passable around that time. Therefore, both routes are plausible given the evidence at hand

(Anderson and Gillam 2000; Mandryk et al. 2001; Meltzer 2009; Pitblado 2011; Surovell 2003).

In relation to the single migration model, the Beringian Standstill Hypothesis, or Beringian Incubation Model (BIM), proposes that New World populations were isolated from their Old World source populations for a long period of time (10,000–20,000 years) (Anderson 2010; Kemp and Schurr 2010; Meltzer 2009; Tamm et al. 2007). Fifty percent of the genetic anthropologists that participated in the study accepted the Beringian Standstill Hypothesis as an adequate explanation for the biological and linguistic diversity of the New World. In contrast, 67 percent of the archaeologists rejected the hypothesis, as well as all of the linguists and skeletal biologists. This is not a surprise due to the lack of archaeological evidence for a long occupation of Beringia (Goebel 2004; Goebel and Slobodin 1999) as well as a lack of evidence to support the morphological diversity among early and late Pelaeoindian crania (González-José et al. 2008; Hubbe et al. 2011; Jantz and Owsley 2001, 2005).

This is the first systematic survey of researchers who work on questions relating to the peopling of the Americas that addresses topics that are contentious and debated in their area of expertise. These results, while admittedly limited by sample size and degree of response, indicate that some agreement on at least some topics exists across different subdisciplines, but that appreciable differences of opinion exist within and among researchers in differing areas of anthropology.

Overall, it is important to point out that there is a majority consensus on some debates. For instance, there seems to be a high degree of acceptance (86 percent) for a coastal migration route. Also, there is a majority acceptance for a pre-Clovis occupation of Monte Verde, with 67 percent of participants agreeing and 11 percent disagreeing. However, while there is some consensus about several issues, there is an appreciable amount of uncertainty for many of the topics of inquiry. For instance, there is more uncertainty about the status of most of the pre-Clovis sites than there is either acceptance and/or rejection. This is perhaps as it should be, since dogmatism or absolute certainty can at times be antithetical to good science, and suggests support is only given or denied after careful consideration and adequate access to the data. A more significant result of this study is that it demonstrates that scholars should take care when making pronouncements about the general acceptance or rejection of a claim without some type of quantifiable evidence. More surveys should be conducted to provide numerical data to support claims of majority opinions as well as to better understand the diversity in opinions held by researchers. As noted above, the perceptions of researchers about the validity of various hypotheses dictate which are examined. If these opinions differ among

researchers and disciplines, this divergence in thought may create impediments to collaborative investigations. Auerbach (2010:9) recently argued this point, stating that “better resolutions to these questions [about human colonization of the Americas] are inevitable” only with discourse and collaboration among disciplines. The only way to obtain a 100 percent agreement concerning these topics is to continue to collaborate so that improved research will direct us to the most accurate understanding of the peopling of the Americas.

*Acknowledgements.* A special thanks to David G. Anderson and Benjamin M. Auerbach for helpful comments on an earlier draft of this paper. Thanks to all of my fellow classmates from the Peopling of the Americas course in which the idea of this survey evolved in part through conversations with all of you. Also, thank you to the anonymous respondents to the survey.

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*For a complete list of references cited, please contact Amber D. Wheat at [awheat@utk.edu](mailto:awheat@utk.edu). Raw survey data is accessible at [www.pidba.org](http://www.pidba.org).*

## CONFERENCIA INTERNACIONAL, from page 8

En total asistieron 100 personas de 19 países a la Conferencia. Se solicitó retroalimentación después del evento a los participantes, la cual arrojó resultados sumamente positivos, proporcionando importantes sugerencias para la mejora de futuras reuniones además de recomendar vigorosamente que la Conferencia fuera ofrecida de manera regular pero en diferentes lugares. También se hizo evidente, tanto en la conferencia como en los resultados de la encuesta, que el evento fue una singular oportunidad de establecer contactos personales entre los profesionales del continente, lo que fue otro de sus aspectos más exitosos.

Los tres disfrutamos mucho al organizar la Conferencia. Por supuesto que el mayor esfuerzo del trabajo descansó en uno de nosotros (Tomás) y en Tobi Brimsek, quienes trabajaron más allá de sus obligaciones.

Se agradece a los patrocinadores locales de la Conferencia Intercontinental: el Instituto Nacional de Cultura (INAC), el Instituto Smithsonian de Investigaciones Tropicales (STRI), el Patronato Panamá Viejo y la Autoridad del Canal de Panamá.

The three of us enjoyed organizing the Conferencia. Of course, the lion's share of the work fell on one of us (Tomás) and on Tobi Brimsek, both of whom worked well above and beyond the call of duty.

We thank the local sponsors for The Conferencia Intercontinental: Panama's INAC (Instituto Nacional de Cultura), STRI (Smithsonian Tropical Research Institute), the Patronato de Panamá Viejo, and the Canal de Panamá.



# EXPERIMENT MEETS RECREATION

## THROWING SPEARS WITH THE PUBLIC

**John C. Whittaker**

*John C. Whittaker (Ph.D. Arizona 1984) teaches at Grinnell College, where he is "coach" of the Raging Cows, the world's first collegiate atlatl team.*

**A**s archaeologists are challenged to engage more of the public, and different publics, we often complain that these publics watch too many History Channel Specials instead of reading *American Antiquity*, prefer tall tales to site reports, collect artifacts instead of admiring them in museums, or just don't give a darn about the past. Sometimes it is good to set aside our professorial attitudes, and recognize in fact, there are some connections that can be made easily with existing publics who value archaeological information. A few prehistoric technologies have found a place in the recreational activities of a surprising number of Americans. Archaeologists who know something about the context and history of these technologies have an immediate "hook" among some non-academic practitioners.

I have a particular favorite: when you despair of fascinating your neighbor with dusty sherds, French buzzwords, and complex graphs showing the percent of *Mays* pollen in storage pits, try an atlatl. The current florescence of popular interest in "primitive skills" has produced an explosion of local and national groups with a wide range of interests and knowledge bases, some of which are very welcoming to more academic input and membership. One of these is the world of recreational atlatls, with which I have been involved for more than 15 years. The satisfying thwack of a dart striking a target has served me well in teaching and research, and in connecting myself and students with a non-academic world of appreciative and interesting friends.

Atlatls, or spear throwers, preceded the bow in most areas of the world and survived to the present in a few ethnographic areas. An atlatl is essentially a stick with a hook on one end and a grip on the other. As a lever, the atlatl gives a mechanical advantage that allows you to fling a light spear much further than by hand alone.

Atlatls are ideal for teaching about early technologies. A simple spear thrower is easy to make, even for the majority of modern students who have more experience with computer games than with woodworking. They are easy to understand, even for a guy like me whose competence began to falter with the internal combustion engine, and takes a long walk when it comes to computers. Although atlatls are simple enough for any Luddite, there are many ethnographic and archaeological variations, some of which are elaborate and spectacular. No technology is merely an artifact. To use any technology you need to understand how to work it, and you need some skill in doing so. The active skill of use you can only acquire through practice, which is why I can barely answer my cell phone without pinching my finger and accidentally photographing the floor. Atlatls are simple enough that beginners can immediately send a dart down range and feel a sense of accomplishment, but they simultaneously recognize that to develop real skill requires a lot of practice. Understanding the knowledge and physical skills behind making or using any artifact is a critical prerequisite to evaluating it in its cultural context, and to developing respect for its prehistoric users.

Teaching and research are connected in my mind. Studying atlatls archaeologically involves questions of how we reconstruct artifacts from surviving fragments, interpreting the contexts of their use, and experimenting to understand their capabilities. Students can easily design simple experiments with atlatls by systematically varying length, flexibility, the placement of weights, the characteristics of the associated projectiles, and so on. These are all issues of active interest and research at many levels of seriousness, from unfounded speculation to carefully controlled





Figure 1 Larry Kinsella, Crabtree Award recipient 2010, explains atlatls to the public at Cahokia.

experimentation, from naked eye observation to high speed photography, from guesswork to mathematical modeling of physical principles. I have published atlatl experiments and archaeological observations, sometimes with the collaboration of students and non-archaeological friends (Whittaker and Maginniss 2006; Whittaker et al. 2008), and I maintain a large annotated bibliography of atlatl literature, which can be found through the World Atlatl Association webpage or at <http://web.grinnell.edu/anthropology/Faculty/johnw.html>. Experimental archaeology is usually less complicated and produces results sooner than excavation, and although “middle range research” is disdained by the current breed of theorists, it remains fundamental to all archaeological interpretations. While exploring atlatls, students can learn good science, and the habit of searching for and evaluating competing ideas in the literature.

And we should not neglect the value of fun. Those who go into archaeology hoping to become millionaires are even less in tune with the real world than most academics, and few of us in the field teach just to earn our daily bread. Accordingly, I feel free to focus on things that interest me and my students. Active participation, working with artifacts, and learning to evaluate them critically usually excites me and my students more than the latest convoluted theoretical posturing.

Fun—adventure, exploration, experimenting with different ideas for living and different skills—is also what creates a non-academic interest in archaeology. Atlatling (the sport has yet to find a really good verb) is a challenging and safe target sport, and as more atlatlists develop adequate skills, it is becoming legal for recreational hunting in a few states. There is a growing social world of atlatlists, united in part by the power of the Internet through webpages and electronic forums. There are local and international organizations, of which the most prominent is the World Atlatl Association (WAA). Local groups organize 60 or 70 events in the U.S. yearly, and another couple dozen in Europe. The WAA and other organizations keep some records of events, print newsletters, and maintain webpages (see <http://www.worldatlatl.org/atlatl>).

I practice seriously, which is necessary to achieve some skill if you want to test atlatls, and also a good way to relax with students and friends after dealing with classes and college politics all day. A few atlatlists are engaged in competing and achieving high scores in the WAA's International Standard Accuracy Competition, and a few other events where records are kept. I have been in the world's top 10 ISAC scores two years. Of course “World” is a tiny little world of very limited glory, but analyzing 8 years of ISAC scores suggested that the better modern atlatlists are now competent enough to compare to prehistoric users and adequately test the capabilities of atlatls in general (Whittaker 2010; Whittaker and Kamp 2006). However, competitions at events are friendly and supportive, and events are open to all. Opportunities for newcomers to try atlatls and be recruited are a feature of most events. I host an event for my students and others at Grinnell College in the Spring, and regularly take a team of students to a Fall event at Cahokia, where they see one of the world's great archaeological sites.



Figure 2 Richard Lyons of the World Atlatl Association explains his display of atlatl types to the public.

At atlatl events, my students also meet other members of the world of atlatlists, where it is easy to find friends and people who are interested in what we know as archaeologists. Among them are people of all backgrounds who have worked hard to develop throwing skills and often do some serious experimentation. Their experiments are sometimes published in newsletters like the WAAs, but more often inform discussions on web sites like Paleoplanet (<http://paleoplanet69529.yuku.com/>).

I suspect that some of my academic friends shy away from becoming proficient knappers or atlatlists, or potters, or even ethnographers, because learning the skills of a craft or a language requires a prohibitive investment of time and effort in a busy scholarly life. But the world of atlatlists (and other “primitive skills” enthusiasts) includes many who would be eager and helpful collaborators in archaeological experiments. With some notable exceptions, archaeologists remain slow to make connections with vocational experimenters. If more archaeologists would read the ephemera produced by the non-academic atlatlists, or spend a day at an event witnessing the range of skills and styles, we would see less-published nonsense about how atlatls are so inaccurate they can only be used against herds, or how the flex of the atlatl led to the invention of the bow, or how they must be used side-arm at ranges of 7–8 feet. The same is true of many early technologies. We don’t have to be expert practitioners to analyze them, although a bit of experience goes a long way, but it is simply lazy scholarship not to take advantage of the readily available expertise of others.



Figure 3 The author introducing visitors from the SAA annual meetings to atlatls at Cahokia, 2010.

Even bumbler from the university can gain the ear of those who are mainly interested in practicing a technology if we are willing to share our knowledge. We have access to specialized literature, and in my experience, many atlatlists are keenly interested in the details of archaeological finds, interpretations of their contexts, hypothetical reconstructions of artifacts, and prehistoric life in general, even if their efforts are focused on hitting the target more consistently.

In the longer view, there are important public relations benefits to participating in the florescence of recreational primitive skills. As all fieldworkers know, it is hard not to form bonds among those who get their hands dirty together. The archaeologist who participates in an informal group of fanatics like atlatlists or flintknappers finds a shared interest that overcomes many differences of opinion and outlook. I like to think that some of my friends no longer see all archaeologists as distant pedants, or members of the “arrowhead police” who hate all amateurs, or opponents of progress who live to prevent construction projects. If we wish to reach members of the public, we must interest them; if we want public support, we must engage them. There is no better way than through shared play.

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# PROYECTO QOCHAMAMA?

## EXPERIENCES, PERCEPTIONS, AND REPRESENTATIONS OF THREE FEMALE CO-DIRECTORS AT TIWANAKU, BOLIVIA

**Maria C. Bruno, Nicole C. Couture, and Deborah E. Blom**

*Maria C. Bruno is an Assistant Professor of Anthropology at Dickinson College. Nicole C. Couture is an Associate Professor of Anthropology at McGill University. Deborah E. Blom is an Associate Professor of Anthropology at the University of Vermont.*

**B**etween 2005 and 2010 we codirected an interdisciplinary field project at Tiwanaku, a UNESCO World Heritage site in the Andean region of Bolivia. During the first millennium, the ancient city of Tiwanaku was the political and ritual center of one of the first states in South America (Kolata 2003). Today, Tiwanaku is one of Bolivia's most important tourist destinations (Sammells 2012). The indigenous Aymara also revere the site and identify themselves as descendents of the site's inhabitants. Given its importance in Andean prehistory and its prominent status in Bolivian history, Tiwanaku has been the location of many national and international archaeological projects.

We founded the Proyecto Jacha Marka (PJM) as a long-term interdisciplinary field and laboratory project focused on the intensive study of the Mollo Kontu neighborhood at Tiwanaku. The purpose of this research was to examine the ways in which different forms of social identity and affiliation (e.g., age, class, sex, kinship, and ethnicity) were forged through the practice of daily life, including the construction and renovation of domestic structures, use of monumental architecture, diet and cuisine, ritual practices, and the organization of urban space within a non-elite neighborhood.

Within the context of Tiwanaku research and Bolivian archaeology in general, our project was unique in that it was the first to be directed by three women. Previous projects at the site included women as lead excavators, laboratory specialists, and senior collaborators; however, as can often be the case with major archaeological projects at prominent sites around the world, project directors and principal investigators at Tiwanaku more commonly had been individual males. As part of the COSWA-sponsored series on women archaeologists in the field, we share a few of our experiences as three, female co-directors. Although colleagues in the field have certainly made note of our gender, we have never been significantly hindered in our fieldwork due to sexual discrimination. Our greatest challenges have come primarily from the fact that there were three of us.

### **Proyecto Qochamama/Pachamama**

For the most part, we did not experience any prejudice or doubts that women could run a successful project in Bolivia. Although there have not been female directors of major field projects at Tiwanaku itself, there have been several influential women running archaeological projects in Bolivia. For example, Christine Hastorf (1999) has directed a large, international project on the Taraco Peninsula since 1992, and Bolivian archaeologists such as Sonia Alconini (2008) and Claudia Rivera (2010) have also directed projects in other regions of Bolivia. Overall, the Bolivian governmental authorities seemed to treat us as any other group of project directors seeking permission to work in their country. Some, however, highlighted the fact that the project was run by women and openly referred to us as "Proyecto Qochamama" and "Proyecto Pachamama," and others noted that our research area had particularly feminine qualities.

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This article is part of an occasional column on Women Archaeologists in the Field sponsored by COSWA.



In Bolivia, Qochamama roughly means “mother of the qochas,” and in this context refers to the numerous artificial ponds of water found in the Mollo Kontu area at Tiwanaku. It is also the name of a stela reportedly found in the area. In part for these reasons, some *yatiri* (ritual specialists) claim the Mollo Kontu area is “feminine,” and therefore “a little dangerous and powerful” and in need of more ritual attention than other areas. The other term used to label us, Pachamama, translates as Earth Mother, a female deity in Andean cosmology who is associated with agriculture, fertility, and reproduction. Before any archaeological project begins in the highlands, *yatiri* prepare an offering for Pachamama that includes a llama fetus, coca leaves, candy, and other items. It is burned and buried to assure that the project will be successful because, after all, excavations require digging into and taking objects from the earth.



Figure 1: The three project directors (Left to Right): Nicole Couture, Deborah Blom, and Maria Bruno.

Since we were unaware of any such nicknames used to linguistically mark male-dominated projects, we took these as potentially chauvinistic terms but we also understood them as something of a compliment. Qochas are precious resources in the arid *altiplano*, and Pachamama is a highly revered entity; in fact, President Evo Morales named his new environmental policy law after her. So while the nicknames clearly signaled that we were women, we gladly accepted them and the responsibilities that accompanied them.

### Three's Company?

The most noteworthy challenge we faced was not the fact that we were women, but that we were *three* codirectors. At Tiwanaku and elsewhere, it is most common to have single site directors, though there are several projects with two directors. That this tripartite configuration did not conform to popular perceptions and representations of archaeological field directors was particularly evident during our participation in the filming of an episode of the Discovery Channel series “Bone Detectives” in July of 2008. The host and “detective” of the show is a lone male archaeologist who helps solve unusual or “mysterious” burials encountered on excavations in different parts of the world. In the case of Tiwanaku, the focus was on a set of children’s remains we encountered at the base of the Mollo Kontu platform mound structure. We agreed to participate in this program because it would bring our project and Tiwanaku archaeology to a broader audience; however, handing over the representation of our work to non-archaeological writers and directors did present some challenges and frustrations.

In preparation for this television project, we had decided that we would like to be filmed together in some segments of the program to show that we were a team of directors that worked collaboratively to both run the project and interpret the findings. To accommodate the “detective story” that the writers had prepared about the mound burials, it was necessary to film each of us, and other project members, individually to discuss the various pieces of evidence. These interviews did reflect our particular areas of expertise: Nicole Couture discussed the architecture of the mound and the unusual layout of the burials; Deborah Blom provided an analysis of the human remains; and Maria Bruno discussed the plant remains. During filming we were encouraged to develop and articulate our own particular lines of interpretation and, in some instances, it seemed that we were being pushed to contradict each other. This may have simply been for dramatic effect and not meant to be confrontational, but we were wary about playing into outdated stereotypes that assert that strong, professional women cannot get along or that differences

in opinion between scholars are antagonistic. The focus on individuals began to frustrate us, and we insisted that they also film the reality of us discussing these ideas as a group. While they did fulfill our request, this footage did not make it to the actual episode. Instead the only indication that we were each directors of the project came in the title that flashed on the screen as we were each introduced. In the end, it was a lost opportunity to show the diversity and variability of how modern-day archaeological projects can be, and increasingly are, directed.

The reality is that codirectorship can be messy. In the field, we were often moving between on-site excavations, laboratory, and field house individually. As we visited each of our hard-working teams, we would be asked questions about how to proceed on a particular task. Given that we each came from different field experiences and analytical specialties, in the early days of the project it was not uncommon for us to give contradictory advice. We quickly learned that this could be problematic and worked to remedy the situation. While the ideal situation would have been for us to meet, discuss, and come to a consensual decision, this was not always possible. After a few contentious situations, we determined that we had to divide particular responsibilities and trust each person's decision. For particularly important queries, however, we would take the extra time to meet together and discuss them as a group. Moreover, there were certain tasks, such as meeting with community leaders or government officials to negotiate permits, which required a public expression of authority and unity. In these situations it was very nice to have each other's support and to present ourselves as a formidable, Pachamama-worthy front.



Figure 2: Mario Bruno conducting flotation analysis.



Figure 3: Deboral Blom and Ruth Fontenla at work in the field.

We continue to learn how to share leadership responsibilities as the focus of our project makes the transition from the world of fieldwork to the dissemination of our research findings, including coauthored publications. While interdisciplinary research is becoming more common in the humanities and social sciences, few anthropology departments have clear guidelines for evaluating collaborative scholarship. In negotiating authorship, we strive to find a balance between ensuring that all get full credit for their work and, at the same time, support each other in our various states of professional and personal development.

**Conclusion**

A project led by three female codirectors was unique at Tiwanaku, Bolivia and is perhaps still quite rare in most parts of the world. We believe, however, that it reflects a growing trend in the

diversification and increasingly collaborative nature of archaeology in the twenty-first century. We cannot deny the complex interactions of factors such as gender, race, class, and education, but our acceptance by Bolivian authorities and indigenous community leaders as female directors of a large project at the most prestigious archaeological site in their country shows that gender is not the primary concern in this context. Perhaps our work was facilitated in part by the fact that there are important cultural entities such as Pachamama and Qochamama that engender powerful female roles. It is undeniably due to the fact that we followed in the footsteps of other successful women archaeologists in Bolivia. Finally, we were all fortunate to have had mentors (both male and female) who encouraged us to take on such leadership roles.

Our experiences are not necessarily unique to us being female, but apply to any project that has multiple directors. While we have learned that the time and cooperation required for this kind of research should not be underestimated, we have also found that collaboration is immensely satisfying and the results gained from it are far greater than one could accomplish on one's own. Sharing these experiences with our colleagues and working to find new means to represent this type of collaborative directorship will be an important goal for us in the future.

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# TAKING THE ROAD LESS TRAVELED

## PUBLIC OUTREACH THROUGH MEDIA AND THE INTERNET

**Richard M. (Rick) Pettigrew**

*Rick Pettigrew is President and Executive Director of Archaeological Legacy Institute, Eugene, Oregon*

In 1999, I was 51 years old, past the midpoint of my archaeology career, and facing a watershed moment. My three-year stint in eastern Oregon as cultural resources coordinator for the Confederated Tribes of Warm Springs was drawing to a close. These years had been some of the happiest and most rewarding in my career. The Tribes were working to relicense a series of hydroelectric dams on the Deschutes River, which flows alongside their reservation, and I was in charge of the archaeological research program. The project yielded important new information about prehistory in the Deschutes River valley, while at the same time demonstrating the value of archaeology to the native peoples living where our research took place. For me, showing that archaeology is much more than an academic pursuit, that it can produce tangible benefits for real people, has always been fundamentally important.

But now I felt pressure to make a choice. Should I continue to pursue archaeology contracts? Or should I strike out in a new direction and do something I had been pondering for some time?

I'd always had an abiding curiosity about the world and the universe and why things are the way they are. As a boy, I was aware of my special talents for learning and understanding. Because I did well in school and was athletically talented, I developed a confidence that I could do anything that I chose to do. I felt that I had something special to accomplish in my life.

My upbringing cultivated in me a strong sense of compassion—I was always the one who stood up for the kid who was being bullied. My education in parochial school and by the Jesuits at Gonzaga Preparatory School in Spokane, Washington, encouraged in me a passion for social justice that probably crystallized during the civil rights movement in the 1960s. I realized early on that Native Americans represented fascinating ancient cultures that were here long before my ancestors crossed the Atlantic and subjugated them.

Even though I enjoyed school and had always followed my interests without concern for employment, it took a long time before

I decided to become an archaeologist. In high school, the physical sciences, mathematics, and technology appealed to me more. When I enrolled at Stanford University in 1966, it was as a physics major.

Empirical evidence and the scientific approach to discovery was the only satisfying way of seeking knowledge to me then and remains so for me now. I took my first computer programming class at Stanford in 1967, when one computer occupied an entire building! I interned at nearby NASA/Ames Research Center in the summer of 1968.

However, Stanford also exposed me to the social sciences. This was in the late 1960s, when students of my generation were questioning everything. I became very interested in people and why they do what they do. I took classes in sociology, anthropology, and psychology. After two years, I switched my major to psychology. In time, I came to realize the importance of a cross-cultural perspective and I gravitated toward anthropology. Overseas study in 1969 at Stanford's campus in Vienna, Austria, emphasized for me the value of experiencing other cultures and understanding their historical roots.

I graduated with a B.A. in psychology, but I had taken as many credit hours in anthropology as in psychology. In 1970, I entered the University of Oregon to pursue graduate studies in anthropology. Soon, archaeology became my direction, largely because its empirical approach and time-depth perspective impressed me as the best way to learn how human cultures originated and developed.

I began archaeological fieldwork in 1971, assisting Mel Aikens with the Oregon summer field school at a prehistoric site in the Willamette Valley. The work there fascinated me and I quickly soaked up the field methodology. Dr. Aikens became my dissertation adviser and probably had more influence on me through his example and direct advice than any other archaeologist at Oregon.





Figure 1. Rick Pettigrew with colleagues at Paisley Caves, Oregon, in 2007, following the shooting of a TAC video interview with Dr. Jenkins. From left to right: Dr. Dennis Jenkins, Dr. C. Melvin Aikens, Dr. Pettigrew, and Dr. Guy Prouty. Photo by Dr. Guy Prouty

By 1972, I was working with Dave Cole and the University of Oregon Museum of Natural History at excavations on the Columbia River. The prehistory of the lower Columbia was poorly known then, but I realized that the area, with its very large native population and key geographic location, must have played a very important role. After dissertation fieldwork in 1973, I earned my Ph.D. in 1977, establishing the first well-documented cultural chronology for the lower Columbia River valley.

While completing class work and my dissertation, I worked on field crews and led projects for the Museum and the Department of Anthropology. In the process, I gained valuable experience in research and fieldwork. In 1976, Dave Cole hired me to investigate proposed highway project areas for the Museum. I became, in effect, the “Highway Archaeologist” for the State of Oregon. For the next ten years, I traveled 10,000 miles each year surveying hundreds of proposed highway improvements and conducting scores of excavations.

A big change came in 1986, when Mike Moratto of the California contracting firm INFOTEC Research, Inc., hired me to open INFOTEC’s Pacific Northwest branch in Eugene. For the next eight years, we completed a series of fascinating projects, including the Pipeline Expansion Project, one of the largest ever done in North America.

After leaving INFOTEC in 1995, I continued on my own to do archaeology under contract (which I still do occasionally). In

time, I became less satisfied and increasingly frustrated about the limited impact of archaeological work. Archaeology is about people and what they have done and created over the millennia that resulted in the world we see today, so we should be sharing what we are learning with humanity.

I recall many times sitting around after a hard day of excavation, grouching with workmates about how the public had very little understanding of what we do and why we do it. I had produced many dozens of contract reports that gathered dust on client office shelves and had written numerous papers and monographs seen by just a few professional colleagues. We all knew that funding for our work came largely from the public, but we had no truly effective means to return that value to the public. And none of us really knew how to change that circumstance, either.

For a long time, I had felt that media programming was the best solution to the problem. But developing TV programs or movies involved a big investment and I had no training in that or the proper connections to get involved in it.

However, I stayed familiar with computers and all that they could do. I took more computer programming classes in the 1970s. I introduced the first archaeological database in Oregon in 1982 and began to use PCs regularly in our work in 1986. In time, I developed familiarity with motion pictures as well—first in the 1970s with a movie camera to film my kids and then in 1990 with Hi-8 camcorders to record the progress of excava-



Figure 2. Dr. Pettigrew shooting video at the Viking trading town of Hedeby on the Jutland Peninsula of Germany while serving as juror for the CINAR-CHEA Film Festival of Kiel, Germany. Photo taken by Aurelie Gaulet-Moissenet, May 4, 2006.

## CAREERS IN ARCHAEOLOGY

tions. That experience encouraged me to dream about sharing archaeology's stories with the public through media.

In the late 1990s, the advent of Web-based streaming media convinced me that media production and distribution were entering a new era. For the first time, one individual on a PC could produce digital video and audio and deliver it over the Internet to a worldwide audience. By 1999, I knew that all media soon would be digital and that Internet distribution eventually would become the primary mode for public consumption of media programming.

That possibility excited me. As I saw it, we finally had a practical means to communicate directly with the public (and with each other) in a compelling manner. I had found my "something special."

So in late 1999, I took the plunge. Gathering together a few friends and colleagues, I founded Archaeological Legacy Institute (ALI), a nonprofit devoted to sharing with the world the human story through media and the Internet. We created *The Archaeology Channel* (TAC), our streaming-media Web site ([www.archaeology-channel.org](http://www.archaeology-channel.org)). We put up our first on-demand streaming videos in 2000, using technology that today seems so primitive that I am amazed we accomplished what we did! We began streaming our very popular weekly show, the *Audio News from Archaeologica*, in 2001. We introduced our annual film competition, *The Archaeology Channel International Film and Video Festival*, in 2003.

My most rewarding experience as ALI's head is our passage from a startup nonprofit with no resources to one that has survived and grown for a dozen years into an organization effectively sharing the human story with everyone. Today, TAC streams about 200 video programs and lots of audio and has become one of the most popular archaeology-related websites. TAC Festival, now in its ninth edition, has screened hundreds of films from at least 45 countries. We have moved into cable TV production with our monthly news-magazine show, the *Video News from TAC*, seen on 20 stations across the US and now going international. Our vision is to grow into a much larger and more influential media organization distributing programming on cultural heritage and archaeology through a variety of means to hundreds of millions of people worldwide.

Directing a nonprofit organization, especially one with a unique

mission, is very challenging. We still have a very limited budget, so we must find novel ways to conduct our work. I have had to learn skills and accumulate information I never contemplated in graduate school, such as what constitutes a nonprofit organization, how to set one up, and how to found and operate a business (which actually, we are). I have had to learn all about digital media and stay current with rapidly advancing technology at a time when many of my age-mates are retiring. I have vastly expanded my professional archaeological network worldwide while building connections with hundreds of filmmakers and distributors. At the same time, I must stay current with archaeological research in order to share new information with the public.



*Figure 3. Dr. Pettigrew on a project to film the prehistoric temples of Malta; riding a ferry to the island of Gozo to visit the prehistoric temple of Ggantija. Photo taken by Teal Greyhavens on May 7, 2011.*

Each day, upon arriving at our office, I check my email to stay in contact with our large network of associates. I assess the priorities of the tasks in front of us and coordinate with our employees and volunteers about the work to be done. I spend part of the day directing others and part of it working on my own set of tasks. I also continually assess our goals and our strategic plan and brainstorm ways for us to grow. It's demanding to think long-term when we have so many immediate, short-term deadlines and needs.

Fund-raising, an inevitable and essential part of my job, is hugely challenging—probably the biggest challenge of all. Just like any business, we have to meet payroll at the end of the month, so I have to figure out what we can afford to try and then figure out how to pay for it. Another challenge is to decide what media content to offer and what messages we should deliver to our audience. This is difficult because we are never able to satisfy everyone.

In effect, we at ALI have been building a bridge to new careers for archaeologists. To the extent that we succeed in multiplying ways to distribute archaeology-related media and compensate producers, we are developing a new industry.

Those considering archaeology their life's work can now imagine a career in public outreach through media. If you decide to take this path, you will need to combine a standard archaeological curriculum with course work in media production and journalism. The same goes for work outside the classroom: you will need to gain some research and field experience in archaeology as well as experience in media production and journalism. Embrace new directions! Learn what the story is and discover how to tell it!



# WHO GETS PUBLISHED IN *AMERICAN ANTIQUITY*?

Alison E. Rautman

*Alison E. Rautman is the Editor of American Antiquity, (2009-2012).*

**A**t the April 2011 meeting of the SAA Board, some members asked how women authors fared as reviewers and as authors of manuscripts that were published in *American Antiquity*. I investigated this issue with the data available from the new online submission system: Editorial Manager.

## Gender Assignment for This Study

This study used a visual study of given (first) names of reviewers and authors for a one-year span from April 2009 to April 2010. Use of first names may cause some errors in gender assignment because some names (e.g., “Chris, Jordan”) can be gendered male or female. This factor is assumed to be relatively minor, and is likely to work both ways. I also was able to make some gender assignments simply because I knew the individual.

## Reviewer Gender

During this one-year period, I invited 763 reviewers. The reviewers included 485 names commonly used for men (64 percent) and 278 names commonly used for women (36 percent).

The main factors affecting the invitation to review a manuscript include:

1. The reviewer has published previously on the general issue
2. The reviewer has published within the last 10 years or so
3. The reviewer is a member of SAA, with a valid email address
4. If the reviewer is not a member of SAA, then the email address is readily available when I search the Web.

The last two factors are, in fact, the deciding and limiting factors on reviewer invitations.

While I do deliberately try to include women as reviewers, I have found that if a woman is NOT a member of the SAA, it is generally more difficult for me to find her email address than it is to find men who are non-SAA members. While I don't know the reason for this issue, I do have some general observations.

1. If an archaeologist works for a university or college, their email is usually easy to find on the departmental web page. The web pages focus on an individual's accomplishments.
2. If an archaeologist works for an agency such as a museum, a private contract firms, a federal or state governmental agency, their individual email is usually not posted within the available contact information. The emphasis is on the group's accomplishments, and individual contributions may or may not be highlighted.

I suspect that the women are differentially represented in non-academic positions, which makes their individual email addresses more difficult to obtain.

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*Note:* Alison Rautman is the outgoing editor of *American Antiquity* (2009–2012); in April 2012 Kenneth Sassaman will become the journal's editor.

Table 1.

Gender of Authors, in order listed	Submitted	Accepted	Rejected
Solo-male	48	26	22
Solo-female	19	10	9
Male-female co-authors	2	0	2
Female-male co-authors	6	3	3
Male-male co-authors	15	8	7
Female-female co-authors	1	0	1
MMF group co-authors	1	1	0
MFF group co-authors	1	1	0
MFM group co-authors	1	0	1
MMM group co-authors	3	2	1
FMF group co-authors	2	1	1
MM? (Not uniquely gendered name)	1	1	0
*Male-led group >3	3	2	1
*Female-led group >3	3	2	1
SUM	106	57	49

\*Articles with more than three authors are very rare. They are usually Comments or (in one case) a manuscript that synthesized multiple technical specialties.

### Author Gender and Manuscript Submission, Acceptance, and Rejection

Table 1 lists the authors' inferred gender, with multiple authors in the order in which they appear in the manuscript. These data do not include articles that were still "in process" or "in revision." These data also do not include those manuscripts that are classified as "withdrawn."

As you can see from the raw data, male solo authors submit more than twice as many manuscripts as female solo authors, and represent also twice the number of acceptances and also twice the number of rejections. Among multi-authored manuscripts, male-male authored manuscripts are the most common combination of authors by far. However, even these manuscripts are fairly evenly split between acceptances and rejections. This brief study of the inferred gender representation among authors who submit manuscripts to *American Antiquity* shows that:

1. Men submit more articles than women do.
2. Men get more articles published than women do.
3. There does not seem to be any obvious factor affecting the outcomes (accept or reject) of manuscripts written by men or by women, or various combinations thereof. That is, a manuscript's fate in the peer-review system does not appear to be sensitive to the (inferred) gender of the author(s).
4. The first step to getting an article published is to submit the manuscript. If an author does not submit a manuscript, there is zero chance of getting it published!

### Suggestions for Future Research

It is possible that men simply outnumber women in academic positions where writing articles for *American Antiquity* is a higher priority. This study does not address whether the male/female representation of authors is proportionate to the demographics of academic employment. There is some suggestion that women are more likely to be employed in CRM, Museum, and governmental agency settings.

### Suggestions for Future Actions

If we as a discipline wish to increase the participation of women in writing and reviewing manuscripts, there are some specific actions that we might take:

↪ RAUTMAN, continued on page 30





# “THE PRINCIPLES OF ARCHAEOLOGICAL ETHICS AS A LIVING DOCUMENT: IS REVISION NECESSARY?”

## A REQUEST FROM THE SAA COMMITTEE ON ETHICS

Joe Watkins

*Joe Watkins is the Chair of the SAA Committee on Ethics.*

In the years since the SAA created and last added to its Principles of Archaeological Ethics, archaeology has faced new challenges, particularly as more people outside the profession have taken interest in using the archaeological record in ways that conflict with our traditional notions of proper “stewardship” of that record. Given our years of experience in using the Principles to guide our profession, most Committee on Ethics members believe it now is appropriate to revisit them. In that light, during its November 2010 meeting, the Board of Directors passed Motion 126-28B, charging the Committee on Ethics “to review the SAA Principles of Archaeological Ethics and recommend whether there are areas that may be in need of revision and further discussion.” Appropriately, the Committee on Ethics will be conducting a survey of the SAA membership concerning the Principles this summer.

These actions are being undertaken partially in response to an open letter published by attendees of an October 2008 conference. Twelve archaeologists of diverse backgrounds, interests, and ages met at Indiana University, Bloomington, to discuss the Principles of Archaeological Ethics and their implications for archaeological practice in today’s society. Proceeding from the position that collaborative practice is essential for quality archaeology, the group reviewed the Principles for possible revision and expansion. They also began developing ideas to improve interactions between archaeologists and affected groups, particularly Native American and Indigenous communities. The group solicited comments from archaeologists via an open letter published in the March 2009 edition of *The SAA Archaeological Record* (page 4), on-line at <http://www.archaeology-ce.info/letter.html>, as well as through a Facebook page (<https://www.facebook.com/#!/group.php?gid=140544690015>).

### The Conversation at the Committee on Ethics Forum in Sacramento

To help meet the Board’s charge, the Committee on Ethics conducted a sponsored forum at the Sacramento meetings titled “The Principles of Archaeological Ethics as a Living Document: Is Revision Necessary?” It also published a notice of the symposium, soliciting participation, in the March 2011 edition of *The SAA Archaeological Record* (page 44).

A diverse group of practicing archaeologists comprised of CRM archaeologists, government archaeologists, academic archaeologists, and International and Indigenous archaeologists attended the symposium. Most were supportive of **revisiting** the Principles of Archaeological Ethics, especially as they relate to the idea of stewardship and the rights of the archaeologist to assume the primary role of “steward” to the apparent exclusion of others whose interests also lie within the archaeological record. Panelists also discussed the differing meanings that heritage has to different groups of people, and the implications such definitions may have to those groups.

While most committee members believe the Principles should be revised, most also acknowledge they cannot gauge how the SAA membership feels about revision at this time. Therefore, the Committee will be conducting a survey of the SAA membership concerning the Principles this summer.

Concerns expressed by committee members and participants at the symposium fall into two categories: substantive changes in the structure or focus of the Principles and practical changes to facilitate their use. The categories that follow only summarize issues expressed at the Symposium and by the Committee members, and are not meant to limit the breadth of potential changes or constrain discussion.

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## COMMITTEE ON ETHICS

The following points related to general substantive change were noted:

1. There should be recognition of the special responsibilities archaeologists have toward indigenous peoples, especially lineal descendants of the people whose lifeways are the subject of our researches, which perhaps conflicts with prioritizing “Stewardship” above “Accountability” in the Principles.
2. The notion of Stewardship is flawed, especially if archaeologists are seen to be self-appointed stewards of the archaeological record. Perhaps a concept of “trusteeship” may be clearer (although the conflict of interest problem still might not be resolved).
3. The Principles should provide better guidance and be more applicable to those archaeologists who practice outside of academic or research-oriented environments.
4. There is a focus on issues that arise in the Americas, mainly North America. The SAA has international members and members who work overseas and who find little guidance for concerns that arise in their practice.
5. The practitioners who have used the Principles since their construction have a sense of their weaknesses. In short, now would be a good time to revisit them.

The Symposium participants and Committee members also were concerned about the practical integration of the Principles into daily archaeological practice. Ethical principles can never provide simple answers to every issue, but a worthwhile goal is to make their application and interpretation easier. Two approaches were suggested by the Committee on Ethics and forum attendees to make the Principles easier to apply and more integrated into the practice:

1. A new format or approach is needed that provides clearer guidance so that the Principles are easier to apply.
2. More guidance is needed to implement the Principles (whether or not they are revised), to overcome their ambiguities. While the SAA Principles have a great deal of published commentary, they would benefit from additional resources for assisting the practitioner to work through an issue. This guidance could come in the form of case studies, hypothetical cases, commentary, “things to consider,” and/or discussion, perhaps somewhat along the lines within the AAA column *Ethical Currents*.

The discipline and the world have changed since the time that the current Principles were drafted. The implementation of the Principles in archaeological practice over the last 15 years has revealed areas that could use clarification, expansion, or modification. Other organizations such as the American Anthropolog-

ical Association have made note of the way anthropology now fits in the world and have acted to amend or change their ethical statements. This is a question the SAA should now ponder: how does the practice of archaeology fit in the early twenty-first century and how should it properly interact with the diverse populations it affects? This is one of the reasons we now see the “weaknesses” of the SAA principles.

Finally, the original authors of the Principles noted the likelihood of the need to revisit and revise them on a regular basis, especially when they are deemed ineffective in aiding archaeologists to address ethical dilemmas.

### Next Steps in Revisiting (and Revising?) the SAA Principles

With this in mind, the SAA Committee on Ethics is hoping to initiate a year-long program to revisit and, if necessary, revise the Principles of Archaeological Ethics. Such a program will be initiated through on-line conversations; discussion within the SAA’s *The SAA Archaeological Record* of the issues and the process; and publication of the results. The Committee has proposed to develop a survey instrument to gauge the membership’s perceptions and thoughts; if approved by the Board and the SAA’s Survey Oversight Committee, we hope to gather information this summer.

Listed below are the current Principles of Archaeological Ethics with some comments as examples of where discussion might proceed. We welcome member comments and discussion, noting that such discussion is an essential part of the process of ethical responsibility and growth within ethical guidelines:

#### Principle No. 1: Stewardship

*The archaeological record, that is, in situ archaeological material and sites, archaeological collections, records and reports, is irreplaceable. It is the responsibility of all archaeologists to work for the long-term conservation and protection of the archaeological record by practicing and promoting stewardship of the archaeological record. Stewards are both caretakers of and advocates for the archaeological record for the benefit of all people; as they investigate and interpret the record, they should use the specialized knowledge they gain to promote public understanding and support for its long-term preservation.*

Can the “archaeological record” be considered independently from its cultural context? While many archaeologists consider the loss of knowledge to be an ultimate issue in the loss of the archaeological record, others perceive the loss of the material remains of the past to be part of the “natural way of life.” Can this conflict between those who make their living on the archaeological past and those whose ancestors created that past be

resolved? Does proper stewardship foreclose multiple uses of the archaeological record?

**Principle No. 2: Accountability**

*Responsible archaeological research, including all levels of professional activity, requires an acknowledgment of public accountability and a commitment to make every reasonable effort, in good faith, to consult actively with affected group(s), with the goal of establishing a working relationship that can be beneficial to all parties involved.*

**Should** the “working relationship” be beneficial to all parties involved, or should any one party have a higher claim on that material than others?

**Principle No. 3: Commercialization**

*The Society for American Archaeology has long recognized that the buying and selling of objects out of archaeological context is contributing to the destruction of the archaeological record on the American continents and around the world. The commercialization of archaeological objects—their use as commodities to be exploited for personal enjoyment or profit—results in the destruction of archaeological sites and of contextual information that is essential to understanding the archaeological record. Archaeologists should therefore carefully weigh the benefits to scholarship of a project against the costs of potentially enhancing the commercial value of archaeological objects. Whenever possible they should discourage, and should themselves avoid, activities that enhance the commercial value of archaeological objects, especially objects that are not curated in public institutions, or readily available for scientific study, public interpretation, and display.*

More recently, some archaeologists have indicated they are less concerned about the exploitation of archaeological material for commercial uses as for its exploitation for nationalist ones: should the SAA consider and address the political uses to which archaeology has been and continues to be put? Is this political exploitation better, lesser, or even different than the commercial exploitation?

**Principle No. 4: Public Education and Outreach**

*Archaeologists should reach out to, and participate in cooperative efforts with others interested in the archaeological record with the aim of improving the preservation, protection, and interpretation of the record. In particular, archaeologists should undertake to: 1) enlist public support for the stewardship of the archaeological record; 2) explain and promote the use of archaeological methods and techniques in understanding human behavior and culture; and 3) communicate archaeological interpretations of the past. Many publics exist for archaeology including students and teachers; Native Amer-*

*icans and other ethnic, religious, and cultural groups who find in the archaeological record important aspects of their cultural heritage; lawmakers and government officials; reporters, journalists, and others involved in the media; and the general public. Archaeologists who are unable to undertake public education and outreach directly should encourage and support the efforts of others in these activities.*

Some archaeologists note that many community archaeological projects are of a different level of “academic rigor” than others, and, as a result, can perhaps be seen as somehow “lesser” than purely academic ones. How can we ensure that public education and outreach truly is beneficial to the many publics that are out there? How many “lobbying” efforts can we undertake to make public education a reality rather than an afterthought?

**Principle No. 5: Intellectual Property**

*Intellectual property, as contained in the knowledge and documents created through the study of archaeological resources, is part of the archaeological record. As such it should be treated in accord with the principles of stewardship rather than as a matter of personal possession. If there is a compelling reason, and no legal restrictions or strong countervailing interests, a researcher may have primary access to original materials and documents for a limited and reasonable time, after which these materials and documents must be made available to others.*

As many people are beginning to notice and write about, not all people believe that “intellectual property” is equally identified and defined by all groups. The Western concept of intellectual property—and property in general—might sometimes be in conflict with that of Indigenous groups and others; who should have the right to control that intellectual property right if a conflict exists?

**Principle No. 6: Public Reporting and Publication**

*Within a reasonable time, the knowledge archaeologists gain from investigation of the archaeological record must be presented in accessible form (through publication or other means) to as wide a range of interested publics as possible. The documents and materials on which publication and other forms of public reporting are based should be deposited in a suitable place for permanent safekeeping. An interest in preserving and protecting in situ archaeological sites must be taken in to account when publishing and distributing information about their nature and location.*

While this Principle discusses “distributing information,” it was written at a time when environments such as the “cloud,” electronic documents, and other such applications were neither commonplace nor relevant. While it might not be necessary to revise this Principle, perhaps clarification and further elabora-

tion on items would be welcome.

### Principle No. 7: Records and Preservation

*Archaeologists should work actively for the preservation of, and long term access to, archaeological collections, records, and reports. To this end, they should encourage colleagues, students, and others to make responsible use of collections, records, and reports in their research as one means of preserving the in situ archaeological record, and of increasing the care and attention given to that portion of the archaeological record, which has been removed and incorporated into archaeological collections, records, and reports.*

The availability of information on archaeological collections and records is important for the academic progress of archaeology, and yet the availability of such information might also have negative consequences for particular groups within areas. As such, perhaps there is a need to identify unintended consequences of which we should be aware in relation to such preservation.

### Principle No. 8: Training and Resources

*Given the destructive nature of most archaeological investigations, archaeologists must ensure that they have adequate training, experi-*

*ence, facilities, and other support necessary to conduct any program of research they initiate in a manner consistent with the foregoing principles and contemporary standards of professional practice.*

Is there a need to further identify particular wording that calls for expanding relationships with the various publics we identify, the relationships with these principles, the principle of preservation, and so forth?

### Please Participate!

None of these points of discussion are meant to be limiting or to in any way guide the discussion. We specifically invite comments from our students who have grown up in this age of the Ethics Bowls. One of our goals is to hear other about issues members have with the Principles and with strengthening our discipline's Principles of Ethical Responsibility. PLEASE participate and help us make sure these Principles are ones the discipline can live by and flourish with. We welcome your email comments to us at [ethics@saa.org](mailto:ethics@saa.org).

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RAUTMAN, from page 26 ↻

1. Encourage non-academics to join the SAA. My informal experience is that archaeologists who work in governmental agencies, private firms, museums, and other non-university settings are less likely to join the SAA, and their contact information is simply more difficult to find, even among the listings of the Register of Professional Archaeologists (RPA). Simply asking non-members to review manuscripts seems to spur people to at least think about joining the SAA.
2. Encourage manuscript submission. This encouragement might simply involve restructuring criteria (e.g., for departmental promotion and tenure) to reward manuscript submission (in a manner similar to the way that some universities track "grant submission" as an indicator of "effort" regardless of whether one receives the grant).

Authors have told me repeatedly that it is quite difficult to persuade colleagues to comment on manuscripts without going through the formal submission process. Many young scholars have mentioned that the formal review is the only mechanism available to get assistance or feedback. While individual scholars can access or develop self-help writing groups, perhaps there are ways in which the SAA could facilitate some process of informal pre-submission review. For example, the SAA might help create an informal mentoring network that would allow interested academics to self-identify as potential pre-submission reviewers for certain topics.

Another idea is that the SAA, or the Publications Committee, or some other group, could arrange space/time at the SAA meetings for senior scholar volunteers to provide half-hour one-on-one manuscript evaluation—the manuscript's equivalent of speed-dating, if you will. Neither of these mechanisms could possibly guarantee manuscript acceptance, but would provide junior scholars with at least some feedback on organizational structure and composition—and some practical advice and perhaps even encouragement—in an informal setting before they submit the manuscript for official review.



# NEW DIRECTIONS IN BIOARCHAEOLOGY

Debra L. Martin and Ryan P Harrod

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**B**ioarchaeology is the study of ancient and historic human remains in a richly configured context that includes all possible reconstructions of the cultural and environmental variables bearing upon interpretations drawn from those remains. Research focused on the study of human remains must consider how this type of analysis affects the people who view the remains as ancestors. The Native American Grave Protection and Repatriation Act (NAGPRA) in the U.S., and similar kinds of injunctions, legislation, and mandates in other countries have forever changed the way that burials and human remains are approached. From the moment of discovery through to analysis and interpretation, NAGPRA and NAGPRA-like mandates have brought bioarchaeologists and indigenous or descendant populations together in often surprising and productive ways that could not have been predicted.

Today, virtually no analysis is done on any human remains without consensus and some form of cooperative effort between bioarchaeologists and other stakeholders. From museum and governmental entities, to tribal representatives and indigenous committees, research proposals, excavation permits, and access to repositories are strictly controlled. The product of this more collaborative effort is not only a much deeper engagement with descendant communities in many cases but also a more detailed understanding of the human remains themselves.

As a field of study, bioarchaeology is informed by a wide range of scientific methods and theories coming from disciplines such as archaeology, medicine, forensics, anatomy, epidemiology, and demography. Yet, it is fully practiced within the discipline of anthropology (Armelagos 2003). Bioarchaeology is the scientific study of humans using the archaeological record to enhance what can be known about the past, and this information is used to make verifiable explanations about human behavior. At its very best, bioarchaeology helps *explain* human behavior and why certain patterns emerge in some cultures at particular times. Primarily, bioarchaeology uniquely provides time depth and a cross-

cultural perspective on humans as both biological and cultural beings.

As a subdiscipline, bioarchaeology is emerging as a specialty that holds a unique place within anthropology, with one foot in biological anthropology and one foot in archaeology privileging each equally. However, bioarchaeology aims to be much more than a sum of osteological data plus archaeological context. As such, bioarchaeology is rooted in anthropological theory, and it has the potential as few other disciplines do to reveal important dimensions to the human life history that are currently unfathomable. The methodological foundation of bioarchaeology was outlined in a volume by Clark Larsen (1997), and the intellectual history of bioarchaeology was formalized in an edited volume by Jane Buikstra and Lane Beck (2006).

The mandate for interdisciplinary approaches has grown exponentially. Knudson and Stojanowski (2008) presented a state-of-the-art overview of the ways that bioarchaeology provides “social identities” to human remains. They called for bioarchaeology to push the limits of what can be known about the lived experience of individuals and communities represented by bony remains in the archaeological record. There is an increasing need for bioarchaeologists to have training in a number of areas including skeletal biology, paleopathology, forensic anthropology, excavation technique, taphonomy and site formation processes, state and federal burial laws, and advanced analytical techniques such as isotopic and DNA analysis and histology. Theory drawn from a number of sources and biocultural modeling has provided the means for integrating data across these boundaries in innovative ways.

Our objective is to demonstrate the value of new directions in bioarchaeology to archaeological research and to better understanding the past. Both offer different strengths and both are challenged in different ways due to the limits of the

↳ MARTIN & HARROD, continued on page 44

# ETHNOBIOARCHAEOLOGY

Ryan P. Harrod

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For most of the history of scientific research involving the study of human skeletal remains, researchers have identified themselves as osteologists. Look up the word *osteology* and you will find that it means the study of bones. Not satisfied with simply measuring and describing bones, several researchers during the last half of the 1970s started a revolution. These pioneers included Jane Buikstra, George Armelagos, and Clark Spencer Larsen. What they did was push researchers to move beyond the “study of bones” toward research that fleshed out the identity of the living person and how they fit into the larger cultural context. The result was the birth of the field of bioarchaeology.

Nearly twenty years after the development of bioarchaeology, another leading bioarchaeologist, Philip Walker, challenged researchers analyzing skeletal remains to go even further. He argued that bioarchaeologists must incorporate *ethnography* in the same way that ethnoarchaeologists have since the mid-1950s (Kleindienst and Watson 1956). Ethnoarchaeology is an approach to understanding material culture and behavior in the past using ethnographic analogy. This is the practice of utilizing ethnographic observations in order to make inferences about the behavior of people in past cultures.

Walker conducted two projects utilizing this approach, both looking at dental health. The first analyzed dental health as it relates to status, while the second looked at the activities and behaviors that affect dental health. The first project involved a collaborative effort between Walker and a cultural anthropologist, Barry Hewlett (1990). This project looked at dental health among foraging and agricultural groups in Central Africa. The second project, a collaborative effort between Walker, a cognitive anthropologist, Lawrence Sugiyama, and a cultural anthropologist, Richard Chacon (1998) explored dental health among horticultural groups in the Amazonian Basin. Walker’s pioneering work created a marriage of bioarchaeology with ethnography producing

what he later coined “ethno-bioarchaeology” (Walker et al. 1998:389).

It has been over two decades since Walker and Hewlett first pioneered this method and a decade since Walker, Sugiyama, and Chacon emphatically noted that there was “*an urgent need for more ethno-bioarchaeological research*” (1998:389). Yet bioarchaeologists have been slow to advance this approach. There have been a few studies that utilize ethnohistoric or clinical documentation as a proxy for ethnographic information. These, however, lack the specificity and cultural nuance that ethnographic studies designed collaboratively with bioarchaeologists could bring to the field.

Ethno-bioarchaeology is one of the next frontiers for a new generation of bioarchaeologists. As such, it is timely to illustrate the wealth of information that can be produced utilizing this approach. To do this I present an overview of the second research project by Walker and his team and a current project that I have been working on with a cognitive anthropologist and a bioarchaeologist. These examples will hopefully stimulate and generate new areas of collaborative research for bioarchaeologists.

## **Ethno-bioarchaeology of Dental Health (Walker et al. 1998)**

Walker and his team had a great idea. They wanted to see if they could use data from three groups living in different regions of Amazonian Basin, the Yanomamö, Yora, and Shiwiari, to understand more completely the relationship between changes in oral health and dentition and shifts in diet and nutrition. What is unique about this research is that the focus was on variations in dental health where there was greater control over confounding variables that bioarchaeologists usually have no control over. Changes to dentition are an important area of research because they are typically perceived to be strong indicators of diet in bioarchaeological

studies. This relationship makes them especially important for ascertaining the type and quality of food resources available to each individual. Most of the research conducted on dental changes over time related to shifting subsistence patterns involves the analysis of ancient skeletal populations. As such, a great deal of inference and speculation about the factors underlying these changes was always present.

The approach to this study involved recording dental health on each individual, as well as ethnographically recording the subsistence strategy and diet from each ethnic group or community. The dental changes examined included the presence of caries, wear to the surface of the tooth, the loss of teeth during one's lifetime known as antemortem tooth loss, and finally the presence and severity of enamel and hypoplasia. The subsistence strategy for each group was recorded according to three characteristics: (1) How they produced their food (e.g., hunting, gathering, and slash-and-burn agriculture); (2) How the food was prepared (e.g., crushing and sucking sugar cane); (3) What food was actually consumed (i.e., protein versus carbohydrates).

The findings revealed that there are variations in the percentage and mean frequencies of caries and antemortem tooth loss among the groups, but changes in dental wear patterns presented a surprising finding. Instead of showing significant change among the groups, this measure illustrated the importance of analyzing the regional differences in the subsistence strategy at the micro-level, which includes factors like sex-based behavior and age-related changes. This would also include how food is produced or its availability (more or less meat as related to wear), the way it is prepared (manioc chewing for beer and prevention of cavities), what resources are consumed (tobacco use and increase wear), and the cultural practices related to subsistence (using teeth as tools and anterior tooth wear).

The overall findings of this research are that simple correlations between subsistence strategy and dental health are not valid. The researchers discovered there



Figure 1. Richard Chacon in the Yanomamö village of Mokaritari (Photo by Lawrence Sugiyama).

are numerous, often confounding, variables that need to be taken into consideration when analyzing dental health. These factors included the person's sex and age, the society's means of food production, and the culture's behavioral practices.

### Ethnobiaoarchaeology of Trauma (Harrod et al. in press, 2012)

Nearly two decades after Walker's ethnobiaoarchaeological research, My colleagues and I began thinking about the origins and evolution of *nonlethal* violence, and the implications for distinguishing violent trauma from accidental trauma on ancient skeletons. Together with Debra Martin (a bioarchaeologist) and Pierre Liénard (a cognitive anthropologist), we designed an ethnobiaoarchaeological study to carry out

with the Turkana. The Turkana offered a good model for studying nonlethal trauma and injury related to lifestyle, marriage practices, and violence.

The methodology involved using a questionnaire and a body diagram that would provide direct information from individuals about their various healed scars, wounds, and injuries. The questionnaire consisted of over sixty questions about reproductive history, general health, stress levels, nutrition and diet, occupational stress, and trauma. The body maps were crucial because they provided an illustration of the body that offered an easy way for individuals to identify all of the places on their body where they had sustained injuries. The idea was to have the Turkana map of each healed injury on the body, as well as

describe when and how it was obtained. Our questions included identifying if there were certain people in the population at greater risk of injury, if there seems to be a pattern of repeat injury among people who had sustained past trauma, and if it was possible to identify the mechanism or activity behind particular injuries. The latter was especially important as it is often argued that injuries to the head and body that are identified as evidence of violence could just as likely be a consequence of accidental or occupational activities. So we wanted to see whether or not there was a way to differentiate injuries that resulted from accidents such as working with the



Figure 2. Pierre Liénard fieldwork among the Turkana (Photo by Dolores Bossuyt).

herds, from those related to interpersonal violence (e.g., male competition for status) and intergroup conflict (e.g., raiding neighboring herders for cattle).

The findings of this research indicated that both males and females were exposed to a fair amount of trauma related to accidents or occupational activities, such as being gored by the horn of a cow, kicked by a donkey, bitten by a camel, or simply falling down. However, what we learned about these kinds of injuries is that they were typically superficial and only affected the soft tissue. In contrast, violence-related injuries were more severe and often did affect the bone. Turkana informants could point to areas on their body where they had sustained injuries related to fighting or raids, which were the more serious types of injury. Some of these old, well-healed wounds could still be felt through the skin on the bone. Another interesting result that emerged from this research was that there were differences between male and female injury patterns that correlated with their different roles. For example, questionnaire data revealed that in the polygynous marriages that are typical among the Turkana, it is not always males hitting females, but that occasionally women use violence against one another. The project provided detailed descriptions of why people engage in violent action or fall victim to violence. While some of these data are specific to the Turkana, we were also able to take much of the insight afforded by this study and apply it to our ongoing studies of violence in past populations.

### Ethnobiaarchaeology and the Future

In addition to the projects discussed above, ethnobiaarchaeology can offer better answers to a number of research questions. Here are some ideas I am interested in pursuing or seeing done by others. First, we can clarify the role age plays in the degree of musculoskeletal muscle attachment or enthesis development. Collaboration with a cultural anthropologist working with an indigenous group that practices very specific and habitual tasks on a daily basis could help identify the variables involved in these muscle attachments. This would involve using portable ultrasound or x-ray to capture bone growth over time at the site of the muscle attachments of interest. A second project I would like to see performed would be to explore the rate of accidental head trauma among a foraging population. Because there is a tendency to assume that violence is not very common in hunter-gatherers populations, trauma to the head has largely been thought to be related to falls and other lifestyle hazards. And,



Figure 3. Ryan Harrod analyzing the Turkana data (Photo by Stephanie Harrod).

accidental or fall-related head trauma is analyzed using Western post-industrial populations who do have higher rates of falls due to environmental hazards produced by the artificial landscape (e.g., low friction surfaces like linoleum or high-level falls due to multistoried architecture). With an ethnobiaarchaeological approach, it would be possible to determine how common these types of injuries are in a natural environment.

Ethnobiaarchaeology is a critical new methodological approach for bioarchaeology because through the interaction with living people we can better understand the circumstances that result in changes to the

skeleton. It goes beyond simply looking at historic or medical records that capture a snapshot of people's lives. We owe Philip Walker gratitude for being so prescient about the future potential of Ethnobiaarchaeology. In writing the obituary for him, Clark Larsen and Patricia Lambert (2010) highlighted the potential of his work in this area.

The use of ethnobiaarchaeological approaches are crucial to consider because they offer a novel method for bioarchaeologists to reverse-engineer individual and cultural behavior in the past. When we are asking questions about the lives of people in the past, we are often at a disadvantage of not knowing what all of the most important biocultural relationships might be. With more ethnobiaarchaeological studies, we can begin to clarify important factors that underlie the patterns in health and healthcare, use of the body, changes in dentition, and other ways that give us clues about ancient identity.

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# KIDS THROUGH ADULT EYES

## THE BIOARCHAEOLOGY OF CHILDREN

Marc F. Oxenham

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**N**early 4,000 years ago tragedy struck a small community of less than 100 souls. A child, who we can name Sammy, had died at an age, some 8 to 9 years old, at which children are generally at their peak of health and vitality. We don't know Sammy's gender as children do not develop skeletal signatures of biological sex until adolescence, but we'll refer to Sammy as female. Sammy's health, good or ill, in addition to her treatment in death can provide insights into what it was like to be a child thousands of years ago. Bioarchaeology provides a set of powerful conceptual, methodological, and inferential tools for reconstructing aspects of both the biology and social identity of children who died well before their time in the ancient past.

Using examples from prehistoric Vietnam, I will paint a picture of what it was like to live as a child in small tropical communities before the arrival of metal technologies. This period, the Neolithic, is characterized in Southeast Asia by a move from hunting land and water animals in addition to gathering wild plants, nuts, and seeds to incorporating domesticated crops (e.g., rice farming) and animals (e.g., pig rearing) into the general subsistence economy. It is a period devoid of metals such as bronze and iron, where stone adzes, sickles, and knives were used in their stead. We also see the introduction of pottery vessels, which facilitated the storage of food stuffs and enabled more efficient cooking methods. Sammy's story is based on extensive archaeological excavations and intensive laboratory analysis, often involving experts from a wide range of specializations (ancient DNA, ceramic and lithic analysis, osteology, palaeopathology, zooarchaeology, palynology, etc.) (see Oxenham et al. 2011).

Sammy's village, named Man Bac, is less than a two-hour drive south of modern day Hanoi. It consisted of a cluster of closely set stilted wooden and bamboo dwellings with thatched roofs, was back-dropped by a steeply rising and partially encircling limestone ridge rising several hundred feet above the low thickly forested plains, home to elephant, rhi-

noceros, crocodile, and various species of deer and monkey. Within a hundred yards of the houses a large river started to broaden as it developed into an expansive estuary rich in bird and aquatic life. This watercourse was one of many that contributed to one of the largest deltas in Southeast Asia: the Red River system. The inhabitants of Man Bac formed the vanguard of a major transformational process that was to sweep through Southeast Asia, changing its inhabitants and the region as a whole for millennia to come.

A few generations prior to Sammy's birth, villagers engaged in hunting wild animals, fishing in the river, estuary, and even open sea as well as gathering a wide range of wild plant foods. This was to suddenly change with the appearance of newcomers from the north, with exotic physical features, bringing a new way of living: domesticated crops and animals. Rather than conflict, the archaeological evidence suggests the two groups shared their different life-ways and even genes. However, the transformations occurring at Man Bac were not all positive, with a dramatic increase in female fertility and a decline in human health being two of the clearest side effects.

How do we know that female fertility markedly increased in Sammy's community? While it may seem somewhat paradoxical, the large number of dead and buried children at Man Bac, half of the entire cemetery population, is a signal of fertility. Hunter-gatherer peoples tend to have long intervals between births and relatively low levels of infant mortality. Farmers tend to have reduced birthing intervals and increased rates of infant mortality, leading to an increase in the percentage of children in their cemeteries (see Bocquet-Appel 2011).

Neonates, or babies that died shortly before or soon after birth, accounted for over 20 percent of the entire cemetery. While this figure sharply declined as babies became infants, there was another mortality peak at 1½ years of age. The

large number of neonate deaths is expected in preindustrial societies; the main cause of death due to endogenous factors, e.g., low birth weight or birthing trauma. The increase in deaths at 1½ years, on the other hand, was due to exogenous factors, e.g., infectious disease and accidental death (Halcrow and Tayles 2011:340). Sometimes both a baby and its mother would have died at or around the time of birth, but evidence for such an unfortunately familiar occurrence is rare archaeologically. We only have one such example in Vietnam: in a contemporaneous community in the far south, close to modern-day Saigon, a young woman only 15 years old, a child herself, died with the tiny skeletal remains of her unborn baby preserved within her lower abdominal region. The tragedy is compounded when considering this young women-girl was not very healthy before she died, with evidence for congenital pelvic anomalies and appalling oral health (see Willis and Oxenham 2012).

Is it possible to be more specific regarding the causes of so many children dying at Man Bac? For the most part the answer is no, however, we can examine aspects of the health of these children before they died, which may throw some light on the underlying reasons for their untimely deaths. In some cases chronic illnesses can leave a skeletal signature or echo of the soft tissue changes associated with certain diseases. When bone is involved in the body's response to disease it will react by way of a net addition or loss of skeletal material, or a combination of both involving remodelling of the bony tissues. We know that at least one child, whom we called Nguyen, suffered from a seriously disabling disease as a young child, leaving him with complete lower limb and partial upper limb paralysis. Despite the severity of Nguyen's condition, he survived into early adulthood; in part facilitated by dedicated and devoted care (see Lorn Tilley's next issue). A very high proportion of Man Bac children suffered from debilitating underlying chronic infectious disease that likely contributed to their eventual deaths. Moreover, the increased level of fertility had a deleterious affect on the health of these children's mothers.

In the past, as now, women tended to have poorer dental health than men, in part due to contrasting female and male biology and physiology. Differences in the composition and flow rate of saliva, hormonal fluctuations (e.g. female menstrual cycling) and major changes associated with pregnancy are contributing factors (see Lukacs 2008). It's not hard to imagine that a marked increase in the number of births per mother will also be associated with poorer female oral health in a community with elevated levels of fertility: frequent births equates with poorer health.

After birth, mother-infant bonding is furthered through breast feeding, which also provides the new born with vital nutrients and a measure of its mother's built up immunity to

a range of local infectious agents. The introduction of solid foods and decreased reliance on breast milk marks a baby's first major transitional period: weaning. The process of weaning, which can take months if not years, can be fraught with danger: not the least being reduction or loss of the mother's anti-bodies and the introduction of hitherto unknown pathogens by way of solid foods. The sharp spike in Man Bac infant mortality at around 1½ years of age could be a signature of this major infant life stage: weaning.

Major transitional periods in life, liminal phases, mark entry into social groups predicated on a range of biological, psychological and socially mediated signifiers. An individual's identity as a child versus an adult, perhaps a fundamental bio-social dichotomy, differs by culture and through time. In past, and indeed modern, communities multiple bio-social categories occurred that could also vary by gender and other aspects of identity (e.g. status). Identifying such bio-social groups from cemetery remains can be problematic and requires an assessment of both the biological age (which tends to approximate chronological age) of the human skeletal remains and the manner in which individuals were buried: e.g., investment in burial (e.g., grave goods or furnishings, type of coffining, etc.), body orientation, location, position, and so forth.

In examining evidence for bio-social age classes at Man Bac we have found that children are not automatically buried with grave offerings until they are at least 7 years of age. Prior to this age milestone, children have a steadily decreasing probability of receiving funerary offerings: neonates only had a 50 percent likelihood. Nephrite, or jade, is found in a number of burials, but the earliest it appears in children's graves is at 1½ years, perhaps coincidental with the inferred period of weaning: or a further signifier of this important bio-social age class. Another important bio-social stage seems to begin around 3 to 5 years, when tools first accompany deceased children. From a motor and cognitive development perspective this makes sense, as children will have the mental and body coordination skills to facilitate the use of tools. Children as young as 5 years old wielding machetes, leading water buffalo, searching for shellfish, and engaging in any number of economically significant tasks are as common a sight in Southeast Asia today as thousands of years ago.

A further bio-social age class, defined by a high percentage of young individuals holding long bivalve shells in their hands, spans a range of other classes from birth to late teens. The significance of the shells is difficult to determine, but symbols of fertility (e.g., shells) are often associated with the dead, perhaps as a reflection of the opposing states of birth (life) and death. This brings us full circle back to Sammy, nicknamed the "shell-child" when discovered, who was

## NEW DIRECTIONS IN BIOARCHAEOLOGY

unusual in being one of only two children to die aged 8–9 years old, and the only individual to be laid to rest upon a bed of shells. Sammy's lifeless fingers grasped long knife-like shells, while a necklace of small cowry shells encircled her neck. Additional grave offerings included a globular ceramic pot and footed bowl that may have contained victuals to assuage any thirst and hunger she might encounter on her journey onward.

We are unlikely to ever know the underlying cause of Sammy's death, and her skeleton is free of any obvious signs of either trauma or responses to chronic infectious disease. Many of the other children at Man Bac did show signs of physiological disruption and/or disease before they ultimately succumbed. Given the extremely high probability of death during childhood at Man Bac, one might be excused for thinking that adults would forswear any significant emotional investment in their offspring. However, such a proposition is not supported: despite high levels of childhood mortality and morbidity, all recovered children were afforded basic burial treatment—and some very young kids had exceptionally “rich” graves. There was deep emotional investment in children in spite of (or perhaps because of) the exceptionally high risk of ill health and/or death. Sammy, and the other children at Man Bac, was invested with great value in death and in life. Living with death everyday heightened the community's appreciation of the gift of life: children.

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# A BIOARCHAEOLOGY OF SEX AND GENDER

## WHAT IS THE DIFFERENCE AND WHY IS IT IMPORTANT?

Pamela K. Stone

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**S**ex and gender, what is the difference? As I began to write this I thought it might be interesting to pose this question to my 10 and 7-year-old boys. They thought about it and the older one suggested that sex is the difference between being a boy and a girl, but he was not sure how gender was any different than sex. In the end both of them responded—“*they are the same.*” I tried some more prompting about sex, the youngest one suggested that maybe it had to do with having a “*doodle*” or not. A good answer, biology defines sex. But still they could not tease apart how gender might be different. Why is this? And if there are no differences between the two, why are we concerned with the concepts of sex and gender?

As Bioarchaeologists we have to be clear and careful about what we mean when we use these terms. We can begin the discussion stating that *sex* defines the reproductive and biological differences in which some components are visible (for example, the phallus and breasts) and others are unseen (such as the uterus and chromosomes). *Gender* is the ascribed cultural performance (roles, behavior, activities) of individuals, often prescribed by the culture in which they live. A GOOGLE search offers the same range of definitions and they all suggest that these terms are limited to *defining* male and female—and offer no alternate to this established binary. Thus, we have defined ourselves into a corner, one that results in an inability to see the differences between sex and gender, and the potential for there to be more than what is now traditionally seen as a biological and social male and female. Anything outside these boundaries is usually thought to be deviant.

To move beyond these binaries, both in our everyday lives and also in our interpretations of past populations, requires some self-reflection on our part. This binary perspective is a product of our own cultural colonialism of the body, initiated in the 1800s, and constructed with rigid parameters for which to consider males and females both biologically and

behaviorally. A concept forged by a changing social climate dominated by western European culture and reaffirmed by the confluences of the Victorian Era moral codes, the Industrial Revolution, and the need for science to categorize all things into simple and clearly definable groups (see Stone and Walrath 2006). Sex was (and is) predicated on the idea that you have only two options: male or female. The same is true for gender, which rests on this binary of male and female sex creating two genders: masculine and feminine. This established the norms, and in turn they have been used as the lens with which to interpret all other cultures through time and space.

The downfall has been that this results in homogenizing people and missing the diversity of sex and gender, and the roles, behaviors, and activities that might not be tied to sex in the same way that they have been within our own cultural tapestry. Bioarchaeologists have begun to look beyond the binary, and to offer more complex interpretations of peoples' identities and roles in communities not bound by single biological markers or cultural practices, but acknowledged in other ways and through other markers.

In archaeology, Gero and Conkey (1991) reflected on this issue as they worked toward engendering archaeological inquiry. Here their objective was to challenge assumptions and concepts, to reframe “how to think about gender relations,” and to consider how this shift in thinking would expand and reimagine conceptual frameworks. They cautioned archaeologists to move away from the “idea of gender as a structuring principal” (1991:9). They were calling for a new model of gender analysis, one that included women and offered more complex interpretations of peoples roles in community not bound by prescribed cultural practices, but interpreted through the material culture excavated. Fausto-Sterling (1993) showed how biologically the concept of two sexes is problematic, and that there actually may be as many as five sexes. Moreover, anthropologists had been reporting





Figure 1. Riley (10) and Tanner (7). Photo by Pamela Stone.

on many cultures in which three or more genders live in concert, and that the gender was not always as clearly connected to the biological sex as it was to the role that the individual played within the community (for example, see Abbott 1984; Epple 1998). The goals here were in the acknowledgment of multiple gender roles and a movement away from a static binary—thus, to recognize that the spectrum of human identity is tied both to biological (sex) identity and to the identity of the individual through lived experience within their cultural frameworks (gender). For the bioarchaeologist this does not mean we have to define the gendered experience as a lens of sex identity, but as we interpret the past we have to remember to see the lived experience as reflected on the body and in the archaeology before we decided what role someone is playing in their society.

These developments are opening up new research agendas in bioarchaeology. In my own research I questioned the ways in which biological sex was assigned to skeletal individuals and how this then forced certain kinds of interpretations. For example, it was assumed that if a female died between the ages of 18–30 it was because she was likely stressed by pregnancy and birth. Could birth really be that dangerous? This seemed an unexplored assumption lacking empirical data to support it. These assumptions about reproductively fragile females dying at a higher rate than age-matched males fit the roles ascribed to reproductive women. It seemed to me that this assumption was biologically deterministic and culturally narrow. I began to wonder if there were data to counter these interpretations, and how could we get past the reproductively “sick” female and show that there is more to being a female than death in childbirth.

Research that takes these kinds of issues into consideration

are beginning to redefine how bioarchaeologists conceive of and assign sex and gender to the skeletonized individual. The research I and others (see Agarwal and Glencross 2011) have been conducting acknowledges that women living in marginal settings give up meals so that their children can eat, that they are the primary caregivers to both young and old members of their families, and that often they perform strenuous activities to either maintain the household or to earn a wage. We know now it is more important to consider the complexity of the biological burden on women and the ways that these gendered activities may make women more nutritionally stressed, immunologically compromised, and physically tired (see Selin and Stone 2009). New interpretations of the “man the hunter, woman the gatherer” paradigm reveals that the gathering females bore the burden of feeding the group on a day-to-day basis, placing them at the center of subsistence strategies in many foraging populations.

In concert with beginning to understand the biological burdens of subsistence and day-to-day stressors, we need to return to the question of pregnancy and its impact. There is little data to support problematic, particularly obstructed, birth as a key factor in early death for a large number of ancient women. However, there are a few notable exceptions where neonatal remains are found *in situ* in the pelvic girdle (for example, see Arriaza et al. 1988). My own analysis of obstetric pelvic data has revealed that females in marginalized environments show little to no difference in pelvic size and shape (except in the case of pathology or traumatic injury) (see Stone 2000). Thus, the sole cause of young female mortality is not simply due to pregnancy but rather to a complex suite of factors that we can begin to quantify with new techniques such as muscle enthesiopathies (raised and irregular bony changes as the site of muscles), measures of robusticity, and chemical analyses of diet.

Another example of the new directions in bioarchaeology comes from the Eurasian Steppes where Davis-Kimball and Behan (2003) revealed the complexity of male-female interpretations based on grave goods, burial practices, and assumed roles of women and men. Here the skeletal material and mortuary context clearly demonstrated that the females were practiced warriors. The original interpretations by archaeologists who did not look at the bioarchaeological data was that the burials with swords and fighting implement were males. It was the bioarchaeological data that revealed that the females were the ones with the warrior grave goods. The alternative hypothesis proposed was that females were buried with their husband’s swords or that these items represented some sort of fertility symbolism. But Davis-Kimball presented a compelling case that the bioar-



Figure 2. Pamela Stone. Photo by Tanner.

chaeological data combined with the folklore of the region support the assertion that these women were most likely warriors.

So we come back to the question: why is this important to understand the distinctions between sex and gender? Where does this leave the archaeologists and bioarchaeologists? Today, as my boys grow up, they are entering a world that is beginning to recognize that boys and girls are not the only identities that people have. As we hear more and more about children “born in the wrong body,” we are seeing new models for gender beyond our traditional “pink and blue” binary. It is important to make the distinction between sex and gender and to be clear in our interpretations, because it allows us to think beyond our own cultural box and offer more nuanced and hopefully accurate interpretations of the past. Walker and Cook (1998:259) put it succinctly, and I will end with their words as my last point: “in bioarchaeology, maintaining this distinction is important because it makes it possible to explore the relationship between the biological and social forces that shape human behavior. . .” in the past, and I would add, also in the present.

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# THE BIOARCHAEOLOGY OF DISEASE

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The bioarchaeology of disease is the study of health conditions that affected human populations in the past, achieved primarily through the study of human skeletal remains. In general, scholars often think of this focus as the province of paleopathologists—those who trace the history of ancient diseases using skeletal evidence. But the bioarchaeology of disease is in many ways unique and distinct from this field; while paleopathologists often focus closely upon identifying *which* diseases affected humans in the past, bioarchaeologists primarily focus on what these diseases *meant* to those that they affected. Bioarchaeologists who work on disease often ask questions such as: what does the presence—or absence—of a particular condition in a past population suggest about its environment, culture, or political and economic systems? How did social inequality, and a person's position within society, influence the diseases they developed, their access to resources and treatment, and the way that they experienced their condition? What does the health of a given population, especially its most disadvantaged and thus vulnerable members, tell you about the success with which they adapted to changes in their environment?

Bioarchaeology emerged in the 1970s from the nexus of archaeology, physical (biological) anthropology, and paleopathology. It is premised on three components: attention to populations of humans rather than individuals, recognition that cultural practices, technology, and even ideology can affect biological adaptation as much as environmental change, and an emphasis upon using hypothesis testing to examine the relationship between cultural and biological adaptation in past populations. This perspective grants bioarchaeology its creative and interpretive power for answering important questions about the adaptive processes of past populations on both regional and broader levels (Armstrong and Van Gerven 2003); it gives the bioarchaeology of disease a unique avenue for examining how a given society's technology, ideologies, environment, economy, and politics will influence the particular diseases it is affected by and in turn, the way these diseases shape that particular society. In many ways, this means that the bioarchaeology of disease is much like a medical anthropology of the past. Just as medical

anthropologists examine the biological and social causes of disparities in health, different cultures' perceptions of disease and illness, and how medical practitioners and healers operate in modern societies, bioarchaeologists examine the same in those of the past. They do so using skeletal evidence of disease, diet, and behavior; archaeological evidence of past environments, and social, political, and economic systems; and, for historic societies, historical material on health, medicine, beliefs about illness, and many other aspects of past cultures.

From the very start of the field, bioarchaeologists have focused on diverse aspects of health and disease in both prehistoric and historic cultures. Many early studies used skeletal indicators of stress, such as signs of arrested growth and development during childhood from disease or starvation, to examine the health consequences of major shifts in past societies. For instance, studies examined the consequences of contact between Europeans and Native Americans and the Old and New Worlds (Larsen and Milner 1994), the development of agriculture, sedentism, and plant and animal domestication in the Neolithic Transition (Cohen and Armelagos 1984), and more recently, how patterns of health and human disease have changed over entire millennia in both the eastern and western hemispheres (Steckel et al. 2002; Steckel and Rose 2002). From the 1980s into the early 2000s, scholars moved on to such topics as the relationship between arthritis and other forms of joint disease and culturally specific, often gender-based behaviors (e.g., Mays 1999; Sofaer Derevenski 2000); the effects of poverty, social inequality, and gender and class-based differences in access to resources on health (e.g., Sullivan 2005); and the emergence, ecology, and evolution of disease (e.g., Barrett et al. 1998). For instance, Barrett and colleagues introduced the idea that bioarchaeological evidence of health and disease could—and should—be relevant to contemporary public health theory on current trends in disease. They argued that rather than viewing current patterns of infectious disease, specifically the rise of new and reemerging diseases like tuberculosis, HIV/AIDS, and now H1N1 influenza, as phenomena unrelated to history, they should instead be interpreted in light of

other trends and transitions in human health. Specifically, modern disease trends can be viewed as but one phase of ongoing social, historical, and ecological themes in the relationship between humans and their diseases. This cycle started with the rise of epidemics of infectious disease during the Neolithic Transition and progressed to the rise of chronic and degenerative disease, such as cardiovascular disease and cancer, with urbanization, industrialization, and modern environments. This argument—that modern disease trends can be best understood within the context of past patterns, and in corollary, that studies of past health should be undertaken with the goal of elucidating (if not improving) the health conditions facing modern societies (Armélagos et al. 2005)—guides much current research on the bioarchaeology of disease and, indeed, is one of the key threads binding together some of the great diversity of current research on the subject.

Given the great range of topics currently encompassed within the bioarchaeology of disease, the following discussion highlights two particular foci, each of which are novel, exciting, and promise to be highly influential within the field.

The first is the use of biochemical analyses to examine the effects of social inequality and aspects of social identity, like class, on access to health care and treatment in the past. Several scholars have pursued skeletal evidence of treatment in the past, like Grauer and Roberts' (1996) seminal study, which examined bone fractures in skeletons from a medieval English cemetery, finding that even the poorest sufferers had well healed breaks and thus access to bone setters. But work on the subject has largely been stalled by the fact that few diseases affect bone and even fewer treatments leave discernible marks. Recently, however, minimally destructive tests that identify and quantify the elements and metals present in bone have opened new avenues for detecting chemically based treatments and determining who had access to them. Several recent studies have focused on syphilis, which leaves distinctive skeletal lesions and was commonly treated with mercury from the Renaissance up to the antibiotic era.



Figure 1: Woodcut, Vienna, 1498. An illustration of physicians treating patients infected with syphilis, then known as 'the great pox', with mercury. Mercury was commonly applied as a skin ointment, as shown here.

For instance, Rasmussen and colleagues (2008) examined medieval Danish skeletons with syphilis (as well as leprosy) from several monastic cemeteries, and found elevated levels in several individuals. By integrating historical evidence, they were able to attribute the levels to exposure from preparation of red, mercury containing inks, or more likely, to preparing and receiving treatments for syphilis and leprosy. Most recently, Zuckerman (2011, 2012) assessed whether gender or socioeconomic status had any measurable effect on syphilis patients' access to mercury in seventeenth- to nineteenth-century England.

For example, while historical evidence ambiguously suggested that women likely had little access to treatment, due to greater poverty and gendered prejudice, mercury levels were surprisingly uniform across skeletons of different sexes. These results suggest that women may have exerted great—and previously undetected—agency in pursuit of one of the few treatments thought to be effective against this painful, disfiguring disease.

Second, bioarchaeological evidence has recently been applied to an area of epidemiological research that explores the relationship between stressful events experienced early in life and poor health later in life. The Developmental Origins of Health and Disease Hypothesis, or DOHaD (i.e., Barker Hypothesis), holds that stressors experienced during gestation and childhood, such as those linked to low birth weight, are tied to negative outcomes in adulthood, like cardiovascular disease and diabetes. The hypothesis has been tested using twentieth-century medical records, but incomplete records and confounders involved in tracing health over the course of an entire lifetime have spurred critiques that substantially more research is needed in humans to better understand the phenomenon. Armélagos and colleagues (2009) responded with a previously untapped source of evidence: skeletal data on health, stress, and longevity. Bioarchaeologists have long recognized that a linkage exists between skeletal stress indicators, especially dental indicators of arrested growth, and overall health and longevity in skeletal samples from many populations. However, these patterns had not yet been explicitly



Figure 2: Molly Zuckerman participating in a question and answer session with students on the bioarchaeology of disease at Georgia State University (the pictured skeleton is a plastic instructional cast) (Photo credit: Bethany Turner).





Figure 2: Molly Zuckerman using handheld X-Ray Florescence Spectrometry to measure levels of mercury in human bone from seventeenth-century London skeletal samples, Museum of London's Centre for Human Bioarchaeology Laboratory. This technique allows nondestructive analysis of the elements contained within various materials, including human bone (Photo credit: Lilly Zuckerman).

recognized as potentially congruent with the DOHaD and thus, as representative of a tremendous source of valuable data for providing new insights into this theory. Importantly, because of the great number of skeletal samples in existence, and the availability of archaeological and historical evidence providing context on the environments, behaviors, and practices of the once living communities that they represent, skeletal samples can provide bioarchaeologists with an invaluable and unrivaled amount of information on the health consequences of a tremendous and highly variable range of behaviors and environments. Whereas the length of human life spans and ethical issues involved with testing on humans often mean that many questions remain unanswered about the health consequences of various behaviors and environments for modern humans, bioarchaeological studies of health and disease can often reveal instances of past populations that have already experienced those environments and engaged in those behaviors. Findings from these studies can further reveal whether their health benefited from—or bore the brunt of—these choices. Their experiences are thus there as lessons to be learned—if bioarchaeologists can seek them out—for our potential benefit.

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## NEWS & NOTES

**T**he Seventh World Archaeological Congress (WAC-7) will be held in Jordan at the King Hussein Bin Talal Convention Center on the Dead Sea, January 14-18, 2013. WAC-7 will feature an engaging international academic program, lively social activities, and optional tours of Jordan's outstanding natural and cultural heritage. WAC-7 presentations may take many forms: working sessions, position papers, forums, demonstrations, and workshops. The WAC-7 Program will be organized into large themes, each containing several sessions that relate to the same overall issue (e.g. Landscape, Geoarchaeology, Archaeology and Digital Technologies, Ethics). Proposals for themes, sessions, and individual contributions are now being accepted. The deadline for proposals of themes is April 30th, 2012. Register and submit proposals early to take advantage of lower registration costs. For further details and the most up-to-date WAC-7 information, including submission, registration, and travel grant deadlines, visit: <http://wac7.worldarchaeological-congress.org/> or contact Talal Akasheh (Academic Secretary) at: [info1@cul-tech.org](mailto:info1@cul-tech.org)



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### 2012

#### APRIL 9–13

The First International Conference on Best Practices in World Heritage-Archaeology aims to generate a meeting point on Archaeology management and treatment of World Heritage sites. It will focus on Archaeology, keeping in mind that it needs to consider not only the sites, which have been inscribed as World Heritage due to its Archaeological

nature, but also any site, property or group of material properties, inscribed as World Heritage, which can be studied using an archaeological methodology. The Conference is organized by the Complutense University of Madrid, and sponsored by the Council of Menorca Island (Balearic Islands, Spain), so that Menorca Island will become a place of reference for studies on the treatment of properties inscribed by UNESCO. Web: <http://www.congresopatrimoniomundialmenorca.cime.es/portal.aspx?IDIOMA=3> Email: [congresopatrimonio.menorca@cime.es](mailto:congresopatrimonio.menorca@cime.es)

#### APRIL 18–22

77th Annual Meeting of the Society for American Archaeology. Memphis, Tennessee. [www.saa.org](http://www.saa.org).

#### MAY 16–20

Annual meeting of the Canadian Archaeological Association, Montreal, Quebec, Canada. <http://www.canadian-archaeology.com/caa/annual-meeting>

### 2013

#### JANUARY 9–12

The Society for Historical Archaeology's annual Conference on Historical and Underwater Archaeology; Ramada Leicester Hotel and University of Leicester, Leicester, England, UK. Abstract submission deadline: July 9, 2012. Contact: Dr. Sarah Tarlow, School of Archaeology and Ancient History, University of Leicester, Leicester LE1 7RH, Leicester, England, UK; email [sat12@le.ac.uk](mailto:sat12@le.ac.uk); fax +44 (0)116 252 5005

#### APRIL 3–7

78th Annual Meeting of the Society for American Archaeology. Honolulu, Hawaii. [www.saa.org](http://www.saa.org)

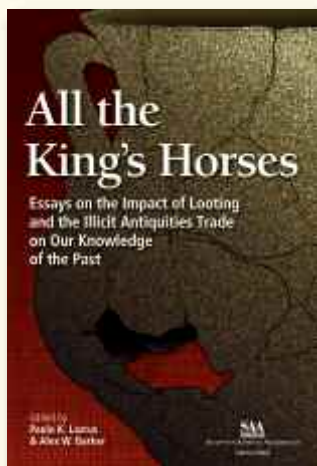
MARTIN & HARROD, from page 31

data that can be collected (i.e., that is, through the archaeological record or from the human remains and mortuary component). The major challenge to archaeology is being able to know how well people were coping and adapting to environmental and cultural constraints. Bioarchaeology provides many different ways to reveal these associations. Bioarchaeologist Joanna Sofaer (2006) has argued that human remains can be best utilized in answering the big questions of our time when they are viewed and analyzed as part of (not separate from) material culture. The same research questions can be asked when examining the human body that can be asked with the projectile point or ceramic shard. New techniques are key because they involve more nuanced ways of understanding this relationship between bioarchaeology and archaeology. In this issue and the following issue, bioarchaeologists will give a flavor for some of the new and exciting directions that are being explored.

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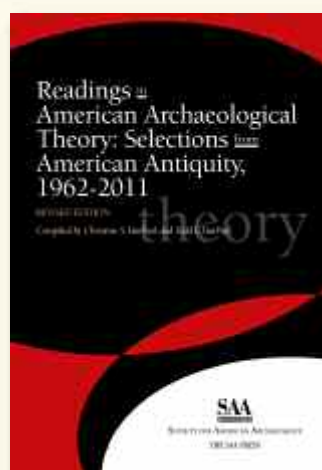
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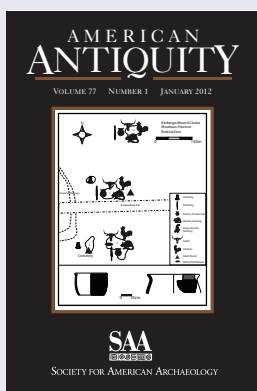
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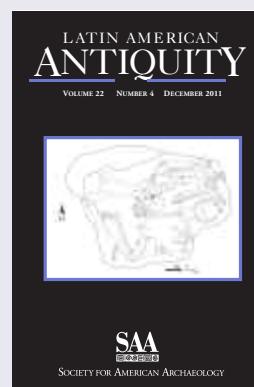
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