



SAS Bulletin



Society for Archaeological Sciences

Volume 18

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January – March 1995

SAS News

Annual SAS Meeting

Half the year has come and gone, and this is the first *Bulletin* of the year (yes, it really is this late!). The 1995 business meeting was held in Minneapolis, Minnesota during the May 3-7 meeting of the Society for American Archaeology. The Executive Board and Annual Business Meetings were held on Thursday, May 4 at noon and 5 p.m.

The SAS President presented a formal "State of the SAS" report and there were formal reports by all SAS Vice Presidents, Chairs of Standing Committees, *SAS Bulletin* editor, and SAS General Secretary. We hope to have these available in a future issue of the *Bulletin*.

This was an election year for the SAS. Rob Sternberg was elected as Vice-President/President-elect, and Chris Prior was re-elected as Secretary-Treasurer for 2-year terms (1995-1997). The SAS Executive Board also accepted the appointment of Chris Nagle as the next editor of the *SAS Bulletin*. Chris is scheduled to take over the reins with the third issue of this year. □

News of Archaeometallurgy

The Archaeometallurgy column in the *JOM, the Journal of the Mining, Metals, and Materials Society* that has been conducted since 1988 by Vincent Pigott has been taken over by Robert Ehrenreich and renamed *Archaeotechnology*. Quoting from this column, "Over the last 30 years there has been a discernible increase in the number of scholars who have focused their research on early industrial organizations, a field of study that has come to be known as Archaeotechnology. Archaeologists have conducted fieldwork geared to the study of ancient technologies in a cultural context and have drawn on the laboratory analyses developed by materials scientists as one portion of their interpretive program. Papers for this bimonthly column are solicited and reviewed by Robert M. Ehrenreich of the National Materials Advisory Board or the National Research Council." His address is (HA-262), 2101 Constitution Avenue NW, Washington DC 20418, USA; tel.

202-334-3505 or 3469; fax 202-334-3718; e-mail: rehrenre@nas.edu. The first column is by Yangjin Pak, "The Armored Warriors of Kaya," in the January 1995 issue (pp. 38-39). He describes recent discoveries of iron body armor and helmets in southern Korea in burials dating to the 4th to 6th centuries. No information is given whether the iron is wrought or cast, although there is reference to blacksmith's tongs and hammers, and "ingots" described as iron plates about 45 cm long and 13 cm wide. Pak is in the Department of Anthropology at Harvard University (Cambridge MA 02138, USA), where his telephone number is 617-496-3796.

Paul Craddock has a new book, *Early Metal Mining and Production*, due out April 1st from the Smithsonian Institution University Press. It will cost US\$59 and can be ordered by telephoning 1-800-782-4612 toll-free, or writing the Smithsonian Institution University Press, Department 900, Blue Ridge Summit, PA 17294, USA. Shipping costs to North America or overseas had not been established at the time of this writing but will be \$2.25 in the U.S.

If you have any archaeometallurgical news to share or comments to make, please write or call

Martha Goodway, Smithsonian Institution MRC 534, Washington DC 20560, USA; tel: 301-238-3700 x164; fax: 301-238-3709. □

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Compiled by Jodie Dalton (address on back page). □

Laboratory Profile

Program on Ancient Technologies and Archaeological Materials

University of Illinois at Urbana-Champaign

The ATAM Program was created in 1977 by faculty in anthropology, ceramic engineering, and classics as a special unit of the Graduate College at the University of Illinois. Its original purpose was to promote interdisciplinary research on the application of materials science to archaeological and art historical problems. Over the years ATAM's scope has broadened to include not only archaeometry, but also aspects of museology, early agriculture, and experimental archaeology. In addition, a teaching function was developed to introduce undergraduates to multidisciplinary science.

ORGANIZATION

The ATAM Program is run by a Director and a student assistant, with oversight provided by a Steering Committee of faculty from major participating departments, laboratories, and museums. Research projects are conveyed to appropriate labs for analyses, and most of the work is conducted by faculty and graduate students who volunteer their time and equipment. Funding has been provided by the American Council of Learned Societies, the National Endowment for the Humanities, the Construction Engineering Research Laboratory (U.S. Army), and the University of Illinois Research Board and Graduate College.

Director: Sarah Wisseman. Director Emeritus: Wendell Williams. Steering Committee: Linda Klepinger and Thomas Riley (Anthropology); James Dengate (Classics); Eric Hostetter (Classics and Art History); Eunice Maquire (Krannert Art Museum); Sheldon Landsberger (Nuclear Engineering); Carl Altstetter (Materials Science and Engineering); Harvey Stapleton (Graduate College).

PARTICIPATING UNITS

Anthropology, Materials Science and Engineering, Classics, Geology, Chemistry, Nuclear Engineering, Institute for Environmental Studies, Art History, Ceramics, Latin American and Caribbean Studies, Illinois State Geological Survey, Materials Research Laboratory, Krannert Art Museum, World Heritage Museum, Museum of Natural History, Urban and Regional Planning, Physics, Program on the Study of Religion, History, Construction Engineering Research Laboratory (CERL), College of Veterinary Medicine, National Center for Supercomputing Applications (NCSA), Textiles and Interior Design.

RESEARCH PROJECTS

Provenience Studies of Ceramics

The ATAM Program has participated in several

provenience studies of ancient ceramics from both excavation contexts and museum collections using neutron activation analysis (NAA). For example, similar pottery vessels from three localities in Illinois were studied to determine whether they had been produced at one central site and then traded to other sites as finished products, or whether the knowledge of how the pottery was made was spread by the movement of individual potters who used three local clays. Characterization by petrography and NAA revealed distinctly different clay compositions, supporting the second hypothesis. This project was a collaboration between ATAM, the Department of Anthropology, and Construction Engineering Research Laboratory (CERL) of the U.S. Army Corps of Engineers.

On the east slope of the Palatine Hill in Rome, the excavation of a late Roman *domus* (mansion) has yielded over nine tons of ceramics. The project is directed by Eric Hostetter at the University of Illinois, and sponsored by the Soprintendenza Archeologica di Roma and the American Academy in Rome. Six classes of domestic pottery presumed to be of regional manufacture, along with fired samples of local clay, were tested by NAA. Preliminary results suggest at least two distinct clay sources, implying pottery manufacture both in the city of Rome and at least one other site in West Central Italy. Our ultimate goal is to achieve a clearer understanding of the movement of craft materials and finished products in and out of Rome during the Late Imperial period.

Another project is a comparison of Byzantine tiles and pottery from Constantinople, now at Dumbarton Oaks (Harvard University) in Washington, D.C., with similar tiles of unknown provenience, now at the Walters Art Gallery in Baltimore. The ATAM Program has also examined Chinese, Palestinian, Nubian, and Roman pottery using both neutron activation analysis and X-ray diffraction.

University of Illinois Mummy Project

Over twenty university departments, laboratories, and local hospitals participated in recent analyses of an Egyptian mummy at the World Heritage Museum. Our goal was to find out as much as possible about the age, sex, medical history, and embalming techniques without unwrapping the mummy. Tiny samples of cloth, bone, wood, insects, and embalming fluids were extracted. Analytical techniques included X-radiography, CT scanning, scanning electron microscopy, stable isotope analysis, and fast-atom bombardment mass spectroscopy. Two three-dimensional renderings of the mummy's head and torso (a computerized image and a sculpture) were completed using the CT scans.

Results indicate that the mummy was a child, aged 7-9 years at the time of death, who suffered post-mortem skull and rib fractures. Insect infestation indicates that the tissues were poorly preserved, yet the body received some special treatment by the embalmers. Extra cloth packing was placed under the fractured skull and over the chest, and hands (and perhaps fingers) were separately wrapped. The body was supported by a cedar board (underneath the body, inside the wrapping), and the heart, lungs, and brain were left in place.

Conservation Science and Authenticity Studies

In addition to the mummy project, ATAM has participated in numerous projects at three University of Illinois museums, as well as the Field Museum of Natural History (Chicago), the Oriental Institute (Chicago), the Indianapolis Museum of Art, the Indiana University Museum (Bloomington), and the Cincinnati Art Museum.

Some of these projects are pre-conservation studies: the examination of composition and technology to assist a conservator in stabilizing and preserving an artifact. An example is the conservation of a Peruvian ceramic drum now at the Krannert Art Museum. The drum is a Nasca ceremonial piece of about A.D. 300. Originally, the drum was decorated with red and black birds on a white-slipped surface, but the surface has been completely covered by an early restorer with layers of tinted plaster, clay, and fake birds. Analyses by X-radiography, scanning electron microscopy with energy-dispersive X-ray spectroscopy, (SEM/EDS) and X-ray diffraction, have revealed the composition of the original ceramic body and slip, the nature of the restorer's materials, and the presence of a modern tack.

Other ATAM projects deal with authentication issues, using non-destructive techniques such as X-ray fluorescence, X-radiography, and SEM/EDS to detect anachronisms in materials, composition, or technique. Our analyses have included Chinese bronzes and ceramics, Medieval Limoges enamel, a Byzantine necklace, a Tiepolo painting, a Wedgwood vase, Merovingian iron buckles, and Luristan bronzes.

Preservation of Monuments

Occasionally ATAM is asked to serve as a consultant in the analysis of deterioration (and preservation) of building stone. Two such projects have been at Mesa Verde National Monument in Colorado, where scientists from several University of Illinois laboratories measured the effects of acid rain on sandstone, and the restoration of the Parthenon temple in Athens, Greece, where ATAM personnel studied why some marble column blocks have fused together in an ancient building where no mortar was used.

INTERDISCIPLINARY TEACHING

Two courses are currently offered through the

collaboration of ATAM, Anthropology, and the Campus Honors Program. They are "Materials and Civilization: An Overview of Archaeometry," and "Milestones in Ceramic and Metalworking Technologies." These interdisciplinary courses supplement lectures by visits to museums and laboratories, and by demonstrations of both traditional technologies and modern analytical methods.

Although ATAM is not a degree-granting unit, we have co-sponsored research leading to advanced degrees in Anthropology, Art History, and Nuclear Engineering.

PUBLICATIONS

ATAM faculty and graduate students have published articles in *Archeomaterials*, *American Antiquity*, *American Anthropologist*, *British Archaeological Reports*, *MASCA Journal*, *Journal of Archaeological Science*, *Analytical Chemistry*, *Archaeological Chemistry*, *American Journal of Archaeology*, and several proceedings of the *International Symposium on Archaeometry*.

A recent book, *Ancient Technologies and Archaeological Materials* (S. Wisseman and W. Williams, eds., Gordon and Breach 1994), contains contributions by many ATAM members and covers over ten years of research, including many of the projects summarized here.

VISITING LECTURES AND CONSULTANTS

In addition to a regular program of faculty and graduate student seminars, ATAM frequently invites outside speakers to campus. Some of these have also served as official consultants to the Program. Since its inception, ATAM speakers funded by the George A. Miller Committee at the University of Illinois include: Frederick Matson (Pennsylvania State University), Heather Lechtman (Massachusetts Institute of Technology), Pieter Meyers (Los Angeles County Museum of Art), Jacqueline Olin and Martha Goodway (Smithsonian Institution Conservation Analytical Laboratory), Stuart Fleming (University of Pennsylvania), Paul Keyser (Cornell University), Ursula Franklin (University of Toronto), Garman Harbottle (Brookhaven National Laboratory), and Robert Vincent (Institute of Nautical Archaeology).

INTERNATIONAL ARCHAEOLOGY SYMPOSIUM

The ATAM Program will be hosting the next Archaeometry meeting May 20-24, 1996 on the Urbana campus of the University of Illinois. For more information, see the first circular for the Symposium which is included in this *Bulletin*.

S. Wisseman, ATAM Program, University of Illinois, 116 Observatory, 901 S. Mathews, Urbana, Illinois, 61801, USA; tel: 217-333-6629; fax: 217-244-0466; e-mail: wisarc@uxl.cso.uiuc.edu. □

Archaeometry Newsletters

The following is a listing of newsletters which may be of interest to the members of SAS; it does not include journals. Special thanks go to Mark Nesbitt for his help in collating and correcting this list. I'd be happy to receive any feedback (i.e., new listings, corrections, deletions, additional information) you'd like to send me at the address listed on the back page.

ACOR Newsletter (American Center of Oriental Research). Contact: Dr. Pierre M. Bikai, PO Box 2470, Jebel Amman, Amman, Jordan. Biannual, free.

American Schools of Oriental Research Newsletter. Contact: American Schools of Oriental Research Newsletter Office, Religious Studies Department, Southwest Missouri State University, Springfield, MO 65804, USA. Quarterly, free to members (\$22.00/yr).

AMS Pulse. Contact: Glenn A. Jones, executive editor, National Ocean Sciences Accelerator Mass Spectrometry Facility, Woods Hole Oceanographic Institution, Woods Hole, MA 02543, USA. Quarterly, free.

Ancient TL. Contact: I.K. Bailiff, editor, Luminescence Dating Laboratory, University of Durham, Archaeology II, South Road, Durham DH1 3LE, UK. 3x/yr, £15.

Archaeological Computing Newsletter. Contact: Gary Lock (one of six eds.), The Institute of Archaeology, University of Oxford, 36 Beaumont Street, Oxford OX1 2PG, UK. Quarterly, \$18.

Archaeological Conservation Newsletter. Contact: Jeff Maish, coordinator, PO Box 1105, Pacific Palisades, CA 90272, USA. 3x/yr, \$10.

Association for Environmental Archaeology. Contact: Membership Secretary, AEA, Gill Campbell, University Museum, Park Road, Oxford OX1 3PW, UK. Quarterly, free to members.

Aura Newsletter. Contact: Australian Rock Art Research Association, PO Box 216, Caulfield South, VIC 3162 Australia. 3x/yr, free to members.

British Association for Near Eastern Archaeology Newsletter. Contact: Dr. J.E. Curtis, Department of Western Asiatic Antiquities, The British Museum, London WC1B 3DG, UK. Annual, £5/yr.

Bulletin of Primitive Technology. Contact: Society of Primitive Technology, PO Box 3226, Flagstaff, AZ 86003, USA. Biannual, \$20/yr.

Conservation News. Contact: United Kingdom Institute for Conservation, 6 Whitehorse Mews, Westminster Bridge Road, London SE1 7QD, UK. 3x/yr, free to members (£49).

Council for British Archaeology Briefing. Contact: Mike Heyworth, Information Officer, Council for British Archaeology, Bowes Morrell House, 111 Walmgate, York YO1 2UA, UK; tel 01904-671417; fax 01904-671384; e-mail 100271.456@Compuserve.Com. 5x/yr, free.

CSA Newsletter—A Quarterly Newsletter for Architectural

Historians and Archaeologists. Center for the Study of Architecture, PO Box 60, Bryn Mawr, PA 19010, USA; tel 610-526-7925; fax 610-526-7926; e-mail neiteljo@cc.brynmawr.edu. 4x/yr, free.

Department of Pottery Technology Newsletter. Contact: Leiden University, Reuvenplaats 4, PO Box 9515, 2300 RA Leiden, The Netherlands. Published once every 2 years.

European Cultural Heritage Newsletter on Research. Contact: Stephen Fitz, ed., Lohengrin Strasse 16a, 14109 Berlin, Germany. Annual, free.

Federal Archaeology Report. Contact: Roger S. Friedman, editor, Consulting Archaeologist/Archaeological Assistance Program, National Park Service, PO Box 37127, Washington, DC 20013-7127, USA. Quarterly, free.

Historical Metallurgy Society News. Contact: Historical Metallurgy Society Membership Secretary, Diana Court, Rock House, Bowen's Hill, Coleford, Glos, UK. 3x/yr, free to members.

Institute of Nautical Archaeology Quarterly. Contact: Institute of Nautical Archaeology, PO Drawer HG, College Station, TX 77841-5137, USA. Quarterly, free to members (\$25.00).

International Association for Obsidian Studies Newsletter. Contact: Kim Tremaine and Blossom Hamusek, editors, Department of Anthropology, California State University at Chico, Chico, CA 95929-0400, USA. Quarterly, \$20.00/yr.

International Institute for Conservation of Historic and Artistic Works Bulletin. Contact: IIC, 6 Buckingham Street, London WC2N 6BA, UK. 6x/yr, free to members.

La Tinaja, A Newsletter of Archaeological Ceramics. Contact: James E. Corbin, editor, Box 13047, SFA Station, Nacogdoches, TX 75962-3047, USA. \$10/yr US, \$15/yr foreign.

Lithics, The Newsletter of the Lithic Studies Society. Contact: Nick Ashton, British Museum Franks House, 38-46 Orsman Road, London N1 5QJ, UK. Annual, free to members (£5/yr).

Medieval Archaeology Newsletter. Contact: Duncan Brown, ed., ICRC Eagle Warehouse, 88-90 French Street, Southampton SO1 0AT, UK. Biannual, free to members.

Museums Journal. Contact: The Museums Association, 42 Clerkenwell Close, London EC1R 0PA, UK. Monthly, free to members.

NewsWARP, Newsletter of the Wetland Archaeology Research Group. Contact: WARP, Fursdon Mill Cottage, Thorverton, Devon EX5 5JS, UK. Biannual, free to members (£10 for 2 yrs).

PAST, Newsletter of the Prehistoric Society. Contact: Dr. Julie Gardiner, ed. c/o Wessex Archaeology, Portway House, Old Sarum Park, Salisbury Wilts SP4 6EB, UK. Biannual, free to members (£20/yr).

The Phytolitharian Newsletter. Contact: Irwin Rovner,

editor, Box 8107, North Carolina State University, Raleigh, NC 27695-8107, USA. 1-2x/yr, \$10.

The Pre-Columbian Art Research Institute Newsletter. Contact: Louis E. V. Nevaer, The Pre-Columbian Art Research Institute, 1100 Sacramento Street, San Francisco, CA 94108, USA. \$50.00 for membership.

SAC (Scandinavian Archaeometry Center) News. Contact: Peter M. Fischer, SIMS-Lab/Physics, Chalmers University of Technology, S-412 96, Gothenburg, Sweden; tel 46-31-772 34 31; fax 46-31-772 34 36. Ca. 1x/yr, 12.00.

SAS Bulletin. Contact: Chris Prior, SAS Secretary/Treasurer, Radiocarbon Laboratory, University of California, Riverside, CA 92521, USA; e-mail CPrior@UCRAC1.UCR.edu. Quarterly, see back page for rates.

Science-Based Archaeology Newsletter. Contact: Dr. Sebastian Payne, Ancient Monuments Laboratory, English Heritage, 23 Savile Row, London W1X 1AB, UK. Ca. 1x/yr, free.

Society for American Archaeology Bulletin. Contact: Mark Aldenderfer, editor, Department of Anthropology, University of California at Santa Barbara, Santa Barbara, CA 93106-3210, USA. 5x/yr, free to members.

Society for Historical Archaeology Newsletter. Contact: Society for Historical Archaeology, PO Box 30446, Tucson, AZ 85751-0446, USA. \$50.00 (membership).

Society for Industrial Archaeology Newsletter. Contact: Robert Frame, editor, PO Box 65158, St. Paul, MN 55165-0158, USA; e-mail frame003@maroon.tc.umn.edu. Quarterly, \$25 for membership, includes biannual journal.

Zooarchaeological Research News. Contact: Pam J. Crabtree, Department of Anthropology, New York University, 25 Waverly Place, New York, NY 10003, USA. \$6.00.

Compiled by Jodie Dalton (address on back page). □

use WEDA for that reason, please check with me first!

REVISIONS

Please contact me if you are not listed, are listed incorrectly, or know someone who should be listed. Feel free to circulate this listing. It is free.

FORMAT

You will note that for each institution or independent individual there is an entry separated by a blank line and all are in alphabetical order. Each entry typically has snail mail information, phone and fax number, and often an administrative or other contact person listed. Use these addresses to contact people whose e-mail addresses are not listed. Also, people have been encouraged to include their areas of research interest, listed after their name by way of brief, generalized keywords such as those used in the American Anthropological Association's handy Guide to Departments. These keywords can be searched on the gopher/Web server as well as the names.

Examples

AIA (Archaeological Institute of America List)
Center for the Study of Architecture, Box 60, Bryn Mawr,
PA, USA, 19010
Ph: 215-526-7925 Fax: 215-526-7926
Subscription: listserv@cc.brynmawr.edu
Postings: aia@cc.brynmawr.edu
EITELJORG, Nick (Owner) n_eiteljorg@cc.brynmawr.edu

AKIN, David david.akin@um.cc.umich.edu
8483 Crane Rd, Milan, MI, USA, 48160
Ph: 313-434-2826

On the Internet

WEDA - The Worldwide E-mail Directory of Anthropologists

For a number of years, I have been compiling a list of e-mail addresses on anthropologists and anthropological institutions around the world. This information, along with snail-mail addresses, telephone and fax numbers, and (optional) areas of research interest, has been assembled together in a rather large file on the mainframe computer at the State University of New York at Buffalo. This information is thus available in a free, searchable format that can be accessed in a number of ways listed below.

The purpose of this directory is to aid in communication between scholars in the fields of anthropology, and related disciplines. The information is not intended to be used for mass mailings, unless those are clearly of benefit to the anthropological community. Thus, if you should desire to

HOW TO ACCESS WEDA

It is now possible to get a copy of the full directory or to search the directory remotely. Searches can retrieve information on any one individual, or on the institutional entry containing that person's information. See the following sections for information on how to access WEDA.

Access via Gopher/mosaic/lynx

WEDA is stored on the Wings gopher at the University at Buffalo. If you have a gopher server, you can access WEDA by typing the command:
gopher wings.buffalo.edu

The directory is stored in the anthropology directory, which you can find by following this path:

/Academic and Departmental Information
/Academic Departments
/Anthropology Department
/WEDA

The UB Wings gopher supports several options. You can choose to look at the whole email directory, you can use the search facility to look up an individual or institution by name (or any other character string), or you can have a copy of the whole file sent to you.

Home page URL on the World Wide Web:

<http://wings.buffalo.edu/academic/department/anthropology/weda/>

Access by E-mail Through the Listserver

Alternately, you can work through the listserver at UB. The listserver similarly supports several options, including retrieval or searching. To command the listserver, send one of the following commands in the text of your message (not the subject line) to the following address, and do *not* include any extraneous text, such as a sig.

listserv@ubvm.cc.buffalo.edu
or listserv@ubvm.bitnet

To get a current copy of WEDA, send the following command:

get weda directry {note the spelling!!}

Automatic File Distribution (AFD):

If you would like to be sent a brand new copy of the directory every time it is updated, send the command:

afd add weda directry {to be added} {note the spelling}
afd del weda directry {to stop this service}

File Update Information (FUI):

This is a more-user friendly alternative to the AFD process. Instead of receiving the whole file every time a fresh copy is stored on the listserver, you just receive a file update notice. The command is:

fui add weda directry {to be added}
fui del weda directry {to stop this service}

Access by anonymous FTP

You can also get a copy by anonymous FTP. FTP to ubvm.cc.buffalo.edu and cd to the directory anthro_1 (note the underscore). The file is listed again as weda directry (note the spelling).

CORRECTIONS, ADDITIONS, OR QUESTIONS

If you want to be added to the directory, if you have corrections, or new information to add about others, please contact me at this address:

Hugh Jarvis, Anthropology Department, State University of New York at Buffalo, 380 MFAC, Amherst, NY 14261-0005, USA; tel: 716-645-2414; fax: 716-645-3808; e-mail: c129qp43@ubvm.cc.buffalo.edu. □

Conference Reports

Midwest Bioarcheology Conference Madison, Wisconsin, 30 Sept. - 2 Oct. 1994

More than 75 people attended the First Annual Midwest Bioarcheology Conference in Madison, Wisconsin, September 30-October 2, 1994. It was sponsored by the State Historical Society of Wisconsin and held on the campus of the University of Wisconsin at Madison. Dr. Leslie Eisenberg (Burial Sites Preservation Program Coordinator) made all local arrangements. Leslie and I initially tried to pattern the Meetings after the rather loose format of the Northeastern Forensic Anthropology Association, although the (unexpectedly!) high response rate eventually necessitated a bit more formality. Nineteen papers were presented on Saturday, covering such topics as skeletal biology, forensic anthropology, and faunal analysis. Seven were delivered by undergraduate and graduate students. Titles and presenters are as follows:

Who Were the People of Dunning Poorhouse?
Diane Houdek, Department of Anthropology, University of Chicago.

Exploring Childhood Mortality in the 19th-Century Dunning Poorhouse Cemetery. Elizabeth McNamara and Anne Grauer, Department of Sociology & Anthropology, Loyola University of Chicago.

The Problems and Promise of Using Multifactorial Ageing Techniques in the Dunning Skeletal Population. Theresa Jolly, Paula Tomczak, and Patrick Waldon, Department of Sociology and Anthropology, Loyola University of Chicago.

Assessing the Health of Fort Ancient's Upper and Lower Villages' Populations. Penelope LaRocque, Karen Weinstein, and Ellen FitzSimmons, Departments of Anthropology, University of Illinois at Chicago (PL and EF), and the University of Florida at Gainesville (KW).

The Urichu Skeletal Remains: An Assessment of Elites in the Emergence of the Tarascan State. Laura Cahue, Department of Anthropology, Michigan State University.

The Use of Bone Levels of Strontium as a Paleodietary Indicator. Jim Burton, Department of Anthropology, University of Wisconsin at Madison.

Comparative Skeletal Morphology: Which Traits are Genetic? Jack Prost, Department of Anthropology, University of Illinois at Chicago.

Demonstration of Polhemus 3-Draw, 3-Dimensional Digitizing Tablet. Fred Anapol, Department of Anthropology, University of Wisconsin at Milwaukee.

Conferences (continued on p. 12)

Conference Reports

Application of Natural Sciences Methods in Archaeology St. Petersburg, 27-30 November 1994

From the 27th to the 30th of November, 1994, The European Network PACT (sciences and techniques applied to cultural heritage), Russian Academy of Sciences, State Hermitage, Saint-Petersburg State University and Scientific-coordinating council "People of Russia: revival and development" held the International Conference on the Application of Natural Sciences Methods in Archaeology. This Conference was dedicated to the memory of Professor Boris A. Kolchin, who was the outstanding Russian scientist in the field of interdisciplinary investigations, whose 80th anniversary we are celebrating this year.

The collections of the abstracts have been published, which contain more than 150 abstracts (about 1-2 pages each) in both Russian and English. We plan also to publish the proceedings of the conference (6-7 pages each with 6-7 figures) in a special issue of PACT journal, which is printed in Belgium. There is also a list of participants with their addresses.

The Organizing Committee consisted of: The President: Prof. Tony Hackens, Vice-President of PACT, Belgium; Dr. W.G. Mook (Nederlands Instituut voor Onderzoek der Zee); Prof. E.N. Chernyh (Institute of Archaeology, Russian Academy of Sciences, Moscow); Dr. G.I. Zaitseva (Institute of the History of Material Culture Russian Academy of Sciences, St. Petersburg); Dr. A.K. Stanyukovich (Moscow); Dr. V.V. Glazunov (St. Petersburg's Mining Institute, St. Petersburg); and Dr. T.N. Smekalova (St. Petersburg University, St. Petersburg). Executive representative of the Organizing Committee: Dr. Tatyana N. Smekalova (address at end of report).

PROGRAM 27 November, Sunday

Opening of the Conference. Welcoming Addresses by Prof. Tony Hackens, Vice-President of PACT (Belgium); Prof. M.B. Piotrovskij, Director of the State Hermitage; Prof. V.M. Masson, Director of the Institute of the History of Material Culture RAN; Prof. L.A. Verbitskaja, Rector of State Petersburg State University; Prof. V.T. Puljaev, Director of State Scientific Program "People of Russia, Revival and Development."

REPORTS

Prof. Edi V. Saiko. The interaction between archaeology and natural sciences as cognitive sphere.

Prof. Julia L.S. Chapova. The history of ancient glass manufacturing and methods of natural sciences: strategy and tactics, problems and perspectives.

Prof. Tony Hackens. The demonstration of the CD-i slide-film.

Prof. Christian Carpelan (Finland). Early cultures in the circumpolar zones of Europe.

Dr. G.I. Zaitseva. One of the criterions for the appreciation of dynamic of technical progress (on the base of complex investigation of archaeological sites).

Prof. Vsevolod M. Slukin. Geophysical investigation of architectural and archaeological objects which are of cultural heritage.

Dr. Andrej K. Stanjukovich. Ulterior objects of historical and cultural heritage. Conception of discovery and investigation.

Dr. Alexander N. Scheglov. Complex investigations: archaeological-geophysical experiment at the site Panscoe I (1970-1980).

28 November, Monday

Chronology (oral presentations)

Dr. A.A. Sinitsyn. Some aspects of absolute dating in Palaeolithic archaeology.

Dr. G.V. Sinitsyna. Modern perspectives of the chronological problems of the Neolithic of Middle Siberia.

Prof. Khikmet A. Arslanov. The state and perspectives of using radiocarbon method in archaeology.

Prof. Hogne Jungner and Dr. Eloni Sonninen (Finland). Determining the age of early building constructions by radiocarbon dating of mortar.

Prof. A.I. Gaigalas (Lithuania). Attribution of archaeological findings to facies of Quaternary deposits by stratigraphical analysis.

Dr. Nikolaj N. Kovaliukh, Dr. Vadim Skripkin. Radioactive releases of NPP and radiocarbon analyses of archaeological remains.

Prof. Max Schvoerer (France). The thermoluminescence dating in archaeology.

Prof. A.N. Molod'kov (Estonia). ESR dating of terrestrial mollusc shell from an early Acheulian Palaeolithic site in Northern Caucasus.

Dr. A. Pazdur, Prof. M. Pazdur (Poland), Dr. T. Goslar, Dr. M. Fontugne, Dr. N.N. Kovaliukh, Dr. V. Skripkin, W. Piotrowski, W. Zajatzkowski. Radiocarbon dating and dendrochronology of fortified settlement of Lusatian culture in Biscupin, Central Poland.

Dr. Darja Ju. Hookk. Modern dendrochronological methods.

Dr. Jury M. Lesman. Serialization chronology: illusions and reality.

Dr. K.S. Burakov, Dr. I.E. Nechasova. The correlation of the multilayer settlements with employment of archaeomagnetic investigations.

S.G. Popov. On the question of chronology of the 'long-barrow' culture on the North-West Russia.

Chronology (posters)

Dr. D.G. Michczynska, Dr. A. Michczynski, Dr. A. Pazdur, Prof. M. Pazdur. Databank of radiocarbon data of East and Central Europe: towards in-field absolute chronology of archaeological site.

Dr. Ju. Cyganov, Dr. G.M. Zaitseva. Complex investigation of Upper Palaeolithic site Borschevo 2.

Dr. G.V. Sinitsyna, Dr. Ju.S. Svezhentsev, Dr. I.E. Kuz'mina. Palaeolithic layers of multilayer site Birusa on the middle Yenisey.

Reconstruction of past environment (oral presentations)

Prof. Urve Miller (Sweden). Perspectives of interdisciplinary research in environmental history.

Prof. Shila Hicks (Finland). Palynology and archaeology.

Dr. Vadim A. Kutaisov. The ancient landscape in the Kerkinitis region.

Dr. Rosa G. Sinenko. On reconstruction of the Pantikapaion relief.

Dr. Galina A. Pashkevich. New materials about antique agriculture in the Northern coast of the Black Sea.

Prof. Jaan-Mati Punning and Dr. Tiit Koff (Estonia). Human impact on the development of vegetation in Northern-Eastern Estonia.

Prof. Andrej A. Nikonov. Crumbling of arches of Crimean caves: geological and archaeological aspects of the problem.

Dr. Galina M. Levkovskaja, G.A. Pospelova, G.F. Baryshnikov, O.P. Potapova, O.M. Adamenko, S.A. Nesmejanov, A.N. Molod'kov, V.P. Ljubin, V.B. Doronichev, N.K. Anisjutkin. Palaeoclimatic interpretation of the scalar parameters of the magnetic susceptibility of the sediments of the Early Palaeolithic archaeological sites Kudaro I, Treugolnaja, Pogreby (based on the pollen data).

Dr. A.L. Alexandrovskij. Soils of archaeological sites: multiple investigation, reconstructions of palaeo-environment.

V.A. Demkin. Palaeopedology and archaeology: the problems of complex investigation of ancient and middle age monuments.

O.S. Khokhlova, I.S. Kovalevskaya. Carbonate profile of semiarid soils as an indicator of climatic changes in Holocene.

T.S. Demkina. The use of paleosoil microbiological information for dating of archaeological monuments.

L.S. Pesochina. The application of paleopedological method for archaeological investigation in the Priazov'e.

Dr. Ja.G. Ryskov. Reconstruction of palaeoenvironment

using isotopic composition of palaeosoils.

Dr. C.V. Kremenetski. Pollen evidence of human impact on vegetation cover of Eastern Europe in Holocene.

Reconstruction of past environment (posters)

Dr. I.A. Bojtsov and Dr. A.L. Alexandrovskij. Soil-archaeological investigations in Moscow: results and prospects.

Dr. M.I. Zolotarev. Geoacoustical explorations of Chersonesus port.

Dr. N.P. Gerasimenko. Landscape conditions of the late and final paleolith of Donbass.

Dr. G.M. Levkovskaya, Dr. T. Lempiainen. The new palaeobotanical data on the ancient agriculture of Novgorod area.

29 November, Tuesday

Ancient metallurgy and metal treatment (oral presentations)

Prof. M.S. Shemachnskaja. On a new stage in production of metals: from bronze to polymetallic zinc-composing alloys.

Dr. Ludmila V. Kon'kova. Far-Eastern bronzes: contents and technology. Traditions of production.

Dr. Olfert Voss (Denmark). Iron production in slag-pit furnaces in Denmark.

Dr. Natalia N. Terechova. The oldest tools of meteorite iron from the territory of Russia.

Dr. Sergej V. Pan'kov. The main stages in the history of the ancient ferrous metallurgy on the territory of the South-West of Eastern Europe.

Prof. N.V. Ryndina and Dr. I.G. Ravich. Metallography in investigation of the metal production of the Eneolithic-Bronze Epoch.

Dr. Dmitrij P. Nedopako. The metal-working on the Early-Scythian Matroninskoe site.

Dr. M.S. Kholodenko. The demonstration of the apparatus "Microscan-1" of the firm JuNILAB (St. Petersburg).

Dr. Ludmila S. Rozanova. The technological traditions and sources of their formation in blacksmith's trade of Ancient Russia.

Prof. Galina M. Voznesenskaja. About the laying of the production traditions in Ancient Russian metal-working.

Dr. Natalia V. Eniosova, Dr. Veronika V. Murashoa. Manufacturing techniques of belt and harness fittings of X century from Gnezdovo.

T.G. Saracheva. Manufacturing technique of Vyatic latticed finger-rings.

Dr. Anna D. Degtjareva. Metal-working of the Early Iron Age in the Middle Priishimje.

Dr. Elena A. Mikolaichuk. A study of textile prints on the reverse side of items from the Siberian collection of Peter I.

Dr. Vjacheslav, V. Vorobev, Dr. Alexander I. Semenov.

Conference Reports

On traces of the metal-working at Slavjansk-settlement of the Khazarian Period.

Dr. R.S. Minasjan. On the role of studying copper, silver, and golden archaeological objects with the tracological method.

Prof. Nina A. Frolova, Prof. A.A. Maslennikov. The treasure of Bosporian coins of the first century B.C. from the settlement Poljanka.

Ancient metallurgy and metal treatment (posters)

Dr. Vladimir I. Zavjalov. The technological characteristic of the iron tools from the Eastern Onega region.

Dr. Marina, M.M. Tolmachjeva. Iron-making in Khazar Khaganat.

Dr. Ju.A. Semykin. Metallurgy and metal-working of Volga Bulgarians at the Early Bolgar and Pre-Mongolian periods.

Dr. V.A. Dmitriev. Copper's wares of Early Bronze Age in the Northern Black Sea Coast.

Prof. N.A. Frolova, Dr. Bartseva, T.N. Smekalova. Coins of the treasure from the settlement Poljanka as a historical source.

Prof. G.A. Lordkipanidze, Dr. Smekalova. Physical and chemical analysis of some anonymous coins of the first century B.C.

Dr. A.V. Eliseev. The demonstration of the possibilities of computer treatment of photos with a purpose to obtain the archaeological drawings

Dr. A.K. Filippov, Dr. M.A. Fedorov, Dr. K.F. Nikitina, Dr. T.A. Baranova. Plasmochemical method by 'Plasma-S' for preserving archival materials, historical and cultural memorials (with demonstration of the equipment).

Field investigations (oral presentations)

G.S. Frantov. Some results and perspectives of archaeological geophysics.

Dr. V.V. Ageev, Dr. D.K. Bolshakov, Dr. I.N. Modin, Dr. E.N. Pervago, Dr. V.A. Shevnin. Possibilities of geophysical electrical methods in archaeology.

Dr. Cucarzi Mauro (Italy), Dr. Vladimir V. Glazunov. Detection magnetic anomalies produced by isometrical objects of multi-aged archaeological site Endrod-170.

Dr. E.L. Svechnikov, A.A. Belov, G.P. Zhabko. High-resolution FMCW radars in archaeology and investigations of historical buildings.

Dr. Andrej K. Stanjukovich. Revealing of the sepulcher of the Second Kamchatka expedition of Vitus Bering as a result of using express phosphate analysis.

Dr. F.B. Baksht, Dr. Ju.M. Kolleganov. Archaeomagnetic anomalies: phenomenology and classification.

Dr. M.Ju. Gorbachev. Electroprospecting median

gradient method in locating architectural and archaeological objects.

A.A. Maslennikov, T.N. Smekalova, S.L. Smekalov. The new results of the complex research on the remote shore of the European Bosphorus.

Dr. Jakov I. Sunchugashev, Dr. Nikolaj N. Kuznetsov. The investigation of Chakassia mengirs by the methods of biolocation and geophysics.

Dr. B.G. Sapozhnikov. Electrical antenna—a new tool for application of the resistivity method in archaeology.

V.A. Ryabkov, B.G. Sapozhnikov, V.I. Lemets. Geophysical equipment for archaeological investigations manufactured in Russia. [The presentation and demonstration of the equipment and apparatus for geophysical prospecting and laboratory investigations of archaeological objects of the State Geophysical Instrument Engineering Enterprise "Geologorazvedka" (portable magnetometers, equipment for resistivity and other electric methods, X-ray analyzer and others).]

Field investigations (posters)

Dr. V.V. Glazunov, G.M. Nikolaenko. Study of ancient vineyards on the base of geological data computer processing.

St. P. Papamarinopoulos, R.E. Jones, V. Karastathis, G. Syrdis, J. Uren and J. Isserlin (Greece). Geophysical testing on the hypothesis of the Xerxes canal dug in Northern Greece in the 5th century B.C.

St. P. Papamarinopoulos, St. Soter, D. Katsonopoulou, P. Stefanopoulos and M. Papaioannou. A geophysical contribution to the identification of the site of ancient Helike.

N.N. Skakun, E.G. Starkova, D.A. Amosov, V.A. Tarasov. The magnetic survey application for investigation of Tripolian settlement near Bodraki village.

Dr. A.N. Mikljaev, Dr. A.V. Melnikov, T.N. Smekalova. Archaeological-geophysical study of an Early Iron Age manufacture complex in the Pskov region.

Prof. VI. Chizhik, Dr. V.L. Myts, Prof. A.A. Maslennikov, Dr. A.V. Melnikov, T.N. Smekalova. Using magnetic prospection in Crimean archaeology.

30 November, Wednesday

The laboratory investigations of ceramics, glass, stone, wood, and textiles (oral presentations)

Dr. Andrej V. Kryganov. The necessity of the natural sciences methods in the archaeological excavations of the Netajlovka cemetery.

Dr. Oxana Ju. Zhironkina. Rare type of beads from Netajlovka cemetery.

Dr. Julia I. Tsitkovskaja. Research of woolen cloth from Netajlovka cemetery.

Prof. Edi V. Sajko. The comprehensive approach to the research of ancient pottery.

Prof. A.A. Bobrinskij. Historic-cultural approach of study pottery production.

Prof. A.A. Bobrinskij. Origin of potter's range.

Dr. E.V. Volkova. Comparative study of pottery from Volosovo-Danilovo and Balanovo cemeteries.

Prof. A.A. Bobrinskij, Dr. I.A. Gej. Stamps of nails of ancient potters as a historical source.

Dr. I.N. Vasileva. Silts as initial raw material for ancient earthenware of Povolgie.

Dr. I.S. Zhushchikhovskaya. Experimental petrography of ancient ceramics.

Dr. N.P. Salugina. Shell in the composition of ancient earthen ware (to the rising of the problem).

Dr. Ju.A. Lichter. Computer catalogue of archaeological finds in Moscow (with a demonstration on computer).

Dr. I.G. Sarachev. Some results of manufacturing technique's studying of the Old Russian pottery.

Dr. Ju.B. Tsetlin. Pottery periodization of the ancient ethnic-cultural process (problems and method).

Dr. Irina Vs. Kalinina. On the ratio natural and humanitarian methods to study neolithic ceramics ornamentation.

Dr. F.B. Baksht. Using kappametry in archaeology.

Dr. A.V. Magda. Research the building ceramic's complex of Chersoness by the method PIXE.

Dr. E.A. Begovatov, Dr. A.F. Kochkina. The reconstruction problem of vessels' dimensions: method and possibility.

Prof. A. Gaigalas. Petrographical analysis of stone axes for the identification of their material source.

Dr. D.Ju. Vlasov, Dr. L.K. Panina, Dr. E.S. Sagulenko. The identification of microorganisms causing the destruction of antique and medieval marble.

Dr. A.A. Evstrapov, Dr. V.E. Kurochkin, Dr. L.K. Panina. Spectrophotometric investigation of marble.

Dr. O. Postnikova, Dr. T. Resaeva. The study of the materials of Ancient Greeks' telae during the conservation of the displays of the Kertch Lapidary.

Prof. S.V. Gusev. North-East Caucasus glass bracelets.

N.P. Dovgaljuk. About a provenance of glass beads of Sargatskaya culture area.

Dr. A.V. Mastikova. The application of chemical-technological analysis to medieval glass investigation.

Dr. M.V. Kozlovskaja. Human bone trace elements and some aspects of palaeoecological reconstruction (on the Sakhtish materials)

Dr. M.B. Mednikova, Dr. A.P. Buzhilova. Radiographs of human skeletal remains: a new aspect of using the method in archaeology.

V.F. Kochkin, N.G. Gerasimova. Poly-para-xylelin as a new consolidant for archaeological materials.

Prof. Z.A. Abramova, G.V. Grigorieva, E.P. Melnikova, M.K. Nikitin. Mammoth bones conservation: An example

of Yudinovo upper palaeolithic site.

Dr. Valentin P. Golikov. Dyeing on textile fibres as a means of evaluation of the technological levels of archaic communities.

Prof. Sergej D. Kryzhitskij. Architectural-archaeological investigations on the monuments of the Antique Northern Black Sea Coast.

The laboratory investigations of ceramics, glass, stone, wood, and textiles (posters)

Dr. D.A. Burylov, Dr. A.A. Evstrapov, Dr. V.E. Kurochkin, Dr. E.D. Makarova, Dr. A.O. Petryakov, Dr. G.E. Rudnitskaja, Dr. A.L. Sizov, Dr. A.S. Shestakova. Photometric devices for laboratory investigation of nonmetallic surfaces.

Dr. I.S. Zhushchikhovskaya, Dr. V.A. Rakov. Ancient ceramics with an admixture of shell: the new methods of analysis.

O.I. Boguslavskij, K.A. Matekhin. Data base of archaeological assemblages.

Dr. Ju.B. Tsetlin. Cultural traditions of organic temper in ancient pottery (problems of method).

Dr. Stanislav M. Sucharzhevskij, Dr. Gorbushina, Dr. E.V. Mavleev. Experience of using Electron-paramagnetic resonance spectroscopy (ESR) on studying of the processes of biological and physical weathering of marble (on the example of "Antique kitchen" in Pavlovsk).

Dr. A.V. Engovatova. Wooden objects from Vojmeznoe-I site.

Dr. N.N. Goncharova. Craniological study of medieval population as a method of historical processes reconstruction (as a pattern of Novgorod region medieval population).

Dr. M.O. Kozlova. Investigation of archaeological glass by the method of X-ray and photoelectron spectroscopy.

Dr. V.P. Golikov, Dr. D. L. Voskresensky, Dr. Ye. A. Pshenichnova, Dr. O.V. Orfinskaya, Dr. M.O. Baichorova. A complex experimental study of the dyeing technique of dichromatic sogdian silks of the VIIth-IXth A.D. from Karachai-Circassia.

V.P. Golikov, Z.F. Zharikova, A.V. Mastykova. An experimental study of the consolidation of archaeological glass with the aid of BMK-5.

Dr. V.N. Yarosh, Dr. G.P. Kudryavtseva. Methods of electronic probe analysis and X-ray diffraction in research into pigment composition of ancient paints.

M. Zjat'ko. Computer treatment of maps (on the example of the Majatskoe site).

Contributed by Dr. Tatyana N. Smekalova, Physical Institute, St. Petersburg State University, 198904 St. Petersburg, Petrodvorets, Russia; tel: 007-812-428-7289; fax: 007-812-428-7240; e-mail: smek@niif.spb.su.

Conferences (continued from p. 7)

Mortality in Non-Human Archaeological Faunas. Christopher O'Brien, Department of Anthropology, University of Wisconsin at Madison.

Forensic Anthropology: Reality Check for Academic Anthropology. Frank Saul and Julie Mather Saul, Lucas County Coroner's Office, Toledo.

The Interface Between Forensic Anthropology and Bioarcheology: A Case Report. Della Collins Cook, Department of Anthropology, Indiana University at Bloomington.

Bioarcheology and Forensics in Indiana, 1991-1994. Stephen Nawrocki, Department of Biology, University of Indianapolis.

Current Bioarcheology at Purdue University. Christopher Schmidt, Department of Sociology & Anthropology, Purdue University.

Forensic Archeology in North Dakota. John Williams, Department of Anthropology, University of North Dakota.

Case Study: Positive Identification Through Radiographic Comparison of a Lumbo-Sacral Anomaly. Matthew Williamson, Department of Sociology & Anthropology, Purdue University.

Problems with the Analysis of Cremated Dental Remains in Order to Determine Positive Identification. Scott Fairgrieve, Department of Anthropology, Laurentian University.

Infant Cranial Trauma: A Case of Child Abuse or an Unfortunate Accident? Peer Moore-Jansen, Department of Anthropology, Wichita State University.

You Done Good: Cervical Nicks and an Unusual Confirmation of Probable Cause of Death. Julie Mather Saul, Lucas County Coroner's Office, Toledo.

The Butcher of Gloucester Street. Jerry Melbye, University of Toronto, Erindale College.

The Sauls gave us a hands-on opportunity to test our identification skills, bringing along an assortment of bones from recent forensic cases and asking us to assess their sex, race, and age and to compare our results with the known profiles of the deceased. Their moral, which was clearly heard by more than a few of the attendees, was that analysts of unidentified prehistoric and historic archeological remains can slip into a sense of complacency and a false sense of security about the accuracy of our (largely untested and untestable) results. Forensic anthropology provides osteologists with a "reality check" on the validity of their methods and experience. The Sauls also came up with an acronym for our Midwest Group (BARFA, for BioARcheology and Forensic Anthropology). Certainly, this title is much more colorful and imaginative than those of our sister groups in other parts of the country (MD&C, NEFAA, MS&B). Dr. Maria Smith has graciously offered to host next year's meeting at Northern Illinois University

in Dekalb, September 29-October 1. We appreciate her offer and enthusiasm and look forward to a great second meeting. The secretary (me) will hopefully be putting out an electronic newsletter soon, including abstracts of all the papers. A message will be posted to the standard e-mail lists when it is ready.

Submitted by Stephen P. Nawrocki, Department of Biology, 1400 E. Hanna Avenue, University of Indianapolis, Indianapolis, IN 46227-3697, USA; tel: 317-788-3486; fax: 317-788-3569; e-mail: nawrocki@gandlf.uindy.edu.

Archaeological Institute of America Atlanta, 27-31 December 1994

One session on Technology and Trade had papers on science in archaeology, in particular, Rob Tykot's fine paper on tracing obsidian sources, who had the best graphics of the conference. Several fine posters on geoarchaeology were presented on the 29th with the bulk of these presented by the Weiner Laboratory of the American School of Classical Studies, Athens. The Aegean Dendrochronology Project 1994 Progress Report was passed out to anyone and everybody by Cornell University. Peter Kuniholm reported that the Cornell Lab had processed 515 samples from 40 different sites in '94. The 1994 report is available free to anyone who requests it. Interested SAS members should write or fax Peter at: The Malcolm and Carolyn Wiener Laboratory for Aegean and Near Eastern Dendrochronology, Department of the History of Art & Archaeology, B-48 Goldwin Smith Hall, Cornell University, Ithaca, NY 14853-3201, USA; fax: 607-255-1454; e-mail: Peter@dendro.mail.cornell.edu.

Your reporter saw several SAS members in Atlanta, both from the U.S. and abroad.

Submitted by Erv Garrison, Department of Anthropology, Baldwin Hall, University of Georgia, Athens, GA 30602-1619, USA; tel: 706-542-3922; e-mail: egarriso@sherlock.dac.uga.edu.

Scientific Approaches in Zooarchaeology Minneapolis, 3-7 May 1995

This SAS-sponsored symposium, held at this year's annual SAA meeting, May 3-7, 1995 in Minneapolis, reviewed and assessed the state of scientific research in zooarchaeology. The case studies presented cover a variety of time periods and geographic locations. Topical coverage

Conferences (continued on p. 16)

Book Review

History of Technology: The Role of Metals. Stuart J. Fleming and Helen R. Schenck (eds.). MASCA Research Papers in Science and Archaeology, Volume 6. University Museum, University of Pennsylvania, Philadelphia, 1989. 87 pp. \$20.00 (paper).

Reviewed by Mark Hall, Archaeological Research Facility, University of California, Berkeley

This particular issue of *MASCA Research Papers in Science and Archaeology* reads more like an issue of *Archaeomaterials* or *Archaeometry* than the usually focused publication it is. The articles in this issue include a report on the archaeological survey of the copper mining sites in the Feinan (Hauptman, Weisgerber & Bachmann); a study of casting molds from the Classical period of Olympia, Greece (Schneider); a metallographic study of Etruscan mirrors (Goodway); a lead isotope study of Roman period artifacts from Carthage (Farquhar & Vitali); a history of the Turm-Rosenhof mine in Germany (Bartels); and an INAA study of Inuit metalwork. An eclectic issue to say the least!

Despite the volume's title, six of the nine articles in this volume have a heavy focus on the analysis of materials and little attention is given to the social or cultural aspects of those findings. A case in point—Goodway's article on Etruscan mirrors is a fine metallurgical study, but I'm not sure about the significance of Etruscan mirrors being forged rather than cast. Similar criticisms can be leveled at other authors in this volume.

In publications like the *MASCA Research Papers in Science and Archaeology* series, which are read and cited by both archaeologists and archaeometrists, I feel it is important for the social and cultural contexts to be integrated into the article. To do otherwise only creates more ambiguity and confusion.

With this in mind, one can also criticize most of the authors in this volume for not properly reporting their methods and techniques. Of the six articles which focus on materials characterization and analyses, the following omissions can be noted:

1. Three articles fail to report if any standards were used in the calibration of their equipment. These same three articles also fail to report how the samples were prepared. While this may not be important for AAS, it is important for XRF and EPMA studies.

2. Four articles fail to report the amount of error and detection limits in their chemical analyses. This is crucial information when the materials are being segregated on the basis of trace element compositions.
3. Two articles provide chemical analyses of geologic source material. Only one of these articles provides specific site locations for the source material.

This information is necessary for articles with an analytical focus. Good scientific method is an important part of archaeometry.

On a positive note, MASCA did a wonderful job in producing this volume. The photomicrographs are clear and have excellent contrast. Graphs and reproductions of manuscript illustrations are clear and sized to be quite readable.

This book is not highly recommended. It fails archaeologists since it focuses heavily on analytical methods and contains little social theory. Scientists are failed by this volume since the finer details of the analytical methods are omitted. □

Books Received

The Aegean Bronze Age, by Oliver Dickinson. 1994. Cambridge University Press, New York. xxii + 342 pp., 108 ill., 30 plates, bibliography, index. \$64.95 (cloth).

African Archaeology (2nd edition), by David W. Phillipson. 1993. Cambridge University Press, New York. xiii + 268 pp., 136 ill., references, index. \$59.95 (cloth); \$19.95 (paper).

Brazilian Studies. The Sambaqui at Forte Marechal Luz, State of Santa Catarina, Brazil, by Alan L. Bryan, and *Archaeological Research at Six Cave or Rockshelter Sites in Interior Bahia, Brazil*, by Alan L. Bryan & Ruth Gruhn. 1993. Center for the Study of the First Americans, Oregon State University, Corvallis, Oregon. xviii + 114 pp., 61 figs., 17 tables, bibliography, index and x + 168 pp., 91 figs., 17 tables, bibliography, index. \$30 (paper).

Labrador Winter. The Ethnographic Journals of William Duncan Strong, 1927-1928, edited by Eleanor B. Leacock & Nan A. Rothschild. 1994. Smithsonian Institution Press, Washington, D.C. xxvi + 235 pp., 4 appendices, bibliography, index.

The Late Bronze Egyptian Garrison at Beth Shan: A Study of Levels VII and VIII, by Frances W. James & Patrick E. McGovern. 1994. The University Museum, University of Pennsylvania, Philadelphia. Vol. 1 (text), xxxii + 272 pp.; vol. 2 (illus.), 168 figs. + 63 pls. \$115.00 (cloth).

The Origins of Agriculture: An International Perspective, edited by C. Wesley Cowan & Patty Jo Watson. 1992. Smithsonian Institution Press, Washington, D.C. xvi + 224 pp. \$19.95 (paper); \$49.95 (cloth).

The Prehistoric Exploration and Colonisation of the Pacific, by Geoffrey Irwin. 1994. Cambridge University Press, New York. viii + 240 pp., 83 figs., 22 tables, bibliography, index. \$17.95 (paper). □

Recent Publications

Archaeology and Natural Science; Peter M. Fischer, ed., Volume 1, 1993. Paul Åströms Förlag, Göteborg. Contains the proceedings of the Symposium "Modern Tools in Archaeometry," arranged by the Scandinavian Archaeometry Center in Göteborg, Sweden, May 23-25, 1991.

Abrahamsen, N. and Breiner, N. Archaeomagnetic Investigations in Denmark: A Review.

Abrahamsen, N., Sigurdsson, T. and Frandsen, J. Magnetic and Georadar Surveying of Farm Buildings at the Medieval Kalø Castle (Denmark).

Bollingberg, H. J. and Lund Hansen, U. Trace Element Studies by DC ARC/Laser-Optical Emission Spectrography of Some Bronze Artefacts from the Roman Import to Scandinavia.

Borrman, H., Rydmark, M. and Jansson, T. The Use of Image Processing in Forensic Odontology—Work in Progress.

Bräthen, A. Dendrochronology in Sweden: Some Reflections on Medieval Wood.

Fisher, P.M. Some Cypