



SAS Bulletin

Newsletter of the Society for Archaeological Sciences

Volume 28 number 4

Winter 2005

Archaeological Science on 'All Hallows Eve'

By the time you receive this issue of the *SAS Bulletin*, Celtic Samhain, as well as the pumpkin-studded American version called Halloween, will have passed. Still, in this season of "days of the dead," I'm inspired to share with you an interesting bit of archaeological science being conducted on—you guessed it—mummies.

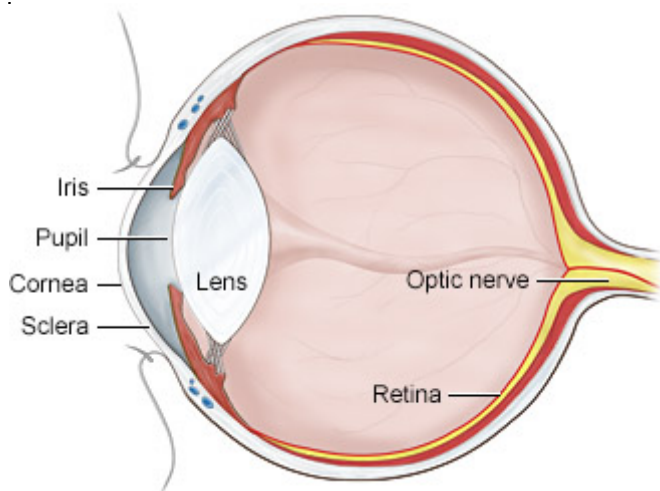
In late October, ophthalmologist William Lloyd of the University of California-Davis School of Medicine dissected and examined the eyes of two north Chilean mummies for evidence of various diseases and medical conditions. One of the eyes belonged to a Tiwanaku male who was 2 years old when he died 1,000 years ago, and the other is from a Tiwanaku female, who was approximately 23 years old when she died 750 years ago. The thin tissues that make up the eye allow it to dehydrate quickly and, because moisture causes decay, most mummies are found with well-preserved eyes. In the news release (<http://www.ucdmc.ucdavis.edu/newsroom>), Lloyd reports, "by analyzing these eyes, we hope to determine if their pathology suggests any so-called modern day diseases, like diabetes or high blood pressure."

The process involves rehydrating the eyes and optical nerves, preparing the tissues for chemical processing, embedding the tissues in paraffin, slicing the specimens for microscopic viewing, applying stains to highlight selected cellular characteristics, and finally examining the tissues under a microscope.

Tests were conducted for eye diseases, such as glaucoma and macular degeneration, but Lloyd says there are many more systemic ailments that can be found by examining the eyes. "During modern-day eye exams we can see signs of diabetes, high blood pressure, various cancers, nutritional deficiencies, fetal alcohol syndrome and even early signs of HIV infection," said Lloyd. "These same changes are visible under the microscope."

This edition of the *SAS Bulletin* contains news about other exciting discoveries (though none are related to Halloween themes!), as reported by our associate editors, as well as conference information, calls for papers, employment opportunities, and other archaeological science news. So enjoy, but beware the curse of the mummy (sorry, I'm mixing genres here).

E. Christian Wells



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Employment Opportunities

Assistant Professor in Conservation Science. Buffalo State College (BSC) seeks a conservation scientist to teach in the Art Conservation Department at the tenure track rank of Assistant Professor. This department is one of the few graduate programs in North America offering instruction in the theory and practice of the conservation of works of art and other cultural artifacts. A three-year curriculum leads to the award of the M.A. degree and a Certificate of Advanced Study in Art Conservation. Duties include the teaching of graduate level lecture and laboratory subjects in conservation science, contributing to the development of the science curriculum, working collaboratively with department instructors and, occasionally, other colleagues beyond the department or college and contributing to the college, community and profession. Applicants must hold a Ph.D. in a physical science, such as materials science, physics, or chemistry, show evidence of a high level of commitment to and experience in teaching at the college level, display effective communication skills and possess experience carrying out successful research projects germane to conservation in collaboration with other scientists. Preferred qualifications include 1) a specialty in microscopy (optical and PLM) and/or pyrotechnologies (glass, ceramics, or metals); (2) experience in teaching at the graduate level; (3) a research and publication record; (4) postgraduate professional experience in science; (5) doctoral and/or postdoctoral experience in conservation science research or research immediately relevant to the conservation of art and other objects of material culture; and (6) experience using XRF, SEM, and XRD. Send a cover letter, resume and three current letters of recommendation to: James Hamm, Professor and Chair Search Committee, Art Conservation Department RH230, Buffalo State College, 1300 Elmwood Ave., Buffalo, NY 14222-1095, USA. Review of applications will begin on September 2, 2005 and continue until the position is filled. Visit our website for more information: <http://www.buffalostate.edu/depts/artconservation/index.html>.

Assistant Professor in Biomedical Anthropology. California State University, Fullerton, Department of Anthropology, invites applications for an Assistant Professor beginning Fall 2006. Ph.D. in anthropology required at time of appointment. Geographic area is open. Candidates should provide evidence of excellence in teaching and scholarship, and demonstrate a commitment to four-field scientific American anthropology. We expect the successful candidate to be able to teach courses in introductory biological anthropology, cultural anthropology, archaeology, history of anthropology, and anthropological theory, and to have an active research program in the topical areas of: human behavioral ecology, medical anthropology, anatomy and physiology, nutrition, aging, and/or growth and development. An explicitly evolutionary perspective is required, and experience with archaeological populations preferred. We expect the successful candidate to integrate his or her research interests with student learning, and also to enhance the department's pluralistic methodological perspective, developing courses that explore the relations of

anthropology to other fields of inquiry and promoting interdisciplinary topics and programs. Candidates should plan to be actively involved in adding new courses for both majors and non-majors in anthropology to the department's curriculum. In addition to teaching, all faculty have responsibilities for advisement at the undergraduate and M.A. level, departmental and university committee work, and working to establish links with other departments and the community. For an understanding of the department's curriculum at the B.A. and M.A. level, applicants are encouraged to view the department's web site at <http://anthro.fullerton.edu>. Review of applications will begin on January 15, 2006, and will continue until the position is filled. Please send your application, describing research and area interests along with (1) evidence of research in biomedical anthropology, (2) evidence of specialization in areas such as human behavioral ecology, medical anthropology, anatomy and physiology, nutrition, aging, and/or growth and development, (3) a copy of the most recent curriculum vitae, (4) copies of undergraduate and graduate transcripts, (5) evidence of excellence in teaching (such as sample syllabi and teaching evaluations), (6) copies of publications (such as articles, reports, and reviews), and (7) a list of three references with contact information to Jacob Pandian, Chair, Search committee for Biomedical Anthropology, Department of Anthropology, California State University-Fullerton, Fullerton, CA 92834-6848 no later than January 15, 2006.

Tenure-Track Position in Industrial Archaeology. Michigan Technological University's Program in Industrial Archaeology and History anticipates filling a tenure-track position for an industrial archeologist to begin academic year 2006-07. The ideal candidate will possess a research record and demonstrated scholarship related to the archeology of industry, as well as experience in field investigations related to the standing remains and material culture of industrial sites, and/or the organization of industrial communities. Duties will include (1) expanding an active field program involving graduate students through the development and acquisition of external funding from public and private sponsors; (2) contributing to undergraduate and graduate teaching (two classes per semester); (3) active writing and scholarly publications in the areas of industrial archaeology/industrial heritage; and (4) the advising of graduate students. PhD required; women and members of under-represented minority groups are strongly encouraged to apply. Salary and rank dependent upon qualifications, with the expectation of hiring at the assistant professor level. The Program, situated in the Department of Social Sciences and comprising an outstanding group of multidisciplinary scholars and students in archaeology, anthropology, history, history of science/technology, and architectural history, awards the MS and Ph.D. The scholarly emphasis is on the understanding of global industrial heritage remains and issues, both within the United States and abroad. Department website: <http://www.social.mtu.edu/>. Please submit a detailed letter of interest, current curriculum vitae, and names of three references to Chair, Industrial Archaeology Search Committee, Department of Social Sciences, Michigan Technological University, 1400 Townsend Drive, Houghton MI

49931-1295. MTU faculty are represented by the AAUP. Michigan Technological University is an Equal Opportunity Educational Institution/Equal Opportunity Employer. The Department will begin reviewing applications about November 15 and will continue until an appointment is made. Interviews may be scheduled at the annual meeting of the Society for Historical Archeology in Sacramento, CA. Final hiring decision and date of decision is subject to budgetary considerations, but position is scheduled to begin August 2006. Questions or queries should be addressed to the address above or to Dr. Patrick Martin, Program Director (pemartin@mtu.edu).

Assistant Professor in North American Archaeology.

The Department of Anthropology at the University of South Florida seeks an Assistant Professor with expertise in North American archaeology to begin Fall 2006. The position is full-time and tenure-earning with benefits. Candidates must be committed to four-field applied anthropology, have experience in cultural resource management, and hold a Ph.D. in Anthropology at the time of appointment. Preference will be given to applicants whose research focuses within the Southeastern U.S. and who can teach undergraduate and graduate courses in archaeological methods, theory, historical archaeology, and applied or public archaeology. We envision the successful applicant being able to take a leading role in developing a concentration in museum studies or cultural heritage. Salary is negotiable. Send a letter of application with names and contact information of three references, a full curriculum vitae, and evidence of teaching effectiveness to Dr. E. Christian Wells, Search Committee Chair, Department of Anthropology, University of South Florida, 4202 E. Fowler Ave., SOC 107, Tampa, FL 33620. All applications must be complete and received by December 1, 2005. According to Florida law, applications and meetings regarding them are open to the public. For ADA accommodations, contact Debbie Roberson (813) 974-0775 at least five working days prior to need. USF is an AA/EA/EO institution.

Head, Department of Anthropology. The College of Liberal Arts at Pennsylvania State University invites applications for the position of Head, Department of Anthropology, to be filled at tenured professor rank effective July 1, 2006. Applicants should have scholarly credentials commensurate with such rank at major research-intensive institutions, an active scientific research program, familiarity with the nature of university research in the natural sciences, administrative expertise and an interest in dedicating that expertise to maintain an internationally leading program. The Department is programmatically structured with emphasis on archaeology and bioanthropology with a largely integrative approach and a strong commitment to field and laboratory research. Theoretical perspectives of the department are materialist and evolutionary, with specific stress on genetic, developmental, and evolutionary aspects of complex phenotypes, biomedical genetics, paleontology, population sciences, human ecology, and the evolution and nature of complex societies. The Department, though small, has a distinguished history, with multiple faculty members and graduates achieving honors such as membership

in US and international academies of science and MacArthur fellowships. We seek a new generation of leadership to use opportunities for development to implement creative objectives for the future of anthropology, evolutionary sciences, and/or their connections. Review of applications will begin October 15th, 2005 and will continue until the position is filled. Send letter of applications, c.v., and the names of three references to: Ms. Karen Connelly, Administrative Assistant, Anthropology Headship Search Committee, Box SAA, 111 Sparks Building, The Pennsylvania State University, University Park, PA 16802.

Assistant Professor in Bioarchaeology. The School of Human Evolution and Social Change (SHESC) at Arizona State University invites applications for a full-time, tenure-track position at the Assistant Professor level beginning in August 2006. The successful applicant will be an integral member of the new Center for Bioarchaeological Research (CBR). We seek an anthropologist specializing in bioarchaeology of the Old World whose duties will include conducting research leading to significant publications, teaching undergraduate and graduate courses, and engaging in academic service. The successful applicant will have a Ph.D. in anthropology awarded prior to July 1, 2006, and an active research program with the potential to obtain external funding and involve students in fieldwork or collections-based research. We are particularly interested in individuals whose geographic emphasis is in Africa, the circum-Mediterranean region, or the Middle East. Preference will be given to applicants whose research and teaching intersect interests of current faculty, complementing and building on present strengths that range from theorizing mortuary behavior to paleopathology. Research relating to one or more of the thematic foci of SHESC, including biocultural dimensions of human health, identity formation and ethnicity, urbanism and the rise of social complexity, and linkages of both urban and non-urban societies to natural and built landscapes is desired. Send a letter of application including a discussion of research and teaching experience and plans, a curriculum vitae, and names and contact information for three references to: Dr. Jane E. Buikstra, Chair, Bioarchaeology Search Committee, School of Human Evolution and Social Change, Arizona State University, Tempe, AZ 85287-2402.

Lecturer in Archaeology. The Department of Archaeology at the University of Cape Town, South Africa, invites applications for the position of Lecturer or Senior Lecturer, with a Ph.D. in Archaeology or cognate discipline, for appointment in 2006. We are especially interested in applicants involved in the development and archaeological applications of stable light isotope analysis. For more information, contact mabalane@bremner.uct.ac.za.

Visiting Scholar. Southern Illinois University Carbondale, Center for Archaeological Investigations, seeks its 2006-2007 Visiting Scholar (VS). The VS organizes and conducts an archaeological conference at SIUC, resulting in an edited volume of selected papers. VS assembles and edits conference volume while in residence. The successful candidate is also expected to pursue her/his research and teach one seminar in

her/his specialty. 11-month term appointment as a Visiting Scholar. Qualifications: Ph.D. in Anthropology or related discipline with specialization in archaeology. Degree must be completed by August 16, 2006. VS selected on the basis of 5-page proposal outlining nature and structure of the conference and on the strength of vita and references. Pre-application inquiries recommended. Closing date: February 1, 2006. Send letter, vitae, list of references, and proposal to: Dr. Heather Lapham, CAI, 1000 Faner Drive - Mail Code 4527, Southern Illinois University Carbondale, Carbondale, IL 62901. Tel: (618) 453-5031, Email: hlapham@siu.edu.

Research Assistantship. The Anthropology section of the Department of Sociology and Anthropology at Purdue University, which offers an M.S. and Ph.D. in Anthropology, is currently expanding its existing facilities to include a new Laboratory for Archaeological Science. In particular the lab will specialize in chemical characterization of ceramic and other archaeological materials and will seek ties with the Campus Wide Mass Spectrometry Center at Purdue University. A one-year research assistantship to help start the lab is available on a competitive basis to an incoming graduate student in anthropology. Anthropology graduate applicants with strong backgrounds in anthropological archaeology and experience in the geosciences, chemistry, petrography, and/or archaeometry will be of particular interest for this funding. For more information, please contact Dr. Kevin Vaughn (kjvaughn@purdue.edu), or visit the department's website (<http://www.cla.purdue.edu/socanth/>). The Department of Sociology and Anthropology is the center for research, teaching, and applications in Sociology (including Law and Society) and Anthropology at Purdue. At present, the department has nearly 450 undergraduate majors and about 65 graduate students.

Awards, Fellowships, and Training

2006 International Dissertation Field Research Fellowship. The Social Science Research Council and the American Council of Learned Societies are pleased to announce the 2006 competition of the International Dissertation Field Research Fellowship (IDRF) program, which is designed to support distinguished graduate students in the humanities & social sciences conducting dissertation field research in all areas & regions of the world. Fifty fellowships of approximately \$20,000 will be awarded in 2006 with funds provided by the Andrew W. Mellon Foundation. The IDRF Program is committed to scholarship that advances knowledge about cultures, societies, aesthetics, economics and/or politics outside the United States. The program promotes work that is relevant to a particular discipline while resonating across other fields & area specializations. The program is open to full-time graduate students in the humanities and social sciences - regardless of citizenship - enrolled in doctoral programs in the United States. Applicants must have completed all Ph.D. requirements except fieldwork and dissertation by the time the fellowship begins or

by December 2006, whichever comes first. Fellowships will provide support for nine to twelve months in the field, plus travel expenses. The fellowship must be held for a single continuous period within the eighteen months between July 2006 and December 2007. Applications for the IDRF program must be submitted electronically using the SSRC's Online Application Portal. Deadline: November 10, 2005. Eligibility Requirements: The International Dissertation Field Research Fellowship (IDRF) program supports full-time graduate students in the humanities and social sciences, enrolled in doctoral programs in the United States, conducting dissertation field research in all areas and regions of the world. Applicants must have completed all Ph.D. requirements except fieldwork and dissertation by the time the fellowship begins or by December 2006, whichever comes first. Contact Information: IDRF Program, 810 Seventh Avenue, 31st Floor, New York NY 10019 USA, Phone: 212-377-2700, Email: idrf@ssrc.org, URL <http://www.ssrc.org/programs/idrf>.

2006-2007 NEH Fellowships at the American School of Classical Studies at Athens. Founded in 1881, the American School of Classical Studies at Athens is the most significant resource in Greece for American scholars in the fields of ancient and post-classical studies in Greek language, literature, history, archaeology, philosophy, and art, from pre-Hellenic times to the present. It offers two major research libraries: the Blegen, with 88,200 volumes dedicated to the ancient Mediterranean world; and the Gennadius, with 112,000 volumes and archives devoted to post-classical Hellenic civilization and, more broadly, the Balkans and the eastern Mediterranean. The School also sponsors excavations and provides centers for advanced research in archaeological and related topics at its excavations in the Athenian Agora and Corinth, and it houses an archaeological laboratory at the main building complex in Athens. By agreement with the Greek government, the School is authorized to serve as liaison with the Greek Ministry of Culture on behalf of American students and scholars for the acquisition of permits to excavate and to study museum collections. In the twelve years since its inception, the NEH Fellowship program at the American School has demonstrated its effectiveness by supporting projects for twenty scholars with distinguished research and teaching careers in the humanities. Those Eligible: Postdoctoral scholars and professionals in relevant fields such as architecture or art who are U.S. citizens or foreign nationals who have lived in the U.S. for the three years immediately preceding the application deadline. Applicants must hold their Ph.D. or equivalent terminal degree at the time of application. Terms: Two to four fellowships, five to ten months in duration. Maximum stipend for a five-month project, \$20,000; for a ten-month project, \$40,000. Term must coincide with American School's academic year, September to June. Application: a) cover sheet (at www.ascsa.edu.gr); b) a statement of the project (up to five pages), including desired number of months in Greece, a timetable, explicit goals, a selected bibliography, and the importance of the work, the methodologies involved, where applicable, and the reasons it should occur in Athens at the American School of Classical Studies; c) curriculum vitae

with list of publications; and d) three letters of reference from individuals familiar with the applicant's work and field of interest who can comment on the feasibility of the project and the applicant's ability to complete it successfully. Full application information and requests for further information on the American School of Classical Studies or the Fellowship may be obtained from: NEH Fellowships, American School of Classical Studies, 6-8 Charlton Street, Princeton, NJ 08540-5232, Tel: 609-683-0800 Fax: 609-924-0578, E-mail: ascsa@ascsa.org, Website: www.ascsa.edu.gr. Postmark deadline: November 15, 2005. The awards will be announced March 1, 2006; acceptance of the award required by March 15, 2006. The American School of Classical Studies at Athens does not discriminate on the basis of race, age, sex, sexual orientation, color, religion, national or ethnic origin, or disability when considering admission to any form of membership or application for employment.

Erasmus Mundus: "Quaternary and Prehistory." This program, coordinated by Ferrara University (Prof. Carlo Peretto), is financed by the European Commission, in order to promote scientific exchanges and help students from non-European countries get their degree within a consortium of universities located in France, Italy, Spain and Portugal. Grants are provided for a two year long curriculum. The purpose of the program is to attract and help the best students interested into Quaternary Geology, Human Palaeontology, and Prehistory. Please notice that besides usual grants, an Asian Window will probably be open again, in order to provide Asian countries with a specific extra number of grants. See www.unife.it/progetti/erasmusmundus. Deadline is January 9, 2006.

Student Grants for the Australasian Archaeometry Conference. Subsidies for 10 student places for the Australasian Archaeometry Conference are available on a competitive basis. The conference is being held at the Australian National University Canberra from Dec 12th to 15th. To encourage contributions from students based outside the ACT (including New Zealand), four forms of subsidy are available for students presenting papers: 1) Travel bursaries sponsored by ARC Network for Earth Systems Science for students presenting at the workshop Constructing Fire Histories: Students traveling from outside Canberra and presenting an oral paper or poster at the meeting will receive a travel bursary of (\$ yet to be confirmed) from the ARC Network for Earth Systems Science (ARC ESS) to contribute towards travel and accommodation costs. Those who accept the bursary will be required to write a brief 2 page report on their research and the workshop for the ARC ESS newsletter. A maximum of 7 bursaries are available. Contact Dr Simon Haberle for details (simon.haberle@anu.edu.au). 2) \$500 bursary for conference attendance for students outside New South Wales and the ACT provided by the Department of Archaeology and Natural History, ANU. This includes registration and conference meal plus \$350 towards travel and accommodation. Note that this award applies to spoken papers only and money will be reimbursed at the conference production of travel/accommodation receipts. 3) The Rafter Radiocarbon Laboratory /GNS Science, <http://www.rafterradiocarbon.co.nz>,

will award one complimentary AMS date to each of three of the best student presentations (spoken papers or posters) incorporating radiocarbon dating results at the 2005 Australasian Archaeometry Conference. Each Rafter Radiocarbon AMS Analysis Award includes full chemical processing of the student's sample, as well as consultation on sample selection, as required. This prize complements existing conference prizes for student presentations. 4) A \$500 bursary for conference attendance for students outside New South Wales and the ACT provided by the Waikato Radiocarbon Laboratory, New Zealand. Contact Dr Andrew Fairbairn for details (andrew.fairbairn@anu.edu.au). In addition there are conference prizes of \$200 for best student poster and presentation. Conference website: http://car.anu.edu.au/Archaeometry/archaeometry_conference.html.

Martin Aitken Prizes for Best Student Posters. To encourage the active participation of students in the 36th International Symposium on Archaeometry, May 2-6, 2006, Quebec, Canada, the Standing Committee offers two prizes of US\$200 each, for the best posters representing the work of students enrolled in programs leading to degrees in science or archaeological science. Students must attend the Symposium to claim their prizes. For more information, contact Dr. Jean-François Moreau, Laboratoire d'archéologie, Département des sciences humaines, Université du Québec à Chicoutimi, Chicoutimi (Québec), G7H 2B1, Canada, Phone: +1 (418) 545-5011 ext.: 4580, E-mail: jfmoreau@uqac.ca. Symposium Website: <http://www.isa2006.ulaval.ca>.

Conference News and Announcements

36th International Symposium on Archaeometry, May 2-6, 2006, Quebec, Canada. The aim of the Symposium is to promote the development and use of scientific techniques in order to extract archaeological and historical information from the cultural heritage and the paleoenvironment. It involves all Natural Sciences and all types of objects and materials related with human activity. In general, papers should deal with the development and/or application of scientific techniques for extracting information related to human activities of the past. Papers that deal with weathering and deterioration of archaeological objects or monuments will be welcome provided they are relevant to one of the main themes of the Symposium. Papers that deal solely with conservation techniques or the development of materials for conservation are outside the scope of this conference and normally will not be accepted. The subjects covered by the Symposium are grouped into the following fields that form the sessions under which the papers will be presented either as oral or poster. The Symposium has six regular sessions plus a theme session selected by the local organizing committee. It also includes a special sub-session. Field Archaeology (Remote Sensing and Prospecting) and Environmental Archaeology, Dating (Organic and Inorganic

Materials), Biomaterials (DNA, Diet, Organic Residues Analysis and Agricultural Archaeology), Technology and Provenance I (Stone, Plaster and Pigments), Technology and Provenance II (Ceramics and Glass), Special Sub-Session: Isotope Studies of Glass, Technology and Provenance III (Metals), Special Theme Session: Early Man in America. Abstracts should have a length of between 200 and 400 words. They should contain some introductory information about the objects or materials examined, a description of the research goals, the techniques used and the results obtained so far, including a short interpretation. The above information is necessary in order to help convenors to understand the work involved and to select the papers for oral or poster presentations. Only papers with subjects that fall in one or more of the designated sessions of the Symposium will be accepted for presentation. Authors should indicate clearly on the Abstract Submission Form in which of the above sessions they would prefer their paper to be presented. Also, they should indicate if they prefer oral or poster presentation. To submit your abstract, please e-mail registration@isa2006.ulaval.ca by December 1st, 2005. The Quebec local organizing committee would, however, appreciate it if those who already plan to participate in ISA 2006 in Quebec City sent their abstract by October 15th, 2005 in order to help us obtain a grant to organize the Symposium. The Symposium will be held at the Séminaire de Québec, situated within the historic city walls of Old Quebec City, Canada. The organizing committee will also provide information on possible travel arrangements and available accommodations during the Symposium on the Conference Website. For more information, contact Dr. Jean-François Moreau, Laboratoire d'archéologie, Département des sciences humaines, Université du Québec à Chicoutimi, Chicoutimi (Québec), G7H 2B1, Canada, Phone: +1 (418) 545-5011 ext. 4580, E-mail: jfmoreau@uqac.ca. Symposium Website: <http://www.isa2006.ulaval.ca>.

Research Infrastructures for Cultural Heritage, December 12-13, 2005 at The Abdus Salam International Centre for Theoretical Physics in Trieste, Italy. The workshop and the foresight study, organized by European scientific institutions with affiliations to advanced lasers, neutrons, and synchrotron radiation research centers, together with the International Centre for Theoretical Physics, aim to bridge the current knowledge gap between Research Infrastructures (RI) and the Cultural Heritage (CH) community by bringing together RI scientists, current and future RI users in the field of CH, and a panel of leading CH experts. The interdisciplinary workshop will consist of scientific sessions, including invited and contributed talks, as well as a poster session, focused on recent advances in Cultural Heritage research with neutrons, synchrotron X-rays, and lasers. A plenary session with Cultural Heritage experts will address future perspectives of large scale facilities in Cultural Heritage. The registration form and abstract template can be found at the RICH homepage, neutron.neutron-eu.net/n_nmi3/n_networking_activities/rich.

33rd UISPP commission, "Tools function and socio-economical reconstructions of the past," Lisbon 4th to 9th

of September 2006. The aim of functional studies is to show the potential of the issues it is dealing with for archaeological reasoning and the modeling of past human economic systems. The main topic of this Commission is devoted to the very complex issues related to functional analysis and the role played by artifacts in the reconstruction of ancient economic systems. This implies that the reconstruction of past artifacts production and use is not just a matter of re-enactment worked materials, actions, or techniques. What actually functional analysis commission is concerned with, is dealing with the issues that aim to understand the evolution of production techniques and their economical consequences for people that at one time produced and used the artifacts in a social context. The Congress will be held in Lisbon, Portugal. Lisbon is the Capital of Portugal, hosting a very rich complex of museums and archaeological sites. The event will take place at the University of Lisbon (Alameda da Universidade, Underground station: "Cidade Universitária"), the welcoming desk being located in the Faculty of Arts (Faculdade de Letras). Starting on Monday the 4th of September, and closing on Saturday the 9th of September. Deadline: proposal of papers/posters: January 2006. Website: <http://www.uispp.ipt.pt/>.

36th Annual International Arctic Workshop will be held March 16-18, 2006, at the Institute of Arctic and Alpine Research (INSTAAR), University of Colorado at Boulder. The meeting is open to all interested in the Arctic, and will consist of a series of talks and poster sessions covering all aspects of high-latitude environments, past and present. Previous Arctic Workshops have included presentations on Arctic and Antarctic climate, archeology, environmental geochemistry, geomorphology, hydrology, glaciology, soils, ecology, oceanography, Quaternary history, and more. Reception and registration: Wed. evening March 15th, 5 pm - 8 pm. Main program: Thurs. through Sat., March 16th to 18th. Boulder, Colorado, USA: Institute of Arctic and Alpine Research, University of Colorado. Submission of abstracts through our website will begin before December 15th, 2005. The deadline for submissions is February 22nd, 2006. Presentations can be either a poster or a talk, but probably not both. Registration through our web site will begin before December 15th, 2005. Professional registration will be \$135 if paid by February 22, or \$160 thereafter. Students presenting a talk or poster can register for free. Other students can register for \$60 until February 22, or \$160 thereafter. This workshop has grown out of a series of informal annual meetings sponsored by INSTAAR and other academic institutions worldwide. In keeping with this tradition, there are no formalized topics, and the workshop is organized around themes developed from the abstracts submitted for presentation. However, we can accommodate specific themes and arrange small group meetings. Please identify any special topics or needs by emailing Tad Pfeffer at: pfeffer@tintin.colorado.edu. Student participation is a vital component of this workshop. A limited number of graduate student presenters will receive free registration and reimbursement for meals and hotel. Support for student participation is subsidized by the U.S. National Science Foundation (NSF, grant OPP-0425387). If you have questions,

please email ArcticWS@colorado.edu, Website: <http://instaar.colorado.edu/meetings/AW2006>.

The Canadian Quaternary Association Conference in 2007 will be hosted at Carleton University, Ottawa, Ontario, Canada, on June 4-8, 2007. The conference is designed to provide an invigorating forum for those interested in the interdisciplinary field of Quaternary geoscience, including geologists, geomorphologists, physical geographers, biologists, botanists, oceanographers, archaeologists, environmentalists, and others. The CANQUA Ottawa 2007 meeting is planned to be a five-day conference consisting of four days of technical sessions and an intervening day of mid-conference field trips. The technical sessions will consist of oral and poster presentations. Special session themes for the conference are currently being defined. The conference organizers welcome suggestions from persons or parties interested in organizing a special session. Please email a tentative title and short summary of the scope of the proposed special session to Alain Plouffe aplouffe@nrca.gc.ca. March 13, 2007 – deadline for submission of conference abstracts. For additional information on the conference, please email Greg Brooks gbrooks@nrca.gc.ca.

National Park Service's 2006 Archaeological Propection Workshop. The National Park Service's 2006 workshop on archaeological propection techniques entitled Current Archaeological Propection Advances for Non-Destructive Investigations in the 21st Century will be held May 15-19, 2006, at the Fort Frederica National Monument on St. Simons Island, Georgia. Lodging will be at the Quality Inn Island House on St. Simons Island, Georgia. This will be the sixteenth year of the workshop dedicated to the use of geophysical, aerial photography, and other remote sensing methods as they apply to the identification, evaluation, conservation, and protection of archaeological resources across this Nation. The workshop this year will focus on the theory of operation, methodology, processing, interpretation, and on-hands use of the equipment in the field. There is a tuition charge of \$475.00. Application forms are available on the Midwest Archeological Center's web page at <http://www.cr.nps.gov/mwac/>. For further information, please contact Steven L. DeVore, Archeologist, National Park Service, Midwest Archeological Center, Federal Building, Room 474, 100 Centennial Mall North, Lincoln, Nebraska 68508-3873; tel: (402) 437-5392, ext. 141; fax: (402) 437-5098; email: steve_de_vore@nps.gov.

CALL FOR CONTRIBUTIONS

The *SAS Bulletin* Editor invites readers to contribute short research articles (1500 words or less), calls for papers and summaries of conferences on archaeological science, relevant news items, and information about jobs, grants, and fellowships in archaeometry. Submit material electronically to the Editor, Christian Wells, cwells@cas.usf.edu.

Geoarchaeology

David D. Kuehn, Associate Editor

There's a lot of exciting things happening in the field of geoarchaeology these days; too many in fact to summarize in one issue of the *SAS Bulletin*. For that reason, I've decided to devote my first contribution to the *Bulletin* to a summary of recent meetings that had a focus on geoarchaeology. Subsequent columns will discuss career opportunities in geoarchaeology, sources of potential financial support, and highlights of recent, innovative geoarchaeological research.

70th Annual Meeting, Society for American Archaeology, Salt Lake City, Utah, March 30 – April 3, 2005. This year's meeting of the SAA in Salt Lake City featured one forum sponsored by the SAA Geoarchaeology Interest Group. Held on Friday morning, April 1, the Forum was entitled "The Palimpsest in Geoarchaeology." Forum participants included Julie Stein (University of Washington), Simon Holdaway (University of Auckland, New Zealand), LuAnn Wandsnider (University of Nebraska), Sarah Sherwood (University of Tennessee), Michael Shott (University of Northern Iowa), Justin Shiner (Comalco Aluminium Limited, Australia), and Patricia Fanning (Macquarie University, Sydney, Australia). Palimpsests have long been thought to be disturbed, largely surficial, and potentially problematic accumulations of archaeological materials. A principal theme of the Forum was that traditional interpretations of palimpsest deposits have been oversimplified. The Forum discussions focused on developing more subtle, site-specific methods in the geoarchaeological investigation of palimpsest deposits worldwide.

In addition to the sponsored Forum, a number of papers with explicit geoarchaeological themes were also presented at the Salt Lake City SAA meetings. These included: (1) a paper by Nancy Sikes (SWCA Environmental Consultants) and Elliott Lips (University of Utah) entitled, "Evidence from Sediment Cores for the Presence of Lacustrine Ecosystems during the Paleoindian Period, Eastern Great Basin, Utah;" (2) a paper by Sonia Hutmacher (SWCA Environmental Consultants) entitled, "Holocene Valley Infill and the Search for Paleoindian Sites: Results of Geomorphic Investigations of Eastern Great Basin Hydromorphic Features;" (3) a paper by Helen Fairley (US Geological Survey), Amy Draut (US Geological Survey), David Rubin (US Geological Survey), Ted Melis (US Geological Survey), and Lisa Leap (National Park Service) entitled, "The Role of Aeolian Sediment in the Formation and Preservation of Archaeological Sites: Collaborative Geo-archaeological Research in Grand Canyon, Arizona;" (4) a paper by Maury Morgenstein (Geosciences Management Institute), Christin Engstrom (Geosciences Management Institute), and Celeste Henrickson (Geosciences Management Institute) entitled, "Geoarchaeological Investigations in Yosemite Valley;" (5) a paper by Kelly Graf (University of Nevada Reno) entitled, "Chronology and Stratigraphy of the Pleistocene-Holocene Transition at Bonneville Estates Rockshelter, Eastern Nevada;" (6) a paper by Gary Huckleberry (Tucson, Arizona) entitled, "Relating Past Floodplain Changes to Archaeology along the

Santa Cruz River, Tucson, Arizona;" (7) a paper by Scott Ingram (Arizona State University) entitled, "Streamflow and Demography in the Lower Salt River Basin of Central Arizona;" (8) a paper by Elizabeth Webb (University of Western Ontario), Henry Schwarcz (McMaster University), Christopher Jensen (Brigham Young University), Richard Terry (Brigham Young University), and Matthew Moriarty (Tulane University) entitled, "Using Stable Carbon Isotopes of Soil Organic Matter to Identify Ancient Maya Maize Agriculture at Motul de San Jose, Guatemala;" and (9) a paper by Steve Shackley (University of California Berkeley) entitled, "Chronometry and Geochemistry at McEuen Cave: The Radiocarbon and Obsidian Geochemical Data." Not included in this list are posters and papers that focused on highly specific geophysical and geochemical investigations (such as remote sensing, provenance studies, and residue analysis).

Annual Meeting, Geological Society of America, Salt Lake City Utah, October 16-19, 2005. There were a number of topical sessions at the recent GSA Annual Meeting in Salt Lake City that were sponsored or co-sponsored by the GSA Archaeological Geology Division. These were: (1) Sunday, October 16. Dendrogeology: Geologic Applications of Tree-Ring Studies, Gregg R. Davidson Presiding; (2) Sunday, October 16. Holocene Climate Change in Western North America: Spatial-Temporal Phasing of Climate Modes, Events, and Transitions, Matthew E. Kirby, Steve P. Lund, Larry V. Benson, and Rob Negrini, Presiding; (3) Monday, October 17. Archaeological Geology, Kathleen Nicoll and Charles D. Frederick, Presiding; (4) Tuesday, October 18. Paleoenvironmental Records in and around the Bonneville Basin: From Glacial/Interglacial Cycles to Anthropogenic Impacts, Joseph G. Rosenbaum and Katrina A. Moser, Presiding; and (5) Tuesday, October 18. Thinking about Fossils: The Emergence and Development of Paleontological Thought in North America from Native American Customs to the End of the Great Western Surveys, Patrick Wyse Jackson and Stephen M. Rowland, Presiding.

The session on Archaeological Geology, held on Monday, October 17, included the following papers: (1) Geomorphology and Formation Processes of the Belmont Neck Site in the Wateree Valley, South Carolina by Heather D. Bartley (University of Georgia); (2) Anatomy of a Biomantle: OSL Dating Results of Sandy Sites in Central Florida by Charles D. Frederick (University of Texas at Austin), Mark D. Bateman (University of Sheffield, United Kingdom), Andy Carr (University of Sheffield, United Kingdom), Duane E. Peter (Geo-Marine, Inc.), and Michael Wilder (Prewitt and Associates, Inc.); (3) Geoarchaeology of Early Paleoindian and Possible Pre-Clovis Cultural Deposits at the Kanorado Locality, Northwestern Kansas by Rolfe D. Mandel (Kansas Geological Survey); (4) Paleoindian Basalt and Obsidian Sources in the North American Southwest: A Preliminary Model of Late Paleoindian Territoriality by Steven M. Shackley (University of California Berkeley); (5) Application of Airborne Radar, Remote Sensing, GIS and Modeling to San Clemente Island Archaeology by Ronald G. Blom (Jet Propulsion Lab);

(6) Pre-Cultivation Mima-Type Mounds in North America and Eurasia: Templates for Mound-Builders and Khourgan-Builders by Donald Johnson (University of Illinois); (7) Geoarchaeology of the Kostenki (Upper Paleolithic) Localities, Don Valley, Russia by Vance Holliday (University of Arizona); (8) Geology of the Koutsongila Ridge and the Roman Cemetery of Kenchreai, Eastern Korinthia, Greece by Richard K. Dunn (Norwich University); (9) What the Excavations, Geophysical & Geomorphological Investigations of Ziyaret Tepe Tell: Results from an Assyrian 'City of Clay' at the Edge of Empire by Kathleen Nicoll (University of Oxford); (10) The Petrographic Characterization of Chert Artifacts from Source to Site: Reconstructing Late Pleistocene-Early Holocene Hunter-Gatherer Cultural Networks in Northern Spain by John D. Risetto (University of New Mexico); (11) The Effects of Alteration on Sourcing Archaeological Turquoise by Sharon Hull (University of Tennessee/Eastern New Mexico University); and (12) Forensic Geolocation Using Environmental Isotopes by Gabriel J. Bowen (University of Utah), Jason West (University of Utah), David Podlesak (University of Utah), Thure E. Cerling (University of Utah), and James R. Ehleringer (University of Utah).

The 2006 GSA Annual Meeting will take place October 22-25 in Philadelphia, Pennsylvania, USA. The meetings begin on a Sunday, and end the following Wednesday. The program structure includes two formats. "Topical Sessions" ensure a successful, excellent program where everyone may contribute to sessions with some invited papers. "Pardee Keynote Symposia" expand the opportunity for high profile sessions on significant scientific developments that impact our science. To submit a proposal, visit the conference website: <http://www.geosociety.org/meetings/2006/>. For more information, contact the Annual Program Committee Chair, John Costa, at jecosta@usgs.gov.

Developing International Geoarchaeology Conference 2005 (DIG 2005), New Brunswick Museum and the University of New Brunswick, Saint John, New Brunswick, Canada, October 21-23, 2005. A new venue for the dissemination of international geoarchaeological research, the DIG 2005 Conference, was recently held in Saint John, New Brunswick. The conference featured four topical sessions: Coastal and Underwater Geoarchaeology, Geophysical Survey and Geoarchaeology, Landscape Evolution, and Artifact Provenance Studies.

Papers scheduled for the session on Coastal and Underwater Geoarchaeology include: (1) The Bova Marina Archaeological Project – Underwater Survey of the San Pasquale Valley, Calabria, Italy by Eduard Reinhardt (McMaster University), Andrei Yakovenko (McMaster University), Gianna Ayala (University of Sheffield), John Robb (University of Cambridge), and Lin Foxhall (University of Leicester); (2) Microfossil Evidence of Recent Anthropogenic Disturbances of Little Round Lake, Southeastern Ontario, Canada by Andrei Yakovenko (McMaster University); (3) Fine Sediment Carbonate Content as a Measure of Residential

Intensity at Shell Midden Sites on the Central Coast of British Columbia, Canada by Aubrey Cannon and Brandi Lee MacDonald (McMaster University); (4) Organisation Géométrique et Modalités D'occupation des Prismes Littoraux Quaternaire Entre Golfe Juan et la Baie des Anges (Cte d'Azur, France). Apports de l'Archéologie Préventive by Olivier Sivan (Institut Méditerranéen d'Ecologie et de Paléocologie, Aix-en Provence, France); (5) Paléoenvironnements et Construction des Territoires en Languedoc Oriental (France) Depuis 8000 Ans: L'apport de la Géomorphologie et de la Malacologie by Christophe Jorda and Sophie Martin (Institut National de Recherche en Archéologie Préventive, Venelles, France); (6) Late Holocene Relative Sea-level History of North Central Cuba: Implications for Taino Archaeology by Matthew Peros and Anthony Davis (University of Toronto); (7) Archaeology vs Geoaerchaeology – A View from Beringia by Jacques Cing-Mars (University of Alberta); and (8) Landscape Modification and Aboriginal Utilisation of Coastal Tidal Ponds: An Example from Southwestern New Brunswick, Canada by Pam Dickinson and Bruce Broster (University of New Brunswick).

Papers scheduled for the session on Geophysical Survey and Geoarchaeology include: (1) GPR Archaeometry by Dean Goodman (Geophysical Archaeometry Laboratory, Woodland Hills, California); (2) Paleoenvironmental Reconstruction of a Drowned Landscape, Colonel By Lake, Ontario, Canada by Lisa Sonnenburg, Joe Boyce, and Eduard Reinhardt (McMaster University); (3) Quaternary Sea-level Change: the Implications for Archaeology and the Techniques Used for Palaeoenvironmental Reconstruction by Sherri Baker-Littman (Scientific Applications International Corp); (4) Lions' Harbour and Kalabaktepe of Miletus (Turkey) as Seen by 3-D Seismic Investigation by Susanne Woelz (Kiel University, Germany), Patrick Musmann (Forschungszentrum Jülich, Jülich, Germany), Christof Mueller (Kiel University, Kiel, Germany), and Wolfgang Rabbel (Kiel University, Kiel, Germany); and (5) SEAMAP-3D: A Tool for 3-D Seismic Archaeological Prospection in Shallow Water by Christof Mueller (Kiel University, Kiel, Germany), Susanne Woelz (Kiel University, Kiel, Germany), Hauke Joens and Harald Luebke (both State Office for the Protection of Archaeological Monuments, Mecklenburg and Vorpommern, Germany).

Papers scheduled for presentation at the session on Landscape Evolution 1 – Settlement include: (1) Landscape Evolution and Pleistocene Human Adaptation by Chris Hill (Boise State University); (2) Climate Change, Landscape Evolution, and Human Settlement in the Lower Mississippi Valley, 5500-2400 Cal BP by Katherine Adelsberger and Tristram R. Kidder (Washington University in St. Louis); (3) Glacial Lake Levels and Paleoindian Settlement Patterns at Munsungan Lake, Northern Maine, USA by Bertrand Gilman Pelletier, Jr. (University of Maine); and (4) Emhazool Archaeological Site: A New Discovery of Remains of an Ancient Settlement in the Emhazool Area in Southwest Kuwait by Ali Al-Mishwat (Kuwait Univeristy), and Dogan Perincek (Natural Sciences Research Center, Barbaraos Bulvari, Istanbul, Turkey).

Papers scheduled for presentation at the session on Landscape Evolution 2 – Formation Processes include: (1) Geoaerchaeology in a Pampean Alluvial Sequence: Evaluating Natural Formation Processes in Guanaco Bone Assemblages from Paso Otero 1 Site (Pampean Region, Argentina) by Cristian M. Favier-Dubois, Cristian A. Kaufmann, and Maria A. Gutierrez (CONICET – INCUAPA, Facultad de Ciencias Sociales, Olavarría, Provincia de Buenos Aires, Argentina); (2) Holocene Alluvial Fan Deposition and Archaeological Site Visibility in Arid Lands: A Case Study from the Tehran Plain, Iran by Gavin Gillmore, Robin Coningham, Randy Danhue, Hassan Fazeli, and Ruth Young (University of Bradford, United Kingdom); (3) Deflation, Dissolution, Deposition, and Displacement: Geomorphological Changes on a Stone Age Landscape, Limpopo River Valley, South Africa by Joel LeBaron (University of the Witwatersrand, Johannesburg, South Africa); (4) Archaeological Sediments and the Issue of Social Use of Space: Identifying Anthropogenic Signatures Using a Multi-Proxy Geoarchaeological Approach by Stella Kyrillidou (Thessaloniki, Greece); (5) Impact de la Solifluxion et de la Reptation par Pipkrakes sur les Niveaux Archéologiques: Simulation á Partir D'expériences en Milieu Actif et Application á des Sites Paléolithiques Aquitains by Arnaud Lenoble (Univerité Bordeaux I, Talence Cedex, Pacea, France), Pascal Bertran (L institute national de recherches en archéologie preventive), and Francois Lacrampe (Archéosphère); (6) Preliminary Results of Sedimentologic and Micropalaeontologic Analysis of Sediment Cores Collected in Sur Lagoon, Oman by Simon Donato and Eduard Reinhardt (McMaster University); (7) Site Formation Processes from the Early Stone Age of Koobi Fora, Kenya by Christopher Lepre (Rutgers University); and (8) Geoarchaeological Investigations at Some Early Middle Period (Mummy Cave) Sites in the Saskatoon Area, Canada by Alec Aitken (University of Saskatchewan) and Ernest Walker (University of Saskatchewan).

Papers scheduled for presentation at the session on Artifact Provenance Studies include: (1) Provenance Studies: Some Fundamentals by George "Rip" Rapp (University of Minnesota, Duluth); (2) The Vaucluse Raw Materials Study: Why, What, How, and Where are We Now? by Lucy Wilson (University of New Brunswick, Canada); and (3) Oxygen Isotopes as a Method of Differentiating Raw Material Sources in the Vaucluse, Southern France by Christopher Baker (University of New Brunswick, Canada).

Finally, a reminder that the deadline for submission of applications for the Douglas C. Kellogg Fund for Geoarchaeological Research is December 1, 2005. This award provides financial support to graduate thesis or dissertation research for students that are interested in receiving an M.S., M.A., or Ph.D. degree in earth sciences or archaeology as well as in the application of earth science methods and approaches to the study of archaeological research. Students who meet these criteria and who are interested in establishing a career in geoarchaeology should contact Dr. Christopher L. Hill, Douglas C. Kellogg Fund, Department of Anthropology, Boise State University, 1910 University Drive, Boise, ID 83725.

All applications for the award must include the following: 1) A one-page letter that briefly explains the individual's interest and how he or she qualifies for the award; 2) An up-to-date resume or curriculum vitae; 3) Five copies of a 3-4 page, double spaced description of the thesis or dissertation research that clearly documents the geoarchaeological orientation and significance of the research. One illustration may be included with the proposal; and 4) A letter of recommendation from the thesis or dissertation supervisor that emphasizes the student's ability and potential as a geoarchaeologist.

Bioarchaeology

Gordon F.M. Rakita, Associate Editor

The Nature of Training in Bioarchaeology

I am often asked to explain (to students, colleagues, administrators, lay folk) what bioarchaeology is or what it means to be a bioarchaeologist. This is not necessarily an easy task. As with an interdisciplinary science, understanding bioarchaeology requires at least a modicum of knowledge about archaeology and biological anthropology.

The short answer that I frequently give to those who ask is that bioarchaeologists study human remains and their associated artifacts from archaeological contexts. Often this is enough to satisfy most, though some will request more information. At which point, I provide something like the following, more formal definition:

"Bioarchaeology is the scientific study of archaeologically recovered human remains. It is an endeavor that is regional and diachronic in scope, based in the analysis of populations as well as individuals. It is biocultural in outlook, explanatory rather than descriptive, and above all, emphasizes the scientific answering of anthropological research questions, not simply archaeological or physical anthropological ones. The approach is concerned with understanding human skeletal biology within the context of human social, funerary, and ritual behavior. Bioarchaeologists use scientific methods developed in archaeology, physical anthropology, and allied fields."

But this definition raises an issue. Where do graduate students receive training in this interdisciplinary field? As many of the *SAS Bulletin* readers will understand, students frequently encounter difficulties balancing their training in archaeology with their training in advanced scientific methods; especially when those methods are from outside of archaeology proper. Bioarchaeologists are no different.

As I noted at last year's American Anthropology Association Meetings in Atlanta (Rakita 2004), the nature of graduate programs in Anthropology in the United States is often very constraining in terms of interdisciplinary training. This is

especially true for students interested in pursuing bioarchaeology. Such students invariably are required to reside and study within either archaeology or physical anthropology with limited official cross-pollination between the two fields. I noted that the results of this system are "... physical anthropologists with some background in or experience with archaeology, but often without the theoretical sophistication to examine archaeological data critically or archaeologists with some knowledge of physical anthropology, but without the depth of methodological issues or experience."

The Center for Bioarchaeological Research at Arizona State University

However, the situation is improving. Graduate programs in Anthropology have been responding to the growing interest in bioarchaeological research by developing innovative interdisciplinary bioarchaeology curricula or programs. The School of Human Evolution and Social Change (formerly the Department of Anthropology) at Arizona State University (ASU) has gone one step further by creating a Center for Bioarchaeological Research (CBR).

Far from springing *de nova* out of thin air, the CBR is a crystallization of the previous Bioarchaeology Program at ASU. Thus, the new Center builds upon the excellent human and infrastructural resources already at the school. However, ASU has also hired three new bioarchaeologists to complement the current faculty.

Professor Jane Buikstra joins the Center as its inaugural Director. Buikstra is famous not only for having coined the term "bioarchaeology" in a 1979 publication, but also as a leader in the field. As an added benefit, she is the Director of the Center for American Archaeology in Kampsville, Illinois. Buikstra sees the CBR as an interdisciplinary anthropological endeavor with strong links to the physical and natural sciences, biomedicine, the social sciences, and the humanities. When asked about the new center she stated, "I am very excited about building a research center focused upon issue-based bioarchaeological investigations. One of our challenges is to bring knowledge of the deep past to problems that face humankind today and tomorrow."

The two other additions to the CBR are Kelly Knudson and Christopher Stojanowski.

Knudson is joining the Center as Assistant Professor and Director of the Archaeological Chemistry Laboratory. Her recent research has focused on using isotope analyses to assess residential mobility in prehistoric Andean (Tiwanaku, Wari, and Inka) populations. The chemistry laboratory she directs will conduct bone chemistry research on archaeological human remains, and will also be actively pursuing the chemical analysis of ethnoarchaeological and archaeological soils with a view towards assessing activity areas through anthropogenic soil signals. Knudson will teach undergraduate and graduate courses in Andean archaeology and archaeological chemistry.

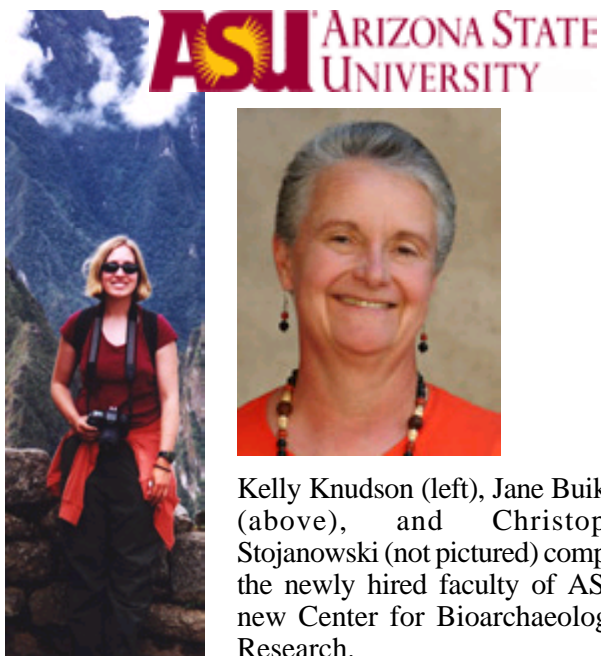
Stojanowski is also joining the CBR as an Assistant Professor. His research integrates ethnohistoric documents and skeletal biodistance measures to assess population structure and social transformations among contact era peoples of the American Southeast (La Florida). His research seeks to integrate quantitative models of micro-evolutionary change with bio-cultural studies of human interaction. Stojanowski will also be teaching courses in forensic sciences and dental analysis, as well as graduate seminars, including "The Bioarchaeology of Identity," co-taught with Knudson.

These new faculty are being added to an already exceptional group of scholars who have made considerable contributions to scientific (bio-)archaeology including: Brenda Baker, Christopher Carr, Katherine Spielmann, and Anne Stone.

The CBR is also currently conducting a search for an Old World bioarchaeologist to be hired at the Assistant Professor rank. The position is full-time and tenure-track. A complete description of the position and application procedures can be found at: <http://www.asu.edu/anthropology/graphic/info/SHESC-BioarchPosition.pdf>.

References

- Buikstra, J. E. 1977. Biocultural Dimensions of Archaeological Study: A Regional Perspective. In *Biocultural Adaptation in Prehistoric America*, edited by R.L. Blakely, pp. 67-84. Southern Anthropological Society Proceedings.
- Rakita, G. F. M. 2004. Putting the "Archaeology" (and the Anthropology) Back into "Bioarchaeology". Paper presented in the Symposium, "Tensions, Theories, & Directions in Bioarchaeology" at the American Anthropological Association Annual Meetings, Atlanta, Georgia.



Kelly Knudson (left), Jane Buikstra (above), and Christopher Stojanowski (not pictured) comprise the newly hired faculty of ASU's new Center for Bioarchaeological Research.

Archaeological Chemistry

Nora Reber, Associate Editor

Here is a quick roundup on things happening or about to happen in archaeological chemistry. If I've missed something, please drop me a line; there's so much going on in archaeological chemistry it can be hard to keep up.

Upcoming

The VIIIth ASMOSIA conference will take place June 12-18, 2006, sponsored by the Association for the Study of Marble and Other Stones in Antiquity. It will be held in Aix-en-Provence, France. The first call for papers was issued on 3 October 2005 with abstracts due 31 January 2006. For a copy of the registration form and other information, visit www.eeescience.utoledo.edu/asmosia/Conferences/asmosia_vii_conference.htm.

The 2005 Australasian Archaeometry conference is still set for December 12-15. It will take place at the Australian National University in Canberra, and the program will include sessions on geoarchaeology, bioarchaeology, conservation, and archaeological sciences. The archaeological science session is chaired by Andrew Fairbairn of the Australian National University, and will focus on the synthesis and integration of archaeological science and other archaeological studies. There will also be a session concentrating on recent advances in artifact characterization and material analyses, which will include various instrumental analyses and applications of archaeological chemistry to specific problems.

The American Chemical Society Annual Meeting is scheduled for March 26-30, 2006 in Atlanta, Georgia. Submissions will be accepted until November 17, via the ACS website, www.chemistry.org. This is the year for a new Archaeological Chemistry Symposium—it will extend over two days and is entitled "Archaeological Chemistry: Analytical Techniques and Archaeological Interpretation."

As mentioned earlier, the 36th annual International Symposium on Archaeometry will take place in Quebec City, Canada, May 2-6 2006. Abstracts should be submitted by December 1, 2005 at the latest. Sessions will include Remote Sensing and Prospecting, Dating Techniques, Biomaterials, Technology and Provenance of many different types of materials, and Early Man in the Americas. For copies of registration forms, visit www.isa2006.ulaval.ca/index.html.

The Society for American Archeology meeting is coming up again on April 26-30, in San Juan, Puerto Rico. Something tells me that this might be a popular meeting! Submissions are no longer accepted, but at least two sessions, and probably more, on archaeological chemistry are planned. Chris Descantes and Mike Glascock of the University of Missouri Research Reactor will organize a session entitled "Chemical Studies of Archaeological Materials from the Caribbean," while Robert Speakman, Patrick Ryan Williams, and Kevin J. Vaughn plan a

session on “Craft Production, Exchange, and Provenance Analysis of Andean Ceramics: Current Research and Future Directions.”

The 2nd Biannual Archaeological Sciences of the America Symposium is planned for September 13-16, 2006. Calls for papers will be posted soon at web.arizona.edu/~anthro/asa.shtml.

Symposia and Conferences

Just days before our publication date, on October 26-29, EMAC'05, the European Meeting on Ancient Ceramics took place in Lyon, France. Many sessions were of interest to archaeometrists, including methodological developments and various spectroscopic and diffusion techniques. If anyone attended, drop me a line!

The International Conference on Natural Catastrophes was held at Rhodes on October 28-30, 2005, sponsored by the Laboratory of Archaeometry, Department of Mediterranean Studies in the University of the Aegean. It seems a very appropriate topic for a year of catastrophes, and the proceedings will be published as a special issue of the journal *Mediterranean Archaeology and Archaeometry*. The keynote speaker was Prof. Suzanne Leroy, of Brunel University.

The International Conference on the Application of the Mossbauer Effect (ICAME) met September 5-9 at Montpellier, France. A session on Earth Science, Mineralogy, and Archaeology was presented on Monday afternoon, including an examination of the surface layers of an Iron Age axe, by Marcel Miglieriani, Julius Dekan, and Danica Stassikova-Stukovska. Data were also presented on a ceramic firing simulation by Luca Nodari, Umberto Russo, Lara Maritan, and Claudio Mazzoli, a characterization of South Indian archaeology pottery by R. Venkatachalapathy, D. Gournis, C. Manoharan, S. Dhanapandian, and K. Deenadalayan, and a characterization of different types of black pottery by U. Wagner, R. Gebhard, J. Froh, W. Hausler, I. Shimada, and F. E. Wagner.

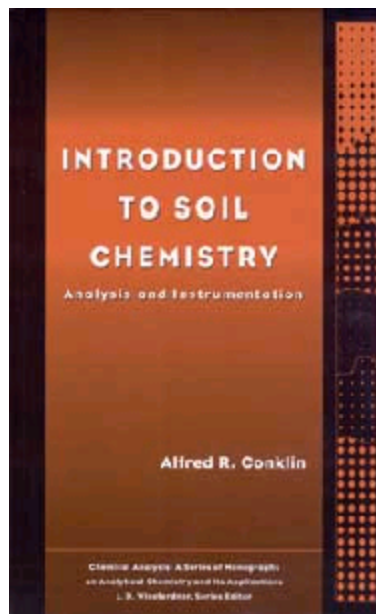
Books

This June 10th, a new textbook on dating methods was released: *Quaternary Dating Methods: An Introduction*, by Mike Walker. Also, *Biomolecular Archaeology: Genetic Approaches to the Past*, edited by David M. Reed has just been published. It is the latest Occasional Paper of the Center for Archaeological Investigations at the Southern University of Illinois at Carbondale. This volume is more DNA based than explicitly chemical, but it can only be found directly through the CAI, so I thought I'd mention it for those who are interested.

For those interested in residues and dairy chemistry, a new edition of *Advanced Dairy Chemistry Volume 2: Lipids*, by Patrick Fox and Paul McSweeney is coming out in early February 2006. This is the best general reference on dairy lipids on the market. In a similar vein, *The Role of Atomic and*

Mass Spectrometry in Identifying Chemical Elements in Food by Sergio Caroli will be published in April. This is more of a modern food scientists' perspective, but should be an interesting parallax perspective on some of the problems faced by residue scientists.

Introduction to Soil Chemistry: Analysis and Instrumentation, by Alfred Conklin was published last July. It includes almost all aspects of soil chemistry, from chromatography and spectroscopy to peds and titration.



Contents:

1. Soil Basics I: Macroscale Features
2. Soil Basics II: Microscopic to Atomic Orbital Description of Soil Chemical Characteristics
3. Soil Basics III: The Biological and Organic Components in Soil
4. Soil Basics IV: The Soil Air and Soil Solution
5. Electrical Measurements
6. Titrimetric Measurements
7. Extraction
8. Spectroscopy
9. Chromatography
10. Speciation

Archaeological Ceramics

Charles C. Kolb, Associate Editor

The column in this issue includes seven topics: 1) Reviews of Books on Archaeological Ceramics; 2) Other Books; 3) New Publications in the British Archaeological Reports International Series; 4) Previous Meetings; 5) Forthcoming Meetings; 6) Exhibition; and 7) Internet Reports.

Reviews of Books on Archaeological Ceramics

Oliver Watson, *Ceramics from Islamic Lands* (New York: Thames and Hudson, in association with the al-Sabah Collection, Dar al-Athar al-Islamiyyah, Kuwait National Museum, 2004. 512 pp., 930 color illustrations, 23 appendices, 2 bibliographies, glossary, index, ISBN 0-500-97629-5, \$65.00 (hardcover). Watson, an expert on Islamic pottery who has written extensively on the subject, was formerly Chief Curator of the Department of Ceramics and Glass of the Victoria and Albert Museum in London; he is currently developing a new Middle Eastern section within the museum. The volume is dedicated to his mother, Katherine Watson (1917-2001), who was also a scholar of Islamic art. The “Preface” for this volume (p. 7)

was prepared by Sheikh Nasser Sabah al-Ahmad al-Sabah, a collector, donor, and benefactor, who holds the copyright for this volume. The specially commissioned photography was undertaken by Fraser Marr and Muhammad Ali.

The volume has seven chapters (supplemented with 56 color illustrations and 256 endnotes), which present essential background on the subject. The seventh chapter provides a clear and concise assessment on the related topics of ceramic restoration and forgeries. These clear, well-written essays provide a basis for 23 lavishly illustrated appendices, which present object descriptions and catalog references to ceramics held in the Al-Sabah Collection at the Kuwait National Museum. In “Chapter 1: Islamic Pottery: Art, Archaeology and Collecting” (pp. 11-22, 2 illustrations, 63 endnotes) Watson defines “Islamic pottery” and presents a brief history of collecting, noting the contributions made by archaeology. This essay emphasizes 19th century collecting, “fashions in collecting,” and the documentation of disappearing ceramic industries. “Chapter 2: Making and Designing” (pp. 23-33, 2 illustrations, 31 endnotes) provides background on clay sources and the selection process, mixing clays, throwing vessels, the use of moulds, glazes and glazing, kiln firing, and the use of slip decoration. Watson’s “Chapter 3: Ceramic Families and Technical Traditions” (pp. 34-43, 2 illustrations, 60 endnotes) has pertinent information on polychrome glaze-painting, opaque white glaze wares, in-glaze painting, lustre painting, slip painting, “splashed” wares, the preparation of frit bodies, Sultanabad and panel styles, and the effect of Chinese blue-and-white painted porcelain on the production of Islamic wares. A basic early history of Islamic wares is presented in “Chapter 4: Islamic Pottery to A.D. 1000” (pp. 44-51, 2 illustrations, 28 endnotes). With “Chapter 5: Islamic Pottery A.D. 1000-1400” (pp. 52-59, 1 illustration, 40 endnotes), Watson details ceramics from Fatimid period Egypt, Fritwares, incised earthenwares (12th-13th centuries), the impact of the Mongol invasions on pottery manufacture, and wares produced in Egypt (13th-14th centuries). Production in Syria and Egypt, Iran, and Turkey are discussed in “Chapter 6: Islamic Pottery from A.D. 1400” (pp. 60-67, 1 illustration, 44 endnotes). “Chapter 7: Restoration and Faking of Islamic Ceramics: Case Histories” (pp. 68-89) includes “Fakes and Forgeries: An Introduction” by Oliver Watson (p. 68) and a long essay entitled “Restoration and Faking of Islamic Ceramics: Case Histories” by Kirsty Norman (pp. 69-89); the latter has 46 color illustrations and a bibliography of 18 items.

An “Introduction” by Oliver Watson (p. 91) provides the organizational concept for the catalog which has 23 appendices (summaries of which follow). The catalogue focuses on approximately 400 objects in the Sheikh al-Sabah collection, citing description, date, dimensions, inventory number, and provenance. “A: Unglazed Wares” (pp. 92-195, 130 illustrations) has six subsections: Syria and Egypt in the Early Islamic Period; Iran and the Eastern Iranian World; The Medieval Period in Syria; The Sphero-conical Vessel; Filters (strainers to remove foreign matter such as insects); and Moulds. “B: Early ‘Green-Glazed’ Wares” (pp. 156-165, 18 illustrations) has a subsection

“From Glaze to Clay.” The four subsequent appendices have no internal divisions: “C: Early Wares: Polychrome Glaze-painting” (pp. 166-169, 5 illustrations); “D: Opaque White Glazed Wares” (pp. 170-181, 27 illustrations); “E: Abbasid Lustreware” (pp. 182-197, 40 illustrations); and “F: Splashed Wares” (pp. 198-203, 11 illustrations). There are seven subsections in Appendix “G: Slip-painted Wares” (pp. 204-245, 92 illustrations): Calligraphic Designs; Abstract Designs; Animal Decoration; “Yellow-staining Black” Decorated Wares; Imitation Lustreware; “A Unique Fragment;” and Later Provincial Slipwares. The unique fragment is reconstructed from a polychrome vessel sherds recovered at the archaeological site of Afrasiyab that depicts a female lute player and her instrument. The subsequent appendix, “H: Buffwares” (pp. 246-251, 13 illustrations), is followed by “I: Iranian Incised Wares” (pp. 252-271, 47 illustrations) with five internal headings: Plain Incised Ware; Garras Ware (from northwestern Iran, especially the site of Takht-i Sulaiman); Aghkand Ware (made in northwest Azerbaijan and Georgia rather than produced in the town of Aghkand, Iran); Amol Ware (found in northern Iran near the Caspian Sea coast); and Incised Ware from Afghanistan (from Lashkari Bazar and “Bamiyan”).

“J: Lustre Pottery of the Fatimid Period in Egypt” (pp. 272-287, 33 illustrations) includes a section on Fatimid Incised and other wares. “K: Syrian and Egyptian Wares: 12th-13th Century” (pp. 288-301, 30 illustrations) focuses on Raqqa Ware while “L: Iranian Fritware: 12th-13th Century” (pp. 302-325, 50 illustrations) emphasizes the production center at Kashan. “M: Bamiyan Fritwares” (pp. 326-331, 11 illustrations), “N: Silhouette and Underglaze Painted Wares: Iran 12th-13th Century” (pp. 332-345, 25 illustrations), and “O: Iranian Lustreware: 1170-1220” (pp. 346-361, 33 illustrations) document unique ceramics. Appendix “P: Minai Enamel Painting: Iran Late 12th-Early 13th Century” (pp. 362-371, 15 illustrations) documents this pre-Mongol Iran ceramic that was apparently produced in Kashan, and features human figures on horseback, seated human figures, and Bactrian camels. The remaining appendices and their subject matter include: “Q: Wares of the Mongol Period in Iran: 13th-14th Century” (pp. 372-393, 46 illustrations); “R: Syria and Egypt: 13th-14th Century” (pp. 394-415, 50 illustrations); “S: Egyptian Wares: 15th Century” (pp. 416-425, 18 illustrations); “T: Ottoman Pottery: Turkey 16th-18th Century” (pp. 426-447, 55 illustrations); “U: Later Iranian Pottery: 15th-19th Century” (pp. 448-481, 78 illustrations); “V: Indian Mughal Ceramics” (pp. 482-483, 2 illustrations); and “W: Chinese Porcelain” (pp. 484-491, 12 illustrations).

The volume concludes with a “Table of Concordance of Inventory Numbers and Catalogue Numbers” (pp. 492-493 and “Bibliography” (pp. 494-506) with 445 entries, in the main, in English but including Arabic, French, German, and Russian sources; 24 of Oliver Watson’s previous publications are included. A “Glossary” (pp. 507-508) with 30 entries (biscuit firing to waster) and “Index” (pp. 509-512) — quadruple column with topical and proper noun entries — complete the book. Among the significant topics reported are design motifs (animals,

birds, and floral), the depiction of human figures (more than 35 examples), applied and barbotine decoration, inscriptions (Arabic, Kufic, and Persian), and the use of moulds. Thermoluminescence “tests” are reported on various ceramics from Afghanistan, Bamiyan Fritwares, and Indian Mughal ceramics (p. 327, 220, 483).

This superbly illustrated volume spans 11 centuries and provides a comprehensive overview of ceramics and pottery production in Central Asia, Afghanistan, Egypt, Iran, Iraq, Syria, and Turkey, as well as China and India. Examples from Iraq, China, and India are only generally represented. By its breadth the privately owned al-Sabah Collection documents the history of Islamic pottery through a millennium. It contains well-known masterpieces and important dated and signed works, and many objects are published here for the first time. Both the technical and chronological history of Islamic ceramics is documented from the first fine wares made in the 8th century to the impact of European industrialization in the 19th century. The 930 high quality color illustrations and ceramic descriptions are excellent, making the volume a bargain at its list price of \$65.00. Written in a non-technical style, it is an essential and invaluable reference work for scholars and students, and would hold the interest of collectors and the general public.

Journal of Roman Pottery Studies, Volume 11, edited by Pamela V. Irving (Oxford: Published by Oxbow Books for The Study Group for Romano-British Pottery, 2004), contains nine articles and five book reviews. The articles are: Steven Willis, “The Study Group for Roman Pottery Research framework document for the study of Roman pottery in Britain, 2003,” pp. 1-20; R. P. Symonds, with Ian Grainger, Angela Wardle, and Ian Betts, “A large group of 2nd-century pottery from Ironmonger Lane, in the City of London: IRL 95, context 58,” pp. 21-38; Paul Booth, “Quantifying status: Some pottery data from the Upper Thames Valley,” pp. 39-52; Clive Orton and Ash Rennie, “Can you trust a correlation coefficient?,” pp. 53-59; Jeremy Taylor, “The distribution and exchange of pink, grog-tempered pottery in the East Midlands: An update,” pp. 60-66; Margaret J. Darling (collator), “Guidelines for the archiving of Roman pottery,” pp. 68-74; Maureen Carroll, “The early Roman pottery industry in Cologne, Germany: A new kiln site in the Oppidum Ubiorum,” pp. 75-88; P. V. Webster, K. F. Hartley, A. G. Marvell and S. H. Sell, “A Roman pottery kiln at Abernat Farm, Caerleon, Gwent,” pp. 89-111; and C. Jane Evans, “Wroxeter: After Barker, after Webster,” pp. 112-116. The book reviews are: Symonds, R. (1992), *Rhenish Wares: Fine Dark Coloured Pottery from Gaul and Germany*, Monograph 23, Oxford: Oxford University Committee for Archaeology; reviewed by Kevin Green, pp. 117-118; Darling, Margaret J. with David Gurney (1993), *Caister on Sea — Excavations by Charles Green 1951-5, East Anglican Archaeology* 60: whole number (pp. viii + 289); reviewed by Jude Plouviez, pp. 119-120; S. S. Frere and R. S. O. Tomlin (1995), *The Roman Inscriptions of Britain: Volume II: Instrumentum Domesticum, Fascicule 7: Graffiti on Samian Ware and The Roman Inscriptions of Britain: Volume II: Instrumentum Domesticum, Fascicule 8: Graffiti on Coarse Pottery*,

London: Roman Inscriptions of Britain; reviewed by Jeremy Evans, pp. 120-121; and W. H. Manning, W. H. (editor) (1993), *Report on the Excavations at Usk 1965-76: The Roman Pottery*, Cardiff: University of Wales Press; reviewed by Margaret J. Darling, pp. 121-124. The Orton and Rennie article is significant beyond Roman ceramic studies and “Guidelines for the archiving of Roman pottery,” collated by Margaret Darling is, likewise, worth contemplating.

Anatomy of a Medieval Islamic Town: Al-Basra, Morocco edited by Nancy L. Benco (British Archaeological Reports International Series S1234, Oxford: Archaeopress, 2004. viii + 106 pp., 53 illustrations, 24 tables). This archaeological site report has 10 chapters and the contributions are an outgrowth of a symposium held at the annual meeting of the Society for American Archaeology in Philadelphia in 2000. This monograph is also a sequel to Benco’s *The Early Medieval Pottery Industry at al-Basra, Morocco* (British Archaeological Reports International Series S341, Oxford: BAR, 1987) which is out-of-print. The papers in the current volume focus on the economic and social aspects of the Islamic city of al-Basra, located in the foothills of the Rif Mountains about 40 km from the Atlantic coast and midway between Fez and Tangier. The city has a pre-urban phase (600-800 CE), two urban phases (Idrisid, 800-970, and Post-Idrisid/Spanish Ummayid, 970-1050), plus a post-urban phase (Almoravid Dynasty, 1105-1150), with a subsequent abandonment. Two contributions are devoted to “The Site of Al-Basra”: Chapter 1: al-Basra in Historical and Archaeological Perspective” by Nancy L. Benco (pp. 3-8) and “Chapter 2: Al-Basra’s Fortification Walls and Towers” by Nancy L. Benco, James E. Franklin, and Azzedine Karra (pp. 9-18). There are two chapters on “Subsistence Economy and the Environment”: “Chapter 3: Food, Fuel, and Raw Material: Faunal remains from Al-Basra” by Michelle Loyet (pp. 21-29) and “Chapter 4: Agriculture, Industry, and the Environment: Archaeobotanical Evidence from Al-Basra” by Nancy Mahoney (pp. 31-42). Of particular interest are two chapters on “Craft Production”: “Chapter 5: Pottery and Ethnic Change at Al-Basra” by Jennifer F. Hembree (pp. 45-50) and “Chapter 6: View from the Rooftops: Clay Tiles and Roof Construction at Al-Basra” by Lance Lundquist and Nancy L. Benco (pp. 51-58). Hembree reviews the temporal changes in two technological styles of pottery production at al-Basra and seeks to determine the reasons for this transformation. Following a discussion of technological style, she presents a case study based on an analysis of 13,524 sherds of which 7,984 (59%) are Buff Ware pitchers and 1,923 (14.2%) Cream Ware pitchers. She examines temporal associations and three urban occupational phases at the site. Cream Ware pitchers with rounded shoulders, associated with the Berber pottery-making tradition, predominate in the pitcher assemblage from the initial occupation phase (ca. 600-800 CE); buff vessels appear subsequently. Indigenous potters did not modify their fabrication techniques but a new style was introduced by artisan immigrants. The Berber potters and Spanish *muwalladun* artisans coexisted but selected different clay sources (producing cream vs. buff upon firing), used different preparation techniques (sifting vs. levigation), employed distinct forming processes

(hand vs. wheel-turned), and used distinct decoration (painted vs. incised or undecorated). It is also likely that different firing methods were used. In Chapter 6, the authors report on a study of 11,000 kg of roof tiles. Tile shapes and sizes are documented and they characterize the selection of raw materials, forming methods (molding), kiln firing (770-1000° C), stylistic variability (five types), and tile decoration. A notable component of the chapter reports roof construction techniques, an analysis of 10 roof collapses, the placement of the tiles on wood beam supports, and the pitch of the roofs. This is a very valuable essay on an often neglected aspect of ceramics.

“Ideological Perspectives” are characterized in “Chapter 7: Speaking Stones: Islamic Burial Practices at Al-Basra” by Rachel Kluender (pp. 61-68) and “Chapter 8: Urban Women in Early Islamic Morocco” by Hannah Dodd (pp. 69-76). “Beyond the City” is the topic of “Chapter 9: Beyond Al-Basra: Settlement Systems of Medieval Northern Morocco in Archaeological and Historical Perspective” by Said Ennahid (pp. 79-91). “Scientific Applications” are reported in “Chapter 10: An Archaeomagnetic Study of Two Kilns at Al-Basra” by Abdelkrim Rimi, Donald H. Tarling, and Sidi Otman el-Alami (pp. 95-106). The chapter on the kilns includes a detailed analysis and drawings of two kilns (F1 and F3) located ca. 50 m apart. Thirty-three oriented archaeomagnetic samples were taken and analyzed and the results compared. The data are statistically similar and the kilns were fired within 50-60 years of each other. The authors also relate these results to other Moroccan kilns.

Mimbres Painted Pottery, rev. ed. by J. J. Brody. Santa Fe, NM: A School of American Research Press Resident Scholar Book, 2004. xxv + 235 pp., 230 black-and-white illustrations, 20 color plates, 2 maps, 2 tables, 18 notes, 2 appendices, references, index. ISBN 1-930618-66-2, cloth \$59.95; ISBN 1-930618-27-1, paper, \$27.95. The SAR Press website is at <http://www.sarweb.org/press/press.htm>. J. J. (Jerry) Brody studied at the Cooper Union Art Students' League in Manhattan prior to military service and double majored in art and anthropology at the University of New Mexico, served as Curator of Art at the Everhart Museum (Scranton, PA), then returned to New Mexico to take a Masters and doctorate in Native American art history. He served as the first Curator and then as Director of the Maxwell Museum of Anthropology for 23 years. In 1998 he was honored with a Lifetime Achievement Award by the Native American Art Studies Association. The author or co-author of 16 books, his research has emphasized the American Southwest and especially ceramics, rock art, and Native American painting. Among his relevant works are *Mimbres Pottery: Ancient Art of the American Southwest: Essays* (J. J. Brody, Catherine J. Scott, and Steven A. LeBlanc; New York: Published by Hudson Hills Press in association with The American Federation of Arts, distributed by Viking Penguin, 1983); *Anasazi and Pueblo Painting* (J. J. Brody; Albuquerque: University of New Mexico Press, 1991); *To Touch the Past: the Painted Pottery of the Mimbres People: Essays* (J. J. Brody and Rina Swentzell; New York: Hudson Hills Press in association with Frederick

R. Weisman Art Museum at the University of Minnesota, Minneapolis, 1996); and *Beauty from the Earth: Pueblo Indian Pottery from the University Museum of Archaeology and Anthropology* (J. J. Brody; Philadelphia: The Museum, 1990).

In 1977, Brody published *Mimbres Painted Pottery* (Santa Fe, NM: School of American Research, 1977, xxiii + 253 pp), which would become the seminal volume on the subject and remained in print for two decades in spite of new archaeological excavations and interpretations. This revised edition incorporates much new information and allows the author to modify, emend, and update his original treatise. The new edition has a list of “Abbreviations Used in the Captions” (p. xi), a tabulation of 31 names and locations of repositories; “Preface to the Revised Edition” (pp. xiii-xvi); “Preface to the 1977 Edition” (pp. xix-xxi); “Introduction” (pp. xxiii-xxv); and Notes (pp. 197-199). Following the nine chapters and two appendices are “Illustration Credits (pp. 201-204). The “Bibliography” (pp. 205-224) is in two parts: Archival Sources (10 from the National Anthropological Archives and citations to 25 notebooks or letters) and Published Sources (n = 274). The 11-page three-column “Index” (pp. 225-235) emphasizes proper nouns rather than topics. Few errors have crept into the narrative.

A brief “Introduction” provides essential background on the region and ceramic types associated with the Mimbres people, a subdivision of Mogollon culture, who inhabited approximately 100 small villages located in southwestern New Mexico and adjacent portions of southeastern Arizona and northern Chihuahua in Mexico, ca. 200 BCE- CE 1150. “Chapter 1: Discovery of the Mimbres” (pp. 1-16, 8 endnotes, 9 figures [7 vessels and 2 sites]) reports the discovery of Mimbres villages and their art, acquisitions of Mimbres ceramics by major museums, and the early problem of determining the place of these people in the culture history of the American Southwest. In “Chapter 2: The Mimbres in Their Place and Time” (pp. 17-26, 2 endnotes, 6 figures [4 vessels, 2 sites]) Brody details Mimbres territory and natural resources, the uses the Mimbres made of their environment, general subsistence activities, and problems of drought. The densest occupation within the region centered on the Mimbres River, and phase chronologies are documented in “Chapter 3: Mimbres Village Life” (pp. 27-52, 1 endnote, 1 map, 1 table, 29 figures [22 vessels, 6 site plans or reconstructions, 1 photograph]). Details are provided about housing, subsistence, furniture and personal adornment, ceremonialism, everyday life, and the relationships of individuals and communities. Figure 22 is a 1902 image of Mary Histia (“Acoma Mary”) shown painting a ceramic jar. In “Chapter 4: The Mimbres and Their Neighbors” (pp. 53-66, 1 endnote, 2 figures [both vessels]), the author characterizes chronologically regional cultures beginning with Cochise and the Desert Archaic and Early and Late Mogollon; he also reviews the dating of the Classic Mimbres period and reports on neighboring peoples such as the Hohokam.

“Chapter 5: Inventing Mimbres Painted Pottery” (pp. 67-98, 3 endnotes, 46 figures [all vessels]) has three major

components, beginning with an assessment of Mogollon painting prior to the Classic Mimbres period. The Mimbres Black-on-White painting tradition began ca. 700 CE and continued to ca. 1150. During this period Mimbreno potters developed new techniques and modified others. Brody describes the figurative and geometric painting traditions, which were separate but closely related. The former derived from Hohokam painted pottery and would come to define the Classic Mimbres period, while the geometric tradition began before the Classic Mimbres period and developed slowly in several Mogollon cultural regions. The author also traces unpainted, polished brown or red wares from 200 CE to 1000. There were about 20 distinct shapes but painting did not become significant until ca. 700. The distribution and evolution of the painting styles are described in detail and the characteristics of Style I and Style II are documented. A subsequent section presents a review of Mimbres painted pottery and the Hohokam tradition, again characterizing distributions and changes in painting. The distinct differences between Mimbres painted pottery and Northern Pueblo traditions are considered prior to an essay on Mimbres painted pottery and other contemporary and later traditions. Brody notes that the styles also reveal that the Mimbres had reached a demographic threshold and had attempted to control a variety of growth-related pressures.

“Chapter 6: The Potters and Their Craft” (pp. 99-114, 1 endnote, 14 figures [12 vessels, 2 petroglyphs]) considers aspects of the fabrication of the ceramic vessels. The SAR Press website incorrectly lists the chapter titles as “The Potters and Their Wares.” There is an important discussion about who created and painted the vessels – mostly women, but the roles of children as novices, men as painters, and the possibility of transvestites are reported. Local use, regional variation, the collection and processing of clays, forming, slipping, and pre-fire pottery painting are also related. Kiln firing procedures in oxidizing atmospheres are documented and firing temperature ranges are suggested. Brody also speculates on the symbolic values and social meanings, which remain a “puzzle” (see Chapter 9).

Chapters 7 through 9 document the last 150 years of Mimbres Classic Black-on-White Style III. “Chapter 7: The Form and Structure of Mimbres Classic Black-on-White Pottery” (pp. 115-136, 40 figures [37 vessels, 3 illustrations]) presents detailed information on the ware; figure 107 depicts 19 Mimbres pottery vessel shapes (after Wheat 1955); figure 131 illustrates 14 basic layout patterns of Mimbres Black-on-white; and figure 138 shows the variants of 5 motifs that employ triangles. The author characterizes the traditional vessel shapes and considers effigy forms (mostly nonhuman animals with birds being most common representation), and details the painting tradition, its variants, patterning systems (mentioning Dorothy Washburn’s innovative research), and elaborates basic pictorial structures, motifs and images. In “Chapter 8: Representational Paintings” (pp. 137-176, 1 endnote, 1 table, 80 figures [77 vessels, 3 petroglyphs]) Brody defines “representational” versus “nonrepresentational” (e.g., “geometric” and “abstract” are sometimes used

interchangeably for the latter). Table 2 provides useful information on the pictorial organization and subject complexity of Mimbres pottery paintings based upon the author’s assessment of 733 published and unpublished images of the vessels (apparently not the actual artifacts) studied from 1972 to 1975. Each of the types of pictures (single figure; two figures, nonnarrative; three or more figures, nonnarrative; narrative with humans; and narrative without humans) are detailed and illustrated. The pictorial means and subject matter are elaborated (draftsmanship, framing, life-forms, and “coded ambiguities”), and a salient discussion of iconography relates images to cultures from the American Southwest and Mesoamerica (“Ehecatl” [Wind God] and Quetzalcoatl [Feathered or Plumed Serpent], for example). Two appendices, “A Distribution of Pictorial Subjects on 733 Figurative Vessels” (pp. 190-193) and “B Specific Attributes of Compound or Mythic Animals: 85 Images on 65 Vessels” (pp. 194-195), provide additional information. Lastly, there is a compelling presentation in “Chapter 9: Ethnoaesthetic and Other Aesthetic Considerations” (pp. 177-189, 1 end note, 7 figures [all vessels]) that provides evidence about paintings as a form of community identification and art as a metaphor; there is also a contemporary view of “new uses for old art” – the uses of old motifs by contemporary potters, and other artisans.

Brody incorporates the extensive fieldwork done on Mimbres sites and ceramics since the original edition was published. In addition, the essays on village life and the context of the region in which the Mimbres people lived have been revised and elaborated. His discussions of the procedures employed to fabricate the ceramics, depictions of human and animal iconography, and the significance of perspective and motion in Mimbres art are also emended and expanded. The Mimbreno cultural florescence from 1000 and 1140 CE remains intriguing in the prehistory of the region, and Brody’s new edition will become a benchmark for future analyses in art history and archaeology.

An Archaeological Guide to British Ceramics in Australia, 1788-1901 by Alasdair Brooks (Australasian Society for Historical Archaeology and the La Trobe University Archaeology Program), \$35.00 (Australian). Brooks received his doctorate from the University of York and was awarded a post-doctoral fellowship at La Trobe University in Melbourne and has worked on major historic sites in the UK, US, and Australia (notably Port Arthur) and for Heritage Victoria. He has published on the symbolic content of 19th-century transfer prints, 19th century ceramic assemblages from Wales, and the importance of international comparisons in ceramic analysis. This volume offers a readable and practical guide to the archaeological analysis of British ceramics found in Australia from the beginning of European settlement at Sydney through to Federation. Intended for students and experienced researchers alike, it presents the latest in international ceramics research in a manner relevant to Australasian archaeologists.

The core of the book is a glossary of terms and guide to the identification of ware, form, and decoration. Additional

chapters present guidelines on field and laboratory methods pertaining to the processing and cataloguing of ceramics; a review of the history of ceramics analysis in Australia, North America, and the United Kingdom; a model for ceramics analysis; and thoughts on the interpretive analysis of ceramics assemblages based on economy, status, function and meaning. The most common wares, decorations and forms found on Australian colonial sites are illustrated in the text and on an accompanying CD featuring color versions of the in-text images. Appendices feature additional information of use in identifying British ceramics in Australia, including a list of known British manufacturers (and their dates of operation) whose materials have been recovered from Australian sites, a ceramic time line cross-referenced to significant dates from colonial Australian history, and a guide to further reading.

Publishers' blurb: "This ambitious manuscript will serve as a useful guide for Australian researchers working on 19th-century sites. The author has done considerable background work and has provided a thoughtful approach to the description and analysis of ceramics. Teresita Majewski, past president of the Society for Historical Archaeology and co-author of "The Use and Mis-Use of Nineteenth-Century English and American Ceramics in Archaeological Analysis." The book may be ordered through the Australasian Society for Historical Archaeology (order form on the Internet at: <http://www.asha.org.au/publications.htm>). Payment (cash, check, some credit cards [Visa, MC, BC]) must be mailed to the Australasian Society for Historical Archaeology, P.O. Box 220, Holme Building, University of Sydney, NSW 2006, Australia.

Hector Neff (compiler), *Ceramics in Archaeology: Readings from American Antiquity, 1936-2002*. Washington, DC: Society for American Archaeology, 2005; 380 pp., ISBN 0-932839-29-0, \$29.95 paperback. The volume is divided into five parts: Part I: Introduction (1 article); Part II: The Typological Concept (10 articles); Part III: Time's Arrow (6 articles); Part IV: Good, Fast, Cheap: Pick Any Two: Characterization of Ceramic Materials (15 articles); and Part V: Pots as Tools: Performance Counts (4 articles). Each of the parts has a two to five page introductory essay prepared by Neff that provides relevant background and context; five parts contain from one to 15 articles (a total of 36). The following summary contains the authors and titles of the articles, along with the original *American Antiquity* volume numbers, page numbers, and years of publication: "Introduction" by Neff (pp. 1-3); "1 Early Formative Cultures in Georgia and Florida" (31:781-799, 1966) by James A. Ford (pp. 5-23); "Introduction" by Neff (pp. 25-26); "2. The Typological Concept" (9:271-288, 1944) by Alex D. Krieger (pp. 27-44); "3. On the Typological Method" (10:202-204, 1944) by Irving Rouse (pp. 45-47); "4: Statistical Techniques for the Discovery of Artifact Types" (18:305-313, 1953) by Albert C. Spaulding (pp. 49-57); "5. Comment on A. C. Spaulding, 'Statistical Techniques for the Discovery of Artifact Types'" (19:390-391, 1954) by James A. Ford (pp. 60-62); "6. Reply to Ford" (19:391-193, 1954) by Albert C. Spaulding (pp. 60-62); "7. Ceramic Variety, Type Cluster, and Ceramic System in Southwestern Pottery Analysis" (24:34-

47, 1958) by Joe Ben Wheat, James C. Gifford, and William W. Wasley (pp. 63-76); "8. The Importance of Both Analytic and Taxonomic Classification in the Type-Variety System" (34:278-285, 1969) by Jeremy A. Sabloff and Robert E. Smith (pp. 77-84); "9. Sabloff and Smith's 'The Importance of Both Analytic and Taxonomic Classification in the Type-Variety System'" (36:115-118, 1971) by Robert C. Dunnell (pp. 85-88); "10. Ethnomineralogy of Ticul, Yucatan Potters: Etics and Emics" (36:20-40, 1971) by Dean E. Arnold (pp. 89-109); and "11. Rethinking the Ware Concept" (41:538-543, 1976) by Prudence M. Rice (pp. 111-116). Part II: "Introduction" by Neff (pp. 117-119); "12. A Chronological Method Applicable to the Southeast" (3:260-264, 1938) by James A. Ford (pp. 121-125); "13. A Method for Chronologically Ordering Archaeological Deposits" (16:293-301, 1951) by W. S. Robinson (pp. 127-135); "14. Stratigraphy and Seriation" (26:324-330, 1961) by John H. Rowe (pp. 137-143); "15. Seriation Method and Its Evaluation" (35:305-319, 1970) by Robert C. Dunnell (pp. 145-159); "16. Stylistic Variation in Evolutionary Perspective: Inferences from Decorative Diversity and Interassemblage Distance in Illinois Woodland Ceramic Assemblages" (60:7-36, 1995) by Fraser D. Neiman (pp. 161-190); and "17. Ceramic Style Change and Neutral Evolution: A Case Study from Neolithic Europe" (66:577-593, 2001) by S. J. Shennan and J. R. Wilkinson (pp. 191-207). Part III: "Introduction" by Neff (pp. 209-213); "18. The Reducing Atmosphere and Oxidizing Atmosphere in Prehistoric Southwestern Ceramics" (4:224-231, 1939) by Harold S. Colton (pp. 215-222); "19. Technological Analysis of Prehistoric Lower Mississippi Ceramic Materials: A Preliminary Report" (29:49-56, 1963) by Elizabeth C. Weaver (pp. 223-230); "20. Temper Identification: 'Technological Sherd-Splitting' or an Unanswered Challenge" (29:518-520, 1964) by Anna O. Shepard (pp. 231-233); "21. Comment on Weaver's 'Technological Analysis of Prehistoric Lower Mississippi Ceramic Materials: A Preliminary Report'" (29:520-521, 1965) by James Warren Porter (pp. 233-234); "22. Megascopic and Petrographic Analysis of a Foreign Pottery Vessel from the Cahokia Site" (41:95-101, 1965) by Charles J. Bareis and James Warren Porter (pp. 235-241); "23. Laboratory-Scale Instrumental Neutron Activation for Archaeological Analysis" (30:345-347, 1965) by Ralph A. Johnson and F. H. Stross (pp. 243-245); "24. Neutron Activation Analysis of Some Cuicuilco and Teotihuacan Pottery: Archaeological Interpretation of Results" (30:348-349, 1965) by J. A. Bennyhoff and R. F. Heizer (pp. 246-247); "25. Problems in Pottery Analysis" (31:870-871, 1966) by Anna O. Shepard (pp. 249-250); "26. X-Ray Diffraction Analysis of Prehistoric Pottery" (38:339-344, 1973) by John W. Weymouth (pp. 251-256); "27. Comment on Weymouth's 'X-Ray Diffraction Analysis of Prehistoric Pottery'" (39:619-620, 1974) by Prudence M. Rice (pp. 257-258); "28. Sensitivity, Production, and Accuracy: Their Roles in Ceramic Compositional Data Bases" (55:537-546) by Ronald L. Bishop, Veletta Canouts, Patricia L. Crown, and Suzanne P. De Atley (pp. 259-268); "29. Acid Extraction as a Simple and Inexpensive Method for Compositional Characterization of Archaeological Ceramics" (58:45-59, 1993) by James H. Burton and Arleyn W. Simon (pp. 269-283); "30. An Assessment of the Acid-Extraction

Approach to Compositional Characterization of Archaeological Ceramics” (61:389-404, 1996) by Hector Neff, Michael D. Glascock, Ronald L. Bishop, and M. James Blackman (pp. 285-300); “31. A Pot Is Not a Rock: A Reply to Neff, Glascock, Bishop, and Blackman” (61:405-413, 1966) by James H. Burton and Arleyn W. Simon (pp. 301-309); and “32. Evaluation of Painted Pottery from the Mesa Verde Region Using Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry (LA-ICP-MS)” (67:137-144, 2002) by Robert J. Speakman and Hector Neff (pp. 311-318). Part IV: “Introduction” by Neff (pp. 319-320); “33. ‘Cell-Tempered’ Pottery” (2:137-139, 1936) by Anna O. Shepard (pp. 319-320); “24. New Perspectives in Experimental Archaeology: Surface Treatments and Thermal Response of the Clay Cooking Pot” (59:197-217, 1994) by Michael Brian Schiffer, James M. Skibo, Tamara C. Boelke, Mark A. Neupert, and Meredith Aronson (pp. 325-345); “35. Life-Expectancy of Utilitarian Pottery in Tzintzuntzan, Michoacan, Mexico” (25:606-609, 1960) by George M. Foster (pp. 347-350); and “36. Mortal Pots: On Use Life and Vessel Size in the Formation of Ceramic Assemblages” (61:463-482, 1996) by Michael J. Shott (pp. 351-370). Neff has selected the best of the best articles and has prepared astute introductory remarks that provide salient background and context. Having these articles assembled in one handy volume is a distinct benefit for pedagogy and reference, and the narratives and illustrations are well-produced and the graphic materials are very legible. This will remain a significant resource for some time to come and the thoughtful essays prepared by the editor are well worth reading and contemplating as they represent his view of ceramic studies.

Other Books

Handbook of Archaeological Sciences edited by Don R. Brothwell and Pollard, A. M. Pollard; John Wiley and Sons, Chichester and New York, 2001, has been reprinted as a paperback in 2005, ISBN 0470014768, £45 (\$84.00), the hardcover edition is \$300.00. This volume provides a broad introduction to the sciences relevant to archaeology and the scientific aspects of modern archaeology. The 59 articles are written by international contributors whose writings reflect the range of scientific studies being undertaken in contemporary archaeology. No claim is made that this work is a comprehensive assessment, but the contributions cover a variety of topics: dating; quaternary palaeoenvironments; human palaeobiology; biomolecular archaeology; biological resource exploitation; inorganic resource exploitation; archaeological prospecting; burial, decay, and archaeological conservation; and statistical and computational methods. Each article reviews the relevant basic science and puts it into the appropriate archaeological context. The book places scientific archaeology in the wider context of the other historical sciences, and is designed as a definitive general reference and guide to the archaeological sciences. Augmenting the general index are indices of sites and of species names and taxonomic groups.

Encyclopedia of Analytical Science, 2nd ed., 10 vols.; edited by Paul Worsfold (University of Plymouth, Plymouth,

UK), Alan Townshend (University of Hull, Hull, U.K. and Colin Poole (Wayne State University, Detroit, Michigan, USA), Amsterdam and New York: Elsevier (Academic Press imprint), 2005, ISBN: 0-12-764100-9 (hardbound), 5000 pp., \$4,570, £2,950, EUR 4,425. Ordering information is available at http://www.elsevier.com/ps/find/booksorderform.cws_home/701879/bookorderform1_1. Customer Service Department, 11830 Westline Industrial Drive, St. Louis, MO 63146 USA; US Customers: Toll Free: +1 (800) 545-2522, Fax: +1 (800) 535-9935; Customers Outside the US: Toll Free: +1 (800) 460-3110, Tel: +1 (314) 453-7010, Fax: +1(314) 453-7095, e-mail: usbkinfo@elsevier.com. The new edition is an extensive revision of the original and contains 610 articles, each consisting of ca. 4,000 words plus figures and tables. The articles are combined to form larger entries providing comprehensive coverage of important topics and assisting the reader in locating material of interest. The entries are arranged in an A to Z format providing a final publication of about 2.5 million words in 10 volumes. The articles are extensively cross-referencing and the encyclopedia has a detailed index. The second edition is designed to provide a detailed and comprehensive publication covering all facets of the science and practice of analysis. It includes comprehensive coverage of techniques used for the determination of specific elements, compounds and groups of compounds, in physical or biological matrices. This edition addresses applications of chemical analysis in all areas, ranging from such topics as medicine to environmental science, and geology to food science. In addition, major characterization techniques, such as microscopy and surface analysis are also included. Partial contents (of particular interest to readers of this column): Activation Analysis; Adhesives and Sealants; Amplification Reactions; Analytical reagents; Archaeometry and Antique Analysis; Atomic Absorption Spectrometry; Atomic Emission Spectrometry; Atomic Fluorescence Spectrometry; Atomic Mass Spectrometry; Bioassays; Building Materials; Ceramics; Chromatography; Colour Measurement; Computer Modeling; Electron Energy Loss Spectrometry (EELS); Electron Spin Resonance Spectroscopy; Environmental Analysis; Extraction; Food and Nutritional Analysis; Fourier Transform Techniques; Gas Chromatography; Geochemistry; Glasses; History of Analytical Science; Infrared Spectroscopy; Isotope Ratio Measurements; Laser-based Techniques; Lipids; Mass Spectrometry; Nuclear Magnetic Resonance Spectroscopy; Optical Spectroscopy; Particle Size Analysis; Qualitative Analysis; Quality Assurance; Radiochemistry; Raman Spectroscopy; Sample Handling; Sampling Spectroelectrochemistry; Spectrophotometry; Surface Analysis; Thermal Analysis; Thin-layer Chromatography; Water Analysis; and X-Ray Techniques.

K'axob: Ritual, Work, and Family in an Ancient Maya Village edited by Patricia A. McAnany, *Monumenta Archaeologica* 22, Los Angeles: Cotsen Institute of Archaeology, University of California, Los Angeles, 2004, ISBN 1931745099, \$65.00, paperback. Three chapters are relevant to readers of this column: M. L. Bartlett, “The potter’s choice of clays and crafting technologies,” pp. 143-167; Sandra L. López Varela, “Ceramic history of K'axob: The early years,”

pp. 169-191; and K. A. Berry, S. L. López Varela, M. L. Bartlett, T. Martz, and P. A. McAnany, "Pottery vessels of K'axob," pp. 263-273.

Other notable volumes that have appeared recently include: Penelope M. Allison, *Pompeian Households: An Analysis of the Material Culture*, Cotsen Institute of Archaeology, UCLA, Monograph 42, Los Angeles: The Cotsen Institute, 2004, pp. 255, ISBN 0-917956-96-6, \$40.00 (hardcover); Martin Bentz and Christoph Reusser, *Attische Vasen in etruskischem Kontext: Funde aus Häusern und Heiligtümern*. Beihefte zum CVA Deutschland, Band 2, München: C.H. Beck, 2004, pp. 120, ISBN 3-406-51904-0, €9.90; Clemente Marconi (ed.), *Greek Vases: Images, Contexts and Controversies*, Columbia Studies in the Classical Tradition, 25. Leiden: Brill, 2004, pp. 149, ISBN 90-04-13802-1, €9.00; Susan I. Rotrof, and Andrew Oliver, Jr., *The Hellenistic Pottery from Sardis: The Finds through 1994*, Archaeological Exploration of Sardis, Monograph 12, Cambridge, MA: Harvard University Press, 2003, pp. 229; pls. 144, ISBN 0-674-01461-8, \$90.00; and Gregory Warden (ed.), *Greek Vase Painting. Form, Figure & Narrative. Treasures of the National Archaeological Museum in Madrid*, Dallas, TX: Meadows Museum and Southern Methodist University Press, 2004, pp. 168; ills. 98, ISBN 0-87074-489-5, \$35.00.

Aboriginal Pottery of the Eastern United States by W. H. Holmes (from *Twentieth Annual Report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution 1898-99*, Washington: Government Printing Office, 1903), 237 pp., 177 plates (some in color), and 79 figures has been reprinted in a well-bound paperback edition: Davenport Iowa, Gustav's Library, 2005 [February], for \$23.75. Contact www.gustavslibrary.com for additional details regarding mailing costs and payments.

New Publications in the British Archaeological Reports International Series

Pottery Manufacturing Processes: Reconstitution and Interpretation Acts of the XIVth UISPP Congress, University of Liège, Belgium, 2-8 September 2001, Colloque/Symposium 2.1 edited by Alexandre Livingstone Smith, Dominique Bosquet and Rémi Martineau, *Acts of the XIVth UISPP Congress, University of Liège, Belgium, 2-8 September 2001*, BAR S1349, 2005, ISBN 1841716952, [9 papers are in English and 8 in French; all papers have French and English abstracts], £35.00/\$82.00; 17 chapters, 228 pp, figures, maps, plans, tables and plates. Contents: 1) Linking Society with the Compositional Analyses of Pottery (Dean Arnold); 2) Transactional Politics and the Local and Regional Exchange of Pottery Resources in the Ecuadorian Amazon (Brenda Bowser); 3) The Source: Clay Selection and Processing Practices in Sub-Saharan Africa (Olivier Gosselain and Alexandre Livingstone Smith); 4) Variabilité technique et identité culturelle: un cas d'étude ethnoarchéologique en Andhra Pradesh (Laure Degoy); 5) Cultural Contacts and Technical Heritage in Senegambia (Moustapha Sall); 6) Reconnaissance

des techniques et des méthodes de façonnage par l'analyse des macrotraces: étude ethnoarchéologique dans la vallée du Sénégal (Agnès Gelbert); 7) Utilisation du dégraissant végétal en contexte néolithique: hypothèses technologiques et expérimentation (Claude Sestier); 8) Use of Image Analysis in Determining Multi-Source Ceramic Materials (Bruce Velde); 9) La chaîne opératoire de la céramique rubanée: première tentative de reconstitution (Dominique Bosquet et al.); 10) Techno-Functional Aspects of a Middle Neolithic Pottery Assemblage (Spiere "De Hel", Belgium) (Bart Vanmontfort); 11) Techniques de fabrication de céramiques du Néolithique moyen I en Armorique (France) (Gwenaëlle Hamon et al.); 12) Exemples de reconstitutions des chaînes opératoires des poteries du Néolithique Moyen II dans la moitié nord de la France (Caroline Colas); 13) Identification of the Beater and Anvil Technique in Neolithic Context : Experimental Approach (Rémi Martineau); 14) Matériaux et types céramiques à Saint-Blaise, station néolithique suisse (2770-2626 av. J.-C.). Poterie exogène et production locale (Simonpietro di Pierro et al.); 15) Perception stylistique et technologie céramique : reconstitution et interprétation des techniques de façonnage des poteries archéologiques de Koumbi Saleh (Mauritanie, IX ème -XV ème siècles) (Barbara van Dooselaere); 16) Identifying Social Entities at a Macro-Regional Level: Chalcolithic Ceramics of South Levant as a Case Study (Valentine Roux et Marie-Agnès Courty); 17) and Comparing Chaînes Opératoires: Technological, Cultural and Chronological Features of Pre-Pastoral and Pastoral Ceramic and Lithic Production (Elena Garcea).

LRCW I: Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry edited by J. Ma. Gurt i Esparraguera, J. Buxeda i Garrigós, M. A. Cau Ontiveros, BAR S1340 2005, ISBN 1841716863, £55.00/\$100.00; v + 736 pp.; figures, maps, plans, drawings and photographs. The 48 papers in this edited work derive from the proceedings of the 1st International Conference on Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry which was held in Barcelona in March 2002. This symposium focused for the first time in an international forum on late Roman cooking wares and amphorae. The papers in this volume all show how the study of Roman coarse wares, cooking wares, and amphorae can contribute to our knowledge and understanding of a wide range of issues and problems. A review of this monograph will appear in a future issue of the *SAS Bulletin*.

Chalcolithic Anthropomorphic Figurines from Ilgynly-depe, Southern Turkmenistan Classification, Analysis and Catalogue by Natalia F. Solovyova, BAR S1336 2005, ISBN 1841716820, £36.00/\$85.00. 211 pp.; 2 maps, 92 black-and-white plates, and an accompanying CD-ROM showing more than 500 figurines in color. The settlement of Ilgynly-depe is located in the foothills of the Kopet Dag mountains approximately 240 km southeast of Ashgabat and 110 km northwest of Meshkhed, southern Turkmenistan. The settlement was founded in the late 5th and early 4th millennium BCE. The subject of this study was the collection of

anthropomorphic figurines found within the confines of the Ilgynly-depe settlement. The assemblage of 500+ distinctive figurines was gathered during the course of 14 excavation seasons. This is the first time the collection has been published in depth.

Etudes sur la céramique romaine tardive d'Afrique by Michel Bonifay, BAR S1301 2004, ISBN 1841716510 [in French], £52.00/\$95.00; viii + 525 pp.; 269 figures, maps, plans, drawing, photographs; 3 color plates; 4 tables, typological index. This compendium presents a comprehensive analysis of the pottery (amphorae, vessels, lamps, small objects and architectural ceramic) of Roman Africa from the 2nd to the 7th century CE. The analysis is based on a large assemblage from several settlements located in southern France (Marseilles), in Tunisia (Nabeul, Hammamet/Pupput, Sidi Jdidi, Oudhna, Carthage, Thuburbo Majus, El Jem) and in the Eastern Mediterranean (Alexandria and Beirut). In Part One, the author examines different aspects of production (epigraphy, petrography, workshops, technology). The second part is devoted to the typology and the chronology of amphorae, red slip ware, cooking wares, coarse ware, handmade wares, lamps, figurines and moulds, tiles, and vaulting tubes, with some new proposals for classification and dating. Economic patterns are discussed in the third part, including the processes of commercialization (both inside and outside of Africa), the contents of amphorae, and the historical interpretations of the large diffusion of African pottery.

Local and Imported Ceramics in the Roman Province of Scythia (4th – 6th centuries AD) by Andrei Opait, BAR S1274 2004, ISBN 1841716278, £32.00/\$80.00; iv + 180 pp.; maps, plans and drawings, and 61 b/w plates. This monograph (first published in Romanian in 1996 and revised and updated) represents an initial attempt to present a general outline of the economic evolution of the province of Scythia (4th-6th centuries CE) from a ceramic point of view. The volume aims to fill a gap in Romanian archaeological research, where ceramic studies focus more on form and decoration of the ceramic vessels than on the economic inferences to be drawn from this ubiquitous archaeological material. This study is of interest not only to specialists in Roman ceramics but also to historians of ancient economy. The monograph is divided into two parts. Part One considers the typology of the ceramic vessels, and the second analyzes the economic implications of the ceramic finds themselves.

Late Ceramic Age Societies in the Eastern Caribbean edited by André Delpuech and Corinne L. Hofman, *Paris Monographs in American Archaeology 14*, BAR S1273 2004, ISBN 184171626X, £38.00/\$85.00; xvii + 329 pp.; maps, figures, plans, photographs and drawings. The contributors to this volume consider the period between ca. 600 and 1500 CE. The geographic region is limited to the eastern part of the Antilles, including Trinidad, the Lesser Antilles, the Virgin Islands, Puerto Rico, and the adjacent coastal area of South America. Emphasis is on the northern islands of the Lesser Antilles as new research has been undertaken in this area during

the past decade, while other regions to the south have been less studied. The 17 papers include: 1) Espaces naturels et territoires amérindiens dans la Caraïbe orientale (André Delpuech); 2) Time and culture: chronology and taxonomy in the Eastern Caribbean and the Guianas (James B. Peterson et al.); 3) Islands of chaos (William F. Keegan); 4) Social dynamics and change in the Northern Lesser Antilles (Corinne L. Hoffman et al.); 5) Political and social history of Eastern Puerto Rico: the Ceramic Age (L. Antonio Curet et al.); 6) What happened after AD 600 in Puerto Rico? Corporate groups, population restructuring, and post-Saladoid social changes (Peter E. Siegel); 7) Late Ceramic Age developments in the Virgins Archipelago: The Puerto Rican connection (Elizabeth Righter et al.); 8) Distribution and exchange of lithic materials: three-pointers and axes from St. Martin (Sebastian Knippenberg); 9) Inter-island exchange, settlement hierarchy, and a Taion-related chiefdom on the Anguilla Bank, Northern Lesser Antilles (John G. Crock et al.); 10) Late Ceramic Age survey of the northeastern islands of the Guadeloupean Archipelago: Grande-Terre, La Désirade and Petite-Terre (Corinne L. Hofman et al.); 11) At the onset of complexity: Late ceramic developments in St. Croix (Birgit Faber-Morse); 12) En vue de l'étude de l'occupation post-Saladoïde de la Martinique (Nathalie Vidal et al.); 13) Life in an insular environment: the case of Antigua (Reg Murphy); 14) Post-Saladoid society on Barbados (Peter Drewett); 15) The Arauquinoid tradition in the Guianas (Stéphen Rostain et al.); 16) Koriabo and the polychrome tradition: the late-prehistoric era between the Orinoco and Amazon mouths (Arie Boomert); and 17) Linking prehistory and history in the Caribbean (Samuel M. Wilson).

The Neolithic Pottery Sequence in Southern Greece by Bill Phelps, BAR S1259, 2004, ISBN 1841716170, £44.00/\$80.00; 277 pp.; 4 chronological charts, 4 maps, 60 pp. of drawings, 8 color plates, 30 b/w plates. The Grecian Peloponnesus forms an approximate cultural province that the author examines over a time-span of some three thousand years. The area witnessed considerable climatic and ecological changes, and the development of a great diversity of pottery types, so that cultural boundaries did remain constant. In the earliest stages of the Neolithic period it could be argued on the ceramic evidence that much of the Greek mainland, from Macedonia to Laconia, constituted one province, while during what is generally termed the Middle Neolithic period, the same area may be subdivided into five or six zones. With this qualification, however, the pottery of the Peloponnesus is on the whole sufficiently distinguished from that of its northern neighbors by style and technique to justify treating the region as a single cultural unit. The volume considers the initial efforts to control the environment through agriculture and animal husbandry, and ends with the rapid expansion of trade and interaction that accompanied the development of metallurgical techniques in the Early Bronze Age.

Sasanian and Islamic Pottery from Ras al-Khaimah: Classification, Chronology and Analysis of Trade in the Western Indian Ocean by Derek Kennet with a contribution by Regina Krahl, Society for Arabian Studies Monographs 1,

BAR S1248, 2004, ISBN 1841716081, £32.00/\$72.00; 146 pp.; 2 color plates; 57 figures, plates, maps, and drawings. During the course of a preliminary surface survey of the island of Hulaylah in Ras al-Khaimah, United Arab Emirates in 1991, it became clear that, although understanding of the ceramic sequence from the Bronze Age until about the 4th century CE in the northern Emirates was fairly good, very little was known about the sequence from the later Sasanian period until the present day. The principal aim of this book is, therefore, to present the classification of Sasanian and Islamic ceramics from the 4th-5th century CE to about the 20th century CE from Ras al-Khaimah as well as the evidence for a proposed chronology. The classification is based on a study of over 124,000 sherds, which includes excavated sequences from the sites of Kush and al-Mataf and numerous surface collections made in and around Ras al-Khaimah. More than 100 ceramic types were discerned and are reported. Although reference is made to other published material from the region, on the whole the approach was to allow the Ras al-Khaimah ceramic sequence to 'speak for itself' before relating it to studies from other areas where chronologies and distributions may be significantly different. In Chapter 5 the author proposes a new and more precise chronology and periodization of Sasanian and Islamic ceramics from the Gulf for use in dating survey collections. A secondary goal is to present a preliminary analysis of the combined quantified sequences from Kush and al-Mataf and to explore some of the results, especially those that have a bearing on the archaeology of Indian Ocean trade and economy. Comparisons are made with the quantified sequence from Shanga on the East African coast in order to identify trends and developments that are relevant to the Arabian Sea littoral as a whole, as well as to Ras al-Khaimah. This aspect of the work is incomplete and is currently being developed into a fuller study of patterns of trade in the western Indian Ocean based on ceramic distributions and quantified assemblages. The latter will appear as part of the final publications of the two excavations and as individual research papers. A basic users' guide is provided in Appendix 4 to facilitate the identification of pottery in the field.

Cultural Change on a Temporal and Spatial Frontier: Ceramics of the Terminal Classic to Postclassic Transition in the Upper Belize River Valley by James J. Aimers, BAR S1325, 2005, ISBN 1841716707, £35.00/\$82.00; x + 231 pp.; 74 figures, maps, plans, drawings and photographs, 1 color plate; 54 tables, appendices. The decline of ancient Maya civilization has resonated in both the popular and archaeological imagination. Archaeologists have questioned this "collapse" with increasing detail in some parts of the Maya area, but in the Belize Valley the era remains virtually unknown. Although the term "collapse" is still used as a collective term for a variety of causative natural and social phenomena, the regional variability of the phenomenon has led most archaeologists to adopt more neutral terms such as that preferred in this study: Terminal Classic to Early Postclassic transition. As work at individual sites continues, evidence grows that this transition varies even within regions, indicating that the nature of the transition may have to be assessed on a site-by-site basis. The site-by-site

approach, in turn, has slowed the realization that there is probably no single cause for the Maya collapse in areas where a collapse can be said to have occurred at all. This study is a comparative approach to the collapse in the Upper Belize River Valley using ceramics, the most ubiquitous and durable data set available for assessment, from sites of varying size and importance. Ceramics are quantified and described in addressing fundamental questions about the nature of Maya lifeways during the Terminal Classic to Early Postclassic transition in the Belize Valley.

Previous Meetings

The 70th Annual Meeting of the Society for American Archaeology was held in Salt Lake City, Utah from 30 March to 3 April 2005. More than 120 papers on ceramics were presented, many in the context of seven symposia, several poster sessions, or as independent papers in various sessions. An analysis indicates that there were 45 dealing with the North American Southwest (including seven poster presentations); 38 from Mesoamerica (among these, 20 on the Maya); 12 Technical Studies (on residue analysis, INAA, petrography, and XRD); and nine on Special Topics (particularly ceramic ethnoarchaeology and apprenticeship). Geographically, there were three papers on Peruvian pottery, one on Panamanian ceramics, three on the US Southeast (all poster presentations), one from Northeastern North America (New York State), and one on the Great Plains. There were at least six non-New World papers: one each on pottery from Greece, Egypt, Syria, Iran, China, and Ethiopia. While the American Southwest and Mesoamerica continue to be the foci of a majority of ceramic studies, there was a dramatic shift in Mesoamerican presentations, with 20 Maya contributions (including seven from upper Central America [Honduras, Belize, and El Salvador]), only two from Central Mexico, and one each from Northern Mesoamerica and West Mexico. Seven symposia were completely or substantially devoted to ceramic subjects. I have listed the titles and abstracts, along with the names and contributions of the presenters.

Symposium 23: "From Anthills to Horse Manure: Provenance Characterization of Sand-Tempered Ceramics from the American Southwest" (organized by Elizabeth Miksa and chaired by James Heidke). Petrographic analysis of rock and mineral temper has been used to characterize pottery provenance for more than a century. With the advent of standardized point counting methods in the 1950s, statistical comparison of temper to potential geologic sources became possible. The petrofacies method developed since the 1980s provided other leap forward, as multivariate statistical techniques were available to classify provenance. Symposium papers demonstrate the application of petrographic methods to pottery provenance characterization. Examples include the full range of petrographic techniques, from initial descriptive characterization to petrofacies provenance analysis, with emphasis on how detailed petrographic information enhances archaeological interpretation. Papers were presented by: Sergio Castro-Reino and James Allison, "Petrographic Analysis of

Sherd Samples from the Hot Spring Lake and Airport Sites, Salt Lake City, Utah”; C. Dean Wilson and Sergio Castro-Reino, “Views of Coalition Period Pottery Production and Exchange from Los Alamos and Beyond”; Jorge Morales and John Carpenter, “Sands of La Playa (Son F:10:3): Developed Preliminary Petrofacies Model with Application to Trinchera Ceramics (Sonora, Mexico)”; John W. Smith, “Compositional Study of Ceramics from the San Simon Valley, Arizona”; Patrick Lyons, Elizabeth Miksa, Sergio Castro-Reino and Carlos Lavayan, “Using Petrography to Demonstrate the Link between Roosevelt Red Ware and Ancient Immigrants”; Carlos Lavayan and Elizabeth Miksa, “Improving the Framework for Assigning Provenance to Sand-Tempered Ceramics: Examples from the Tucson Basin, Arizona”; Elizabeth Miksa, “Technological and Provenance Variation in Native American Pottery from the Spanish Period to the American Territorial Period, Tucson, Arizona”; James Heidke, “Evaluating the Role of Ballcourts in the Distribution of Sedentary Period Hohokam Pottery”; David R. Abbott, and “Hohokam Buff Ware Provenance and Its Implications for Sedentary Period Pottery Economics.” Judith Habicht-Mauche served as discussant.

Symposium 45: “Ancient Apprenticeship” (organized and chaired by Willeke Wendrich). Learning a craft, a physical learning process, is based on observation, imitation and, most importantly, repetition. This symposium concentrates on the types of knowledge and the methods of knowledge transfer by craftsmen in the social context of learning. Subjects that will be covered are: How do we recognize the work of apprenticeship or evidence of learning in the archaeological material; what are the social aspects of knowledge transfer in relation to social mobility; engendering knowledge transfer; the epistemology of craftsmanship and lastly, the use of insights gained by discerning different types of knowledge and learning in teaching archaeology. There were 13 papers, some of which considered textiles and stone tool production; three considered ceramics: Samuel Duwe, “Communities of Practice and Networks of Exchange: Glaze Paint Analysis of Pueblo IV Ceramics in the Silver Creek Area, Arizona”; Kathlyn M. Cooper, “Apprenticeship and Figured Ostraca at the Ancient Egyptian Village of Deir el Medina”; and Eleni Hasaki, “J. D. Beazley: The World of Attic Vase Painters and their Apprentices.” Brenda Bowser was the discussant.

Symposium 48: “Using Nuclear Chemistry to Answer Questions: Recent Applications of INAA in the American Southwest” (organized by Robert Speakman, Tiffany Clark and Donna Glowacki; chaired by Clark and Glowacki). Archaeologists have increasingly turned to the physical sciences for reliable chemistry-based analytical techniques to match artifacts with raw-material sources. In the American Southwest, we have reached a watershed moment in the application of one such technique, instrumental neutron activation, moving beyond the analysis of data from small, individual projects to the creation of large databases with multiple researchers. These larger databases enable the researchers in this session to investigate broad anthropological topics such as the mobility patterns and migrations of people, cultural responses to conflict

and stress, community social organization, the development of craft production, and the use of ceramics in the creation and maintenance of social boundaries and identity. There were presentations by Darrell Creel, Robert Speakman, Hector Neff, and Michael Glascock, “Compositional Analysis and New Perspectives on Mimbres Pottery Production and Exchange”; Myles Miller, “Peripheral Basins and Ephemeral Polities: INAA of Mimbres Black-on-White Ceramics and Insights into Mimbres and Jornada Mogollon Social Relationships”; Nancy Kenmotsu, “Insights from INAA about Possible In-Migration of Groups to La Junta de los Rios, Texas”; “Lori Stephens Reed, “A Sourcing Study of Early Pithouse Period Ceramics and Raw Materials in the Burro Mountains, Southwestern New Mexico”; Daniela Triadan, M. James Blackman, Eduardo Gamboa Carrera, and Ronald L. Bishop, “Sourcing Casas Grandes Polychrome Ceramics”; Donna M. Glowacki, “Northern San Juan Intra-regional Interaction During the ‘Turbulent 1200s’”; William J. Grimm, “An Alternative Statistical approach to Chemical Characterization Data”; Tiffany Clark, “What’s Black and White, and Spread All Over? A Compositional study of Chupadero Black-on-white Pottery”; Matthew Chamberlin, “Interaction, Symbolic Conflict, and Social Identity in the Salinas Pueblo District”; Jonathan Schoolnick, “Local Production and Interregional Circulation of Cibola White Ware During the Pueblo IV Period Reorganization”; Deborah Huntley and Andrew Duff, “Scales of Interaction and Identity in the Zuni and Upper Little Colorado Regions”; Wesley Bernardini, “Jeddito Yellow Ware and Hopi Ethnogenesis”; Leah Minc, Stephen Fowles, Samuel Duwe, and David Hill, “Settlement Patterns and Clay Procurement: Trace-element and Petrographic Analysis of Pre-Classic Pottery from the Taos District, NM”; and J. Andrew Darling and B. Sunday Eiselt, “Consumer-Producer Relations and Interethnic Economy of 19th Century Hispanic Communities in the Lower Chama Valley, New Mexico.” The co-discussants were David Abbott and Maria-Nieves Zedeño.

Symposium 104: “General Session: Southwestern Ceramic Studies” (chaired by Margaret Lyneis). Participants included Diane Curewitz, “Maximizing the Value of Older Collections: Excavations in the Stacks at the Museum of Indian Arts and Culture, New Mexico”; Daniel Sorrell, “A New Method for Dating Cohonina Sites Based on Ceramic Thickness”; Scott Van Keuren, “Order in a Time of Chaos: Cultural Boundaries in Northern Arizona Following the Eruption of Sunset Crater”; Karl Schleher, “Standardization in Pottery: An Ethnoarchaeological and Archaeological Comparison”; Margaret Lyneis, “Pots on the Move: Western Colorado Plateaus Vessels in Southern Nevada;” and Jamie Merewether and Scott Ortman, “An Analysis of Late Pueblo Pottery II Ancestral Pueblo Basket-impressed Pottery.”

Symposium 135: “Electronic Symposium: Across the Great Divide: Ethnoarchaeological and Archaeological Perspectives on Ceramic Assemblage Formation” (organized by James Skibo and Alan Sullivan). The papers were posted prior to the session so that their authors presented summaries at the session and there was a panel discussion (which extended an hour past the

scheduled time); using assigned login and password, SAA members can access all of the papers through the SAA Internet site at <http://www.saa.org/meetings/esymposium/135/>. Ceramic ethnoarchaeology's impact on the analysis of prehistoric assemblages has been restrained. Ethnoarchaeologists think their work is ignored by prehistoric archaeologists who, in turn, complain that it is difficult to apply ethnoarchaeological "findings" because they focus, for example, on whole pots rather than sherds. Hence, both groups are frustrated by the Great Divide – a chasm of ignorance that thwarts a broad understanding of the origins and interpretive potential of ceramic assemblage variability. With scholars whose ceramic research embraces these topics, this symposium seeks to establish a common analytical ground and identify opportunities to narrow the Great Divide between ethnoarchaeological observations and archaeological practices. The participants were William A. Longacre, "In the Service of Archaeology"; James Skibo, "Great Divide or Seamless Web? Understanding the Relationship Between Ethnoarchaeological Observation and Archaeological Practice"; Alan Sullivan, "Vessels unto sherds into Data: The Inferential Challenges of Working with Residual Archaeological Assemblages"; Margaret Beck, "Midden Ceramic Assemblage Formation: An Ethnoarchaeological Perspective"; Kathleen M. Sydoriak Allen, "Ceramic Variability and Social Identity: Applying Insights from Ethnoarchaeology to Iroquoian Pottery"; Michael Deal, "Ethnoarchaeological Perspectives on Domestic Ceramic Production and the Formation of Household Ceramic Assemblages"; Sissell Schroeder, "Tempering the Inferential Potential of Ceramics: Ethnoarchaeology and Its Relevance for Mississippian Studies"; John Arthur, "Understanding Household Population through Ceramic Assemblage Formation: Ceramic Ethnoarchaeology among the Gamo of Southwestern Ethiopia"; Christopher Pool, "Do Chains Make Good Bridges? Applying Technological Choice to Archaeological Ceramic Assemblages"; and Mary Jane Berman, "Temper Tantrums or How to Get Fired in the Prehistoric Bahamas." Philip Arnold served as the session discussant.

Symposium 148: "Electronic Symposium: Squaring the Spheres: Interregional perspectives on Postclassic Maya Ceramics" (organized and chaired by Jim Aimers). The papers were posted prior to the session so that their authors presented summaries at the session and there was a general discussion; using assigned login and password, SAA members can access all of the papers at the website, <http://www.units.muohio.edu/mcs/mediaservices/webdev/portal/index.php>. Type-variety classification encourages different type names for Postclassic Maya ceramics that are similar at various sites, making it difficult to compare assemblages. Chronological relationships between various Postclassic ceramic spheres are still unclear, and there are difficulties in comparing ceramics from different zones of the Maya world and its periphery. Participants will present well-known Postclassic ceramics from sites where they work, compare these to similar ceramics elsewhere, and assess the best methods for presenting these comparisons. We will critically evaluate type-variety classification in the assessment of interregional interaction and the chronological alignment of

ceramics. Participants included Jim Aimers and Elizabeth Graham, "Type-Variety on Trial: Experiments in Classification and Meaning Using Ceramic Assemblages from Lamanai, Belize"; Cassandra Bill, "Classic-Postclassic Disjunction in Ceramic Technology and Style: Questions of Social Change and Problems in Type-Variety Analysis"; Arlen Chase and Diane Chase, "The Future and The Past: Type-Variety-Mode Analysis and Postclassic Ceramics at Santa Rita Corozal, Belize and Tayasal, Guatemala"; Linda Howie, Terry Powis and Elizabeth Graham, "Can You Judge a Pot by Its Colour? Typological Groupings Under the Microscope at Lamanai, Belize"; Prudence Rice, "Type-variety: What Works and What Doesn't" (paper not presented or posted); Jennifer Taschek and Joseph Ball, "Northern Yucatec Maya in Early Postclassic Central Western Belize: 'Concrete' Evidence from the Upper Belize Valley"; and Patricia Urban and Marne Ausec, "The Problematic Postclassic in NW Honduras." The discussants were Frederick Bove and Annick Daneels.

Symposium 159: "Sphere of Influence: Fifty Years of Interpreting Lowland Maya Ceramics in the Shadow of the Uaxactun Report" (organized and chaired by Debra Walker) In the 50 years since R. E. Smith's *Ceramic Sequence at Uaxactun, Guatemala*, his work has become synonymous with the lowland Maya ceramic sphere. "Chicanel" and "Tzakol" for example, provide definitions approaching dictionary-level accuracy for archaeologists. While Smith's insights have stood the test of time, the cultural landscape has increased in temporal and spatial complexity due to new research. This session puts our present knowledge of lowland Maya ceramics into historical context, framed against Smith's seminal work. The presenters were Lauren Sullivan and Fred Valdez, Jr., "Reflections on R. E. Smith's Influence: A Perspective from Northwestern Belize"; Sandra L. Lopez Varela, "The Processual Myth of Mesoamerican Pottery Analysis"; Laura J. Kosakowsky, "The Problematical Terminal Late Preclassic: Ceramic Evidence from Northern Belize"; Debra Walker, "Tzakol Pots and Politics: Delimiting the Cultural Parameters of Early Classic Polychromes"; Lorraine Williams-Beck and Joseph W. Ball, "A Chenes Perspective on the Maya Ceramic Analysis: The View from Acanmul"; Shirley Boteler Mock, "The Rise and Fall of Tepeu 3 on the Northern Belize Coast"; and David Johnstone, "Smith's Legacy in the Northern Lowlands: The Pottery of Mayapan." Antonio Foias was the discussant.

A *Minoan Seminar* was held at the Danish Institute, 14a Herefondos, Plaka, Athens, Greece, 20 May 2005. "Does Size Matter? Miniature Votive Pottery in Minoan Peak Sanctuaries. The Case of Kythera" was the topics of a presentation by Dr. Iphiyenia Tournavitou. Paper abstract: "In the Aegean Bronze Age, miniature pottery vessels of all classes are usually associated with ritual, whether secular or religious, and are therefore left out of any detailed discussions on the matter. At the same time, the association of miniatures with peak sanctuaries, especially in primary deposition locations (rock fissures/hollows), is considered as an intrinsic element of the cult. Although the truly miniature vessels at the Kythera peak sanctuary of Ag. Georgios sto Vouno constitute only a small

percentage of the extant ceramic material, the vast majority belonging to the Neopalatial period (MM IIIB-LM IB), they represent a surprisingly wide variety of vessel types. The resulting corpus, as regards shape frequencies, demonstrates only superficial affinities with the non-miniature class, and illustrates different priorities with respect to specific ritual practices at the site. Another point of interest, involves context. In contrast to the data from the non-miniature class of vessels, a serious majority of the miniature corpus is attested in primary deposition locations, alongside other votive material. On the other hand, the association of miniatures with pyres - ritual or not - or even with secondary, displaced material from pyres at Ag. Georgios sto Vouno, is very tentative, as was the case with the entire corpus of ceramic material from the site. The overall statistics confirm not only striking differences in the manipulation of the miniature and non-miniature corpuses, but also distinct preferences for the use of miniatures in specific ritual practices. Their symbolic value, as dictated by their size and as determined by their function, use, and context, is fully supported by the extant data." For additional information, e-mail secretary@minoanseminar.gr or contact the Danish Institute (Tel. 210-3244644; Fax 210-3247230).

The Society of Post-Medieval Archaeology's 2005 Annual Conference was held from 27 June to 1 July 2005 on the island of Nevis in the Eastern Caribbean and focused on the historical archaeology of the colonial or shared landscapes of the Caribbean. This is the first time that the Society's Annual Conference has been held outside the British Isles. Five of the 32 papers and posters focused on ceramics: "Guadeloupe - Ceramics and Present-day Identity" by Kenneth Kelly (University of South Carolina); "Afro-Caribbean Pottery on Nevis" (poster) Elaine Morris (Nevis Heritage Project, University of Southampton, UK); "'Little tubes of mighty power': How Clay Tobacco Pipes from Port Royal, Jamaica, Reflect Socioeconomic Change in Seventeenth-century English Culture and Society" by Georgia Fox (California State University, Chico); "Afro-Caribbean Ware and the Study of Cultural Identity at the Brimstone Hill Fortress, St. Kitts, West Indies" by Todd Ahlman (University of Montana); and "Ceramics and Ceramic Use on a Caribbean Island" by David Barker (Stoke-on-Trent Archaeology Service, UK). The conference organizers were Professor Roger H. Leech, School of Humanities (Archaeology), University of Southampton, Highfield, Southampton, SO17 1BF, UK, e-mail: R.Leech@soton.ac.uk, and Bruce Williams, Bristol and Region Archaeological Services, St Nicholas Church, St Nicholas Street, Bristol, BS1 1UE, UK, e-mail: bruce_williams@bristol-city.gov.uk.

Forthcoming Meetings

Australasian Archaeometry Conference 2005 sponsored by the Department of Archaeology and Natural History and the Centre for Archaeological Research (CAR), Australian National University, Canberra, Australia, is scheduled for 12-15 December 2005. Sessions and papers usually focus on Australasia and the broader Asia-Pacific region, but sessions/

papers by researchers working in other geographical areas will also be considered presented. Please visit the conference website for all details: http://car.anu.edu.au/Archaeometry/archaeometry_conference.html, and for other information contact Andy Fairbairn (andrew.fairbairn@anu.edu.au) or Sue O'Connor (sue.oconnor@anu.edu.au) at the Department of Archaeology and Natural History, RSPAS, Coombs Building, Australian National University, ACT 0200, Australia. There is an online registration system that can be reached via the conference website or via this link: <http://rspas.anu.edu.au/anh/conference/>. Of special interest to readers of this column will be two presentations in Section C: Material Science. The first is "Innovative Approaches to Understanding Technology," convened by Oliver MacGregor and Chris Clarkson (Oliver.Macgregor@anu.edu.au, c.clarkson@uq.edu.au). Abstract: Analysis of prehistoric technology is undergoing rapid and exciting development with the emergence of new approaches to understanding and describing assemblage variability. This session aims to present some of these new developments in the analysis of stone, shell and other technologies, with a focus on technological and quantitative approaches, controlled experimentation, and studies which incorporate new measurement and analytical techniques not previously employed in artifact analysis. The second is "Recent Advances on Artifact Characterization and Material Analyses," convened by Glenn Summerhayes and Peter Grave (glenn.summerhayes@stonebow.otago.ac.nz, pgrave@pobox.une.edu.au). Abstract: Recent advances in inorganic and bio-molecular techniques have resulted in a raft of actual or potential applications to archaeological materials. The purpose of this session is to showcase new and exciting studies which are on the cutting edge both within Australia and internationally. The session will also include applied case studies that have used an archaeological science approach to significantly advance our understanding of aspects of social, political or economic dynamics in past societies.

Ceramic Ecology XIX: Current Research on Ceramics 2005, the 19th Annual Ceramic Ecology Symposium, is scheduled for Saturday afternoon, 3 December 2005 at the American Anthropological Association Annual Meeting in Washington, DC. The symposium co-organizers are Charles C. Kolb (National Endowment for the Humanities) and Louana M. Lackey (Maryland Institute College of Art). Kolb will serve as Chairman, and the Discussant will be Kostalena Michelaki (McMaster University). The symposium abstract is followed by abstracts of each of the 11 papers to be presented in the order of their delivery. Symposium Abstract: The papers in this international and interdisciplinary symposium, the 19th in the annual series, reflect a number of approaches within the framework of Matson's concept of Ceramic Ecology, set forth in his volume, *Ceramics and Man* (1965). In this work Matson a ceramic engineer, archeometrician, ceramic ethnoarchaeologist, and ethnographer stated that "unless ceramic studies lead to a better understanding of the cultural context in which ceramic materials were made and used, they form a sterile record of limited worth." Ceramic Ecology as a methodological and theoretical approach has as its paramount

goal a better understanding of the peoples who made and used pottery and seeks to redefine our comprehension about the significance of these materials in human societies. The concept of Ceramic Ecology is contextual, multi and interdisciplinary, and analytical. On the one hand, it seeks to evaluate data derived from the application of physiochemical methods and techniques borrowed from the physical sciences within an ecological and sociocultural frame of reference. It relates environmental parameters, raw materials, technological choices and abilities, and sociocultural variables to the manufacture, distribution, and use of pottery and other ceramic artifacts. On the other hand, interpretation of these data and explanations of the ceramic materials utilize methods and paradigms derived from the social sciences, humanities, and the arts. The concept of Ceramic Ecology forms an implicit or explicit basis of the investigations reported by archaeologists, ethnographers, and others in this symposium in which emphasis is placed upon the technological and socioeconomic aspects of ceramic materials regardless of chronology or geography. It also demonstrates the value of the cross fertilization which results when investigators ranging from art historians and professional potters to ethnoarchaeologists and archaeometricians come together in a forum devoted to a topical consideration: ceramics. These papers continue a symposium series initiated at the 1986 AAA meeting by students of ceramic materials who are members of the informal "Ceramic Studies Interest Group," an organization formed at the suggestion of Matson.

Dean E. Arnold (Wheaton College, Illinois). "Pots as Symbols: The Potter's Gremio in Ticul, Yucatán, Mexico." While archaeologists are familiar with the 'pots as tools' approach to material culture, less is known about the use of pottery as symbols. One approach to this disparity is the use of ethnoarchaeological contexts to illuminate the use of pottery in ritual contexts. An examination of the activities of the potters' guild (gremio) in Ticul, Yucatan, Mexico, reveals a rich use of material culture symbols (including pottery) that do not just signal potters' veneration for Yucatan's patron saint, but provide a complex set of meanings that provide structure to the gremio's activities, and identify it during a ritual month when many such gremios provide fiestas in honor of the saint. Furthermore, these gremio data reveal why such as supra-household organization of potters can thrive and organize ritual activities when government attempts at organizing potters at such levels for economic purposes have failed for more than 60 years. Religion and ritual of the potters' gremio symbolize the importance of their craft economically in Ticul and serves as the glue that holds such supra-household organization together when inter-household and inter-familial suspicion and distrust have prevented other attempts at such organization in the past.

Sandra L. Lopez Varela (Universidad Autonoma del Estado de Morelos) "Unattended Voices of Globalized Lands, Silencing Pottery Making at Cuentepec." In 1998, the original goals of the Cuentepec project were trapped within the processual framework of providing a "scientific understanding of the past" by studying pottery making in the archaeological record. The effects of modernity and globalization are leading to the

extinction of social productions in various communities around the world, as it is the case of pottery making by women of Cuentepec, near the archaeological site of Xochicalco in Morelos, Mexico. Policies deriving from international agencies and applied by the federal government or private institutions for land use planning and education in Mexico have supplied women from Cuentepec with a new repertoire of meanings about pottery making and new concepts of the self. The effects of such programs resulted in the abandonment and modification of pottery making, the appropriation of identities and different forms of social organization. However, some women refused to change despite the pressure. In this powerful transformational context, the project could no longer assume that the ethnographic context is something elementary, from which to draw analogies to understand the past. At the turn of the millennium, David Nicholas and Carol Kramer predicted this scenario, as part of the future range of ethnoarchaeology. Here, ethnoarchaeology is presented as a powerful methodological tool, even to anthropologists, as it contributes to the present for future times.

Christopher A. Pool (University of Kentucky) "Further Investigation of Ceramic Production and Political Economy at Tres Zapotes, Veracruz, Mexico." Archaeologists frequently distinguish between "attached" craft specialization, which produces wealth items for elite and governmental institutions, and "independent" specialization, which produces utilitarian artifacts for an unspecified demand crowd. Previous survey and surface collection at Tres Zapotes, Veracruz, Mexico, however, suggested an alternative arrangement in which ceramic specialists in elite contexts duplicated the manufacture of utilitarian and serving wares also produced in non-elite contexts. Recent excavations at Tres Zapotes (1) support this model of ceramic production and (2) suggest ceramic production was carried out as part of a diversified domestic craft economy, but (3) suggest some differential production of non-ceramic crafts. This research contributes to a growing appreciation of the complexity of Prehispanic household and political economies in Mesoamerica.

Anabel Ford (ISBER/MesoAmerican Research Center, University of California at Santa Barbara) and Frank Spera (Geological Sciences, University of California at Santa Barbara). "Implications of Volcanic Ash in the Maya Lowlands: Glass Shards in the Pottery Sherds." In the 1930s, the innovative Carnegie researcher Anna O. Shepard applied geological techniques to archaeological problems, and so doing discerned volcanic ash in pottery from the non-volcanic limestone Maya lowlands (Shepard 1937). This incongruity – geologically recent volcanic glass used as temper with clay derived from geologically ancient marine limestone – presented an anomaly that followed her throughout her career. Years later she emphasized that the "source of this ash has not yet been located" (Shepard 1964). Disregarding this cautious heretic's discoveries and, significantly, the implications of those discoveries, has encumbered our understanding of the ancient Maya economy and ecology (see Cordell 1991). We take up Shepard's challenge to identify the source(s) for the volcanic ash in the limestone Maya lowlands and recover evidence of

cultural and environmental influences preserved in the potter's craft by combining classical petrographic techniques and explore the potential of electron microprobe analyses (EMA) to address the source problem and the implications of volcanic ash in the Maya lowlands. Revealing and understanding the nature of the volcanic ash and the Maya has bearing on their cultural development and on refining lowland Maya chronologies.

Arlen, Diane, and Aubrey Chase (University of Central Florida) "Late Classic Maya Pottery Production, Distribution, and Standardization at Caracol, Belize." Despite substantial research on ancient Maya pottery, ceramic production and distribution systems of the Late Classic Maya remain unclear. Were ceramics produced by workshops or by households? Was distribution accomplished through market exchange or by prestation? How uniform were ceramics? In order to attempt to answer these questions, one specific form of contextually-recovered vessel was selected for measurement and comparison – specifically hollow-footed tripod plates dating to the end of the Late Classic Period (A.D. 700-850). The Caracol sample consists of 76 vessels of the same basic form from primary deposits in a total of 28 different households. Two "types" of tripod plates, Belize Red and Infierno Black, exhibited distinctive standardized measurements – despite location; polychrome tripod plates did not. However, all of the hollow-footed tripod plates evinced distinct spatial distributions relative to coeval deposits from other excavated households at Caracol. These data are thus significant and can be used to provide insight into the site's ancient economic system.

Christopher P. Garraty (Arizona State University) "Nahua Commercial Exchange Under Spanish Rule: Insights from Decorated and Plainware Ceramic Exchange in the Early Colonial Basin of Mexico." Archaeological analyses of Nahua ceramic exchange in the Basin of Mexico during the Early Colonial period (ca. A.D. 1520-1650) shed new light on the impact of Spanish colonial rule on the indigenous commercial economy. Compositional analyses of Aztec-style decorated and plainware ceramics using instrumental neutron activation analyses (INAA) provide empirical grounds for a comparative analysis of ceramic distributions during late pre-conquest (ca. A.D. 1400-1520) and Early Colonial times. These analyses show that the Aztec imperial capital of Tenochtitlan was a major locus of production and export of both decorated (Aztec Black-on-orange serving vessels) and plainware cooking and storage vessels in pre-conquest times. In the Early Colonial period, Tenochtitlan—subsequently renamed Mexico City, the capital of New Spain—ceased as an exporter of Black-on-orange ceramics but persisted as a production and exchange source for plainware ceramics. Importantly, pre-conquest Black-on-orange ceramics incorporated meaningful design elements indicative of Nahua cosmologies, religion, and feasting practices. In addition, these vessels appear to have served as emblems of imperial affiliation throughout the Aztec domain. Given their implicit political and cosmological significance, Spanish leaders and religious officials in Mexico City may have actively suppressed or discouraged the production of Black-on-orange ceramics in the colonial capital but are unlikely to

have interfered in the production of utilitarian plainware pottery. Black-on-orange production and exportation in the Early Colonial period was subsequently taken up at smaller centers in the Basin, where pressures from Spanish administrators and clergymen would probably have been less pronounced.

Brenda Bowser (California State University at Fullerton). "Stability and Change in Pottery Style and Social Boundaries in Conambo: Results from Longitudinal Ethnoarchaeological Research in the Ecuadorian Amazon." Conambo is a horticultural-foraging community of Achuar, Quichua, and Zaparo-speaking people in the Ecuadorian Amazon. The village is divided ethnically and politically into two opposing factions, and the painted style of women's domestic pottery in 1993 signified their political affiliation more strongly than their ethnicity. Since 1993, factionalism in Conambo has abated and intensified, and ethnic identity has become highly politicized following UNESCO's designation of the Zaparo language as a Masterpiece of Oral and Intangible Heritage of Humanity. This paper compares the results of ethnoarchaeological research in Conambo in 1993 with data from 1998, 2002, and 2005 to address whether stylistic patterns track social-structural processes of political factionalism, ethnicity, or both, and whether measures of stylistic similarity gauge differences in group cohesion and the strength of social boundaries.

Judy C. Voelker (Northern Kentucky University). "Examining Prehistoric Industrial Ceramics from Central Thailand: The Distribution and Use of Ceramic Bivalve Casting Molds" The Thailand Archaeometallurgy Project (TAP) has focused on the Khao Wong Prachan Valley, central Thailand in efforts to better understand the origins of mining and metallurgy in Southeast Asia. The copper industry of the Khao Wong Prachan Valley represents a major center for the production of raw copper that was traded across a wide region in prehistory. TAP has surveyed and excavated a group of culturally and technologically related copper production and habitation sites in this valley and occupation at three sites: Non Pa Wai, Nil Kham Haeng, and Non Mak La, spans the mid-3rd to the late 1st millennium BC. At the sites of Non Pa Wai and Nil Kham Haeng evidence of all aspects of metallurgy, from the local procurement and processing of copper ores to the smelting and casting of metal is visible. The site of Non Mak La, situated nearby and contemporaneous to Non Pa Wai is most likely a habitation settlement of the metal producers. Ceramic tools of metal production are common at these sites and include crucibles, furnace chimneys, ingot molds, and bivalve casting molds. This paper presents initial findings from analysis of over 600 fragments of ceramic bivalve casting molds that were recovered from deposits at the three sites.

Jerolyn E. Morrison (University of Houston) and Tina Thurston (University of Buffalo, State University of New York). "The North Jutland Rural Ceramic Study: Beyond Shape and Decoration Typologies for Rural Potting Traditions." The North Jutland Rural Ceramic Study (NJRCS) is a pioneering ceramic research project, designed to create a typology of rural potting traditions by evaluating how people use potting resources in

their environment. Analysis of ceramic data, gathered from within the regional, landscape-oriented perspective of the Thy's Iron Age project (Thy Archaeological Project), is designed to explore whether the political and social upheavals in Denmark during the transition from the Viking Age to the Medieval era are mirrored by continuity or discontinuity in rural potting traditions. In North Jutland, a pre-state autonomous area, transitional and Medieval ceramic styles differ completely from other regions of the state. The nontraditional approach of examining the ceramic fabrics on a macroscopic and microscopic scale is essential, due to a lack of traditional ceramic attributes such as changes in shape and decoration. The NJRCS has two goals. The first is to create a typology of North Jutland rural ceramics between AD 1000 and 1200 to help delineate Early and later Medieval chronological phases that will help distinguish changing site-size and occupation density. The second goal is to detect cultural changes linked to shifting social structure in rural North Jutland as society moved from the decentralized Viking chiefdoms to a centralized medieval state.

Charles C. Kolb (National Endowment for the Humanities) "The Kabul Museum Collections Revisited." At the Ceramic Ecology XV symposium in 2001, I presented a paper entitled "Beyond the Bamiyan Buddhas: The Fate of Ceramic Collections in the Kabul Museum." In March 2001 fundamentalist Taliban destroyed monumental Buddhist staturary at Bamiyan, Afghanistan and objects depicting humans and animals housed in the collections of the Kabul Museum — The National Museum of Afghanistan. These acts received worldwide attention and condemnation, but were only an episode in the obliteration of the cultural patrimony of Afghanistan that began with the Soviet invasion and occupation, the rise of the Mujahiddin, factional rivalries, and the subsequent Northern Alliance-Taliban civil war. Afghanistan's archaeological heritage covers 50,000+ years from the Middle Paleolithic through historic eras and was well represented in the museum's collections. Many world-class archaeological objects were thought to have been destroyed or stolen, and the museum's storerooms were ransacked and artifacts mutilated or transported outside of Afghanistan to be sold on the clandestine art market. Significant ceramic artifacts from the exhibits were either decimated or looted, the fate of the majority of the ceramic specimens and type collections was unknown, and the documentation of the museum's artifact collections was similarly lost. In this report I reassess the status of several major ceramic collections once housed in the national repository. Particular attention is paid to pottery and ceramic figurines excavated by the American Museum of Natural History, Délégacion Archeologique Française en Afghanistan, and Kabul Museum from sites at Aq Kupruk, Balkh, and Ai Khanoum in northern Afghanistan, and Mundigak, Deh Morasi Ghundai, and Lashkari Bazaar in the south.

Olivier Gosselain (University of Brussels/Université Libre de Bruxelles) "Sorry, never heard that word before.' Techniques as Stigmas in Southern Niger." In the Ader area (South Central Niger), people of Tuareg origin or who were formerly dominated by Tuaregs are currently undergoing a

process of 'Hausa-ization': they adopt the Hausa language along salient cultural traits such as architecture, dresses, or specific Islamic practices. The process, which is probably quite ancient, stems from series of political and economical reasons. For craft people, and especially female potters, it offers an opportunity to shift from a vertically segmented social context in which they occupy the lowest position, to a context where craft activities are neither stigmatized nor distinguished from other activities. Drawing on data collected during winter 2004 in some 50 villages, I will show how Hausa speaking potters from the Ader area are currently re-building their pottery traditions with the adoption of new shaping or firing techniques and the "purification" of their technical vocabulary in order to dissociate themselves from their Tuareg speaking counterparts.

Louana M. Lackey (Maryland Institute College of Art) "Down to the Wire: Current Research in Ceramic Studies." Members of the informal "Ceramic Studies Interest Group" use a number of approaches in searching for answers to their questions. In this paper I will discuss some of the many current problems and projects in ceramic studies they have reported to me by mail, e-mail, and telephone. Examples include work from both the Old and New Worlds — work that uses approaches that include archaeology, ethnoarchaeology, ethnography, and technical analysis. Many of these field and laboratory investigations are still in progress and have not yet reached a final "paper ready" stage. Many of the investigators of work "in progress" invite input from colleagues. Other projects have been too recently completed for a "final report" and, for others, results are in press, or have been too recently published to be generally known.

John B. Carlson (Center for Archaeoastronomy & Kislak Fellow in American Studies, John W. Kluge Center, Library of Congress) "The 'Maya Flasks and Miniature Vessels' Project: An Interim Report and Request for Archaeological Data." Maya "flasks" constitute a distinctive class of small Maya clay bottles most of which date from Late Classic times (ca. 650 – 900 C.E.) and are found all across the Maya zone and as far south as Nicaragua and Costa Rica. Most are constructed with a characteristic defining flange-lipped spout and were created in a wide variety of forms with several different techniques of manufacture and decoration. Never studied before as a group – with one interesting exception – they have been called everything from "Poison Bottles" (Veneneras) and "Perfume Bottles" to "Pilgrim's Flasks" in the literature, but until the present project, their primary and potential secondary uses have been unknown. The interdisciplinary "Maya Flasks and Miniature Vessels" Project, begun in 1992, has accumulated measurements, photographic documentation, and other data on well over 400 examples from both unprovenienced and documented archaeological collections. A morphological classification system was created; an extensive literature survey was completed; the imagery, iconography and glyphic texts have been classified and analyzed; and basic contents analyses have been carried out on roughly 40 examples. When complete, the goal is to provide (1) a comprehensive Study of all known examples, addressing the wider implications for Maya

(Mesoamerican) studies, and (2) a searchable Catalog/Database in CD-ROM as well as printed format to make the data available for further research. The central conclusion, to date, is that most Maya flasks were *primarily* created to hold powdered tobacco and lime preparations (often with other additives) which were used for a wide variety of ritual, medicinal, magico-protective and perhaps recreational uses. There were also secondary and perhaps tertiary uses that one can document – and one would expect such secondary uses for all types of vessels in all societies. Other classes of Maya “miniature vessels,” such as pigment containers (paint pots) and “candeleros,” have also been studied as well. In this presentation, the author, not being a ceramics expert, requests information on additional examples that have been excavated in context by Maya archaeologists to add to the database and also seeks the expertise of ceramicists (Mesoamericanists and others) who can help to identify some the ceramic types and techniques of manufacture.

Exhibition

The Earthenware of Antiquity is the title of an exhibition of materials from Egypt, the Near East, and Greece at the Musée de Louvre, Paris, that ran from 1 July through 26 September 2005; see <http://www.louvre.fr/>. The exhibition employed objects from the museum’s own collections and describes the techniques of production. This exhibition overlaps with the exhibition *Faïences of Antiquity from Egypt to Iran* that ran from 10 June through 12 September 2005.

Internet Reports

Robert L. Folk’s 1980 “classic” *Petrology of Sedimentary Rocks* (Austin, TX: Hemphill Publishing Co., 182 pp., 2 leaves of plates) has been digitized and made available on the Internet by the Walter Geology Library at the University of Texas, Austin. There is a low resolution version consisting of separate, downloadable image files and a higher resolution pdf file (16 megabyte) with searchable text. The primary topics include: Introduction to Sedimentary Rocks, Properties of Sedimentary Rocks, Collection and Preparation of Samples for Analysis, Suggested Outline for Detailed Study of Texture, A Few Statistical Measures for Use in Sedimentary Petrology, Mineral Composition of Sedimentary Rocks, Petrology of Sandstones, Petrology of Mudrocks, Description and Nomenclature for Terrigenous Sediments, Petrology of Carbonate Rocks, and Diagenesis. See <http://www.lib.utexas.edu/geo/FolkReady/folkprefRev.html>.

An article on Cypriot winemaking: New finds suggest Cyprus was 1,500 years ahead of neighboring vintners, written by Michele Kambas – Reuters (May 21, 2005) <http://www.ekathimerini.com/4dcgi/news/content.asp?aid=56560> Nicosia. The ancient Greeks took wine to the masses, the Romans to the world. But it was the innovation of the Cypriots that showed them how, say archaeologists. Italian experts claim to have unearthed evidence suggesting not only did Cyprus introduce clay drinking goblets and wine jars for transport, but

it had at least a 1,500-year head start on any of its Mediterranean cousins in the art of making wine. “It’s an amazing discovery,” says research head Maria Rosaria Belgiorno. “The most ancient wine seems to have been found in a 5,000-5,500 BC vase in Ajji Firuz Tepe in Iran [sic. Hajji Firuz] ... but in the Mediterranean, the earliest examples of winemaking have been in Cyprus.” With a tradition steeped in history, the quality of the “honey flavored” Cypriot wines was praised by the ancient Greek poet Homer, and, subject to some scholarly debate, by King Solomon. Historians say Commandaria, a sweet dessert wine introduced to Europe by the Crusaders, has been made on the island since at least 1,000 BC. It is thought to be the world’s oldest wine that continues to remain in production.

Belgiorno, of the Italian Institute of Technologies Applied to Cultural Heritage, said the testing of pottery fragments showed winemaking was thriving up to 5,500 years ago. The earliest examples of winemaking, discovered on the Greek island of Crete, are about 3,600 years old. “We discovered the remains of tartaric acid, a key component of wine,” she said. The pottery fragments, found in the wine-producing region of Erimi some 100 km (62.5 miles) southwest of Nicosia, are the oldest evidence available of “nipple base” storage jars used throughout the ancient world for transporting wine. They have a narrow mouth, wide body and taper off at the bottom, designed on earlier goatskin sacks used to carry wine.

Such jars bear an uncanny resemblance to storage containers found on later Egyptian hieroglyphs. “The same vases were adopted by the Egyptians, and portrayed together with their system to make wine,” said Belgiorno. With their expertise in pottery, Cypriots also created drinking containers, modeled on cattle horns, which were believed to be the first “glasses.” “The tradition of remaking the cattle horn in clay began in Cyprus,” she said.

Lauded as a gift of the gods, a must-have by Egyptians on their spiritual journey to the afterworld and just plain good for you by modern-day science, wine had humble beginnings. An ancient Persian legend speaks of a princess, who, having lost favor with the king, attempted to poison herself by eating spoiled table grapes. She became intoxicated instead. “It was certainly after grapes were accidentally left to ferment,” says Belgiorno. “How it became a product is a completely different story.”

Archaeologists have also discovered a representation of wine production on Cypriot pottery which is 4,000 years old. “This is unique worldwide,” said Pavlos Flourentzos, director of the Cyprus Antiquities Department. He said the type of wine was impossible to determine, but that it was probably a full-bodied red rather than a white, and unpalatable by today’s standards. “The wine they drank then was different. It was thick and extremely potent, so had to be diluted with water,” he said. Some in ancient Greek mythology believed wine could bring people to an elevated state of consciousness. But ancient Cypriots left another testament to at least one effect of overimbibing. Ancient Roman mosaics in the House of Dionysus,

the mythological Greek god of wine and mischief, give a display of Cyprus's "first wine drinkers" from the second century AD in the western region of Paphos. One of the men is slumped on the floor, thought to be drunk." For further information, see <http://www.archaeology.org/9609/newsbriefs/wine.html>, http://www.museum.upenn.edu/new/exhibits/online_exhibits/wine/wineolithic.html, and http://www.iranian.ws/cgi-bin/iran_news/exec/view.cgi/2/2504/printer.

Book Reviews

Stacey N. Lengyel, Associate Editor

Integrating Archaeology and Ethnohistory: The Development of Exchange between Yap and Ulithi, Western Caroline Islands. Christophe Descantes, BAR International Series 1344, Archaeopress, Oxford, UK, 2005. vi + 124 pp., 47 figures, 17 tables, two appendices. Price: £29.00. ISBN: 1-84171-690-1.

Reviewed by Margaret Beck, Center on the Everyday Lives of Families (CELFF), UCLA, 341 Haines Hall, Box 951553, Los Angeles, CA 90095-1553

Integrating Archaeology and Ethnohistory is a diachronic study of inter-island exchange in Micronesia, focusing on the evolving relationship between two communities on different islands. Both historically participated in the *sawei* system, the formal exchange network between the volcanic-continental high island of Yap and nearby coral islands in the Western Caroline Islands. Archaeological data come from mapping and excavation in Gachpar Village on the island of Yap and the islet of Mogmog in the neighboring Ulithi Atoll. This publication is a revised version of Descantes' doctoral dissertation at the University of Oregon. Regional specialists may be the primary audience, but many more readers will be interested in the general method and theory used here, including his interpretations of ceramic distributions and compositional data.

Descantes begins with a brief introduction and overview of *sawei* exchange, the project area, and his data sets (Chapter 1). In Chapter 2 he describes anthropological models of exchange, focusing on those developed to describe exchange between Pacific islands, and compares archaeological strategies for understanding exchange before turning to the specifics of his case study. The chapter ends with a review of current reconstructions of the *sawei* system and a summary of his research questions, theoretical approach, and methods. The next three chapters introduce the project area and summarize previous research. Chapter 3 concerns the environment of the

project area, including climate, geology, soil development, and potential clay sources. Chapter 4 presents ethnohistoric accounts of interaction and exchange in the Western Caroline Islands from the sixteenth through the twentieth centuries, emphasizing those most relevant for Yap-Ulithi interaction. Chapter 5 is an overview of previous archaeological research on Yap and Western Caroline coral atolls, including Ulithi Atoll, and previous ceramic descriptive and provenance studies. Descantes' survey and excavation methods and new archaeological data, including ceramic compositional data from petrography and instrumental neutron activation analysis (INAA), appear in Chapter 6. He discusses the combined archaeological and ethnohistoric data sets in Chapter 7, addressing issues such as the origins of Yap-Ulithi exchange, possible reasons for intensified exchange between A.D. 600 and 1400, and changing relationships after European contact, and summarizes his results in Chapter 8. The two appendices provide radiocarbon dates and INAA raw data.

The author makes a strong case, based on multiple lines of evidence, that Yap-Ulithi interaction changed over a 1300-year period in response to changing population pressures, taro intensification, ceramic technology, and, eventually, the depopulation and economic transformations that resulted from European contact. Mogmog was not a pottery-producing island, and both the petrographic and INAA data confirm that all ceramics in Descantes' sample from Mogmog were produced on Yap. The clay sources do not appear to be the same ones used for the Gachpar vessels, suggesting to Descantes that "Ulithians had exchange relations with non-Gachpar Yapese people before and during *sawei* practice despite oral history to the contrary" (p. 97). Another interesting result is that Laminated earthenware, a stronger ceramic body apparently developed for more effective taro preparation, was made from Yap Formation clays while earlier wares were made from Map Formation clays.

Regional specialists should appreciate the detailed literature review, data presentation, and careful integration of previous research into the conclusions. Those working elsewhere will also want to consult this book for its larger themes. Descantes uses an Annales-based approach to combine archaeological and ethnohistoric data, and he places changes following European contact in an interesting perspective. His discussion of anthropological and archaeological approaches to exchange will also appeal to a broader audience. Ceramic compositional data are used effectively in the context of his research questions, and there is much worth emulating in Descantes' approach. For example, methods and the reasoning behind them are clearly outlined. The information on geology, soils, and potential clay sources in Chapter 3 is effectively integrated in Chapter 6, when the compositional results are reported. Post-depositional chemical changes are carefully evaluated and taken into consideration.

Inter-island relationships are the focus of this study, to the exclusion of some other interesting developments on Yap that could be addressed with compositional data and other ceramic

analyses. Relationships between Gachpar Village and neighboring communities on Yap, which apparently had their own exchanges with Mogmog, are not considered. As Descantes observes (p. 99), data from other Yapese communities are also needed for a more comprehensive look at inter-island exchange. Any differences among Gachpar potters in the production of *sawei* and non-*sawei* vessels would be of interest, as would the level of ceramic specialization in this context. The data from this project provide a good starting point for more work in these areas.

This book is a great addition to the literature on exchange and will also interest those studying the effects of European contact. The ceramic compositional data are used effectively and appropriately to address the research questions outlined here. Those most interested in the details of ceramic production and distribution should watch for future work by Descantes.

Mediterranean Archaeological Landscapes: Current Issues. Edited by Effie Athanassopoulos and LuAnn Wandsnider, University Museum: Philadelphia, 2004. xii+242 pp., 53 figures, 8 tables, indexes. Price: \$39.95 (Cloth). ISBN: 1-931707-73-1

Reviewed by Maryanne W. Newton, Malcolm and Carolyn Wiener Laboratory for Aegean and Near Eastern Dendrochronology, Cornell University, Ithaca, NY, 14853

This collection of 11 papers promises to address current issues in landscape archaeology in the Mediterranean. As the issues are what seem to be perennial favorites in archaeology since at least the 1960s, namely, methodology and theory, I would have to say the editors have chosen their presenters appropriately. What the volume lacks, however, is any kind of consensus about how best to characterize, to understand, the nature of Mediterranean archaeological landscapes. Three of the 11 papers are more overview than case-study, and even these (by both editors, and Wilkinson) seem to be in agreement on one thing only: “the need for various conceptual and methodological tools” (Wandsnider, p. 79). These tools are not at all unlike those called for in the 1970s by Binford and Adams, by Alcock and Cherry in the 1980s, and by Van Andel & Runnels and Bintliff & Knapp in the 1990s, *et alii* and *i.a.* It strikes this reviewer that the most commonly shared call from all the authors is the need for comparability, compatibility, and replicability. All of the papers stem from survey projects and the effort on the part of the researchers to understand “the total landscape,” even that is not uniquely defined.

That said, this volume is a good introduction to the kinds of questions being asked by researchers, and the methods they are using to try to make sense of the data. After the introductory chapter, Gregory’s case studies of “Low Impact Survey” on Kythera, in the Peloponnese in Eastern Korinthia, and as part of the Sydney Cyprus Survey Project (SCSP), emphasize the use of a ChronoType system pioneered in the mid 1990s by

Michael Given for SCSP. Gregory explicitly states his goal to move “away from our present practice of recording sherds according to standard periods,” but he acknowledges the difficulty in practice, especially the “disagreement among ceramic specialists . . . concerning absolute dates.” (p.23) And this is the rub, as it makes almost impossible incorporation of any “low impact” survey data into a system that can communicate with the data compiled over many years through excavation (as high impact as it gets!). It is true that a ChronoType approach can come closer to a more holistic representation of the landscape, especially with respect to treatment of coarsewares, but until we see more integration with the same data from high impact (survey and excavation) work, it is hard to recommend its continued use.

Diacopoulos’s paper calling for more attention to the archaeology of the recent past broaches important themes, such as cultural resource management (CRM), the involvement of local communities, and the productive use of ethnoarchaeological approaches to the study of material remains (ceramics, architecture, and use of space). She explicitly confronts the problem of integrating the work of other operators in the field, namely, the Greek Archaeological Service, in ways that can be productive. She finds that by working through the shared goal in CRM of preserving the archaeological landscape she can mitigate some of the barriers that more commonly persist. Diacopoulos also notes that by working with material from the recent past, especially that from and about funerary practice, she can get closer to answering some of the bigger questions posed about the “ideational landscape.”

Given’s paper offers a broader intellectual sweep over the same data collected as part of the SCSP that was addressed by Gregory. This may be because of Given’s work in survey over the past 20 years (having been “in the trenches”), and he now turns to “the important issue of past conceptions of the landscape” (p. 165). From rigorous analysis of survey data, primarily pot sherds, and a recognition that these data are prominent on the landscape, he uses analogous studies over the past decade to justify his interpretation of low density ‘carpets’ of sherds in different temporal settings to practices of “manuring” pottery (that is, throwing it out with the garbage). At least Given incorporates all data at his command, including historical data and context and ethnographic data, but I leave it up to readers to decide to what extent the assumptions, however well-grounded, truly result in “an understanding of the total landscape” (p. 170).

So here we return to the theoretical issues still being debated in the study of Mediterranean Landscape Archaeology. Doonan (p. 43) considers the “ecological concept of patchiness” as a “useful analogy for evaluating productive potential in inhabited landscapes.” While his use of an approach well grounded for a biological science seems logical, it still suffers from the ambiguity in applying it to human systems, especially ones complicated by differences in scale and time. Hill easily moves into discussions about theoretical models based on adaptive strategies derived from evolutionary theory, and these

are perhaps more easily understood since his subject is the long-term trajectory of "10,000 Years of Land Use on the Transjordan Plateau." Hill has worked out quantifiable ways to describe the movement of settlements (otherwise understood as people/agents) over time. It is interesting that he takes as some of his predecessors the early "Processualists" who worked in Mesopotamia (close to the Mediterranean), but he also adopts more recent statistical methodologies and the common use of GIS systems. It is unlikely that Hill's methodologies will receive widespread acceptance, as the incorporation of such a complicated multi-disciplinary approach seems on many levels to be redundant.

Hill is not the only contributor to find useful analogies in the *Annales* School of history. If it took until the late 1980s for this framework to work its way to issues of Mediterranean archaeology, it seems to me that practicing archaeologists in the region find a better explanatory model in Wallerstein's World Systems Theory (WST). It may be that WST offers an easier way to understand the trajectory of development in the Mediterranean from prehistory into history, and despite some criticisms of its inherent focus on materialism, I have to say that I rather prefer its use by Kardulias and Yerkes for their "Malloura Valley Survey on Cyprus." Like Algaze's *The Uruk World System*, it may be that the historical basis of many of the cultures, or contact with them by most, is what makes WST so applicable for many of the projects considered here. It also has a more fully articulated theoretical base from which to work. It is unclear how applicable WST will be to smaller, more isolated, systems at work within the Mediterranean Basin. Barton et al. deal with deeper timescales and work from a different archaeological base, and it seems that the only way to tell whether WST might apply is to expand the geographical base. As work to reconcile all the Neolithic and earlier cultures from Pakistan west to Gibraltar is still in its infancy, it is clear that broader consideration of theoretical bases for Landscape Archaeology in the Mediterranean has a long way to go.

While I say that integration of data about the cultures prior to the appearance of historical cultures in and around the Mediterranean is still in its infancy, what I really am admitting is that, in general, few theoretical aspects of archaeology in and around the Mediterranean are fully worked out. All of the papers in this volume speak of the need for comparability, compatibility, and replicability in studies of landscape archaeology, and the same certainly applies to a number of different subfields in this region. As a dendrochronologist who has been absorbed in the nitty-gritty of tree-ring science, I have always been aware of the need for a stronger theoretical basis to the application of scientific dates to humanistic questions. Especially for the Mediterranean basin, there needs to be a grounding in a chronometric theory, one that broaches ecological and evolutionary principles that will give meaning to a dendrochronological date. It is both disconcerting that there is little concern about chronologies, relative or absolute, in all aspects of landscape archaeology, and, in a sense, liberating, as the need for correlation in a statistical sense still will need, always, to be "interpreted" in a meaningful way.

Upcoming Conferences

Colleen P. Stapleton, Associate Editor

2006

- Jan. 8-14, Winter Conference on Plasma Spectrochemistry, Tucson, Arizona. For more information, contact Dr. Ramon Barnes, Conference Chairman, Telephone (413) 256-8942, Fax (413) 256-3746, Email wc2006@chem.umass.edu, Website <http://www-unix.oit.umass.edu/~wc2006>.
- Jan. 9-12, The Second International Conference on Environmental, Cultural, Economic and Social Sustainability will be held in Hanoi and Ha Long Bay, Vietnam. Full details of the conference, including an online call for papers form, are to be found at the conference website, <http://www.SustainabilityConference.com>.
- Jan. 11-15, SHA Annual Conference, Sacramento, CA, USA. General information: <http://www.sha.org/About/Conferences/mt2006.htm>.
- Feb. 1-3, IV Congresso Nazionale di Archeometria-Scienza e Beni Culturali, Pisa, Italy. Abstracts due: Nov. 14, 2005. Contact: aiar2006@humnet.unipi.it. General information: <http://aiar.mater.unimib.it>.
- March 26-30, Archaeological Chemistry: Analytical Techniques and Archaeological Interpretation, American Chemical Society, Atlanta, GA, USA. Contact: Mike Glascock: glascockm@missouri.edu.
- March 28-30, Association for Environmental Archaeology, University of Exeter, UK. Sessions on organic analysis, landscape reconstruction, palaeopathology, and ritual deposits. For proposing other sessions, contact: A.K.Outram@ex.ac.uk. General information: <http://www.ex.ac.uk/archaeology/AEA2006.html>.
- April 18-23, Computer Applications and Quantitative Methods in Archaeology (www.caaconference.org) 2006 annual conference will be held in Fargo, North Dakota (USA). For questions or comments send e-mail to: info@www.caa2006.org. For questions about sponsoring a conference event, please send e-mail to: sponsors@www.caa2006.org.
- April 26-30, SAA 71st Annual Meeting, San Juan, Puerto Rico. Abstract deadline: Sep. 7, 2005. General information: <http://www.saa.org/meetings/index.html>.
- May 10-15, International Symposium on Archaeometry, Quebec City, Canada. See <http://www.isa2006.ulaval.ca>.
- June, ASMOSIA, Aix en Provence, France. Contact: Prof. Philippe Jockey, Maison Méditerranéenne des Sciences de l'Homme; e-mail pjockey@msh.univ-aix.fr.
- June 23-26, Integrating African Archaeology, honoring Peter Lewis Shinnie, is the theme of the biennial conference of the Society for Africanist Archaeologists. The conference will be held in Calgary, Alberta, Canada. For more information, visit the website at <http://homepages.ucalgary.ca/~safacnf/SAFA/index.htm>.
- July 9-15, 18th World Congress of Soil Science, Philadelphia, PA, USA. Symposium on "Soil Micromorphology, Archaeometry, and Archaeology". General information: <http://www.colostate.edu/programs/IUSS/18wcss/index.html>.

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Published quarterly by the Society for Archaeological Sciences

Distributed to subscribers: \$20/yr regular membership; \$15.00 student & retired; \$30.00 institutional; \$300 lifetime. Individuals add \$105.00/yr for *Journal of Archaeological Science*; \$35/year for *Archaeometry*. ISSN 0899-8922.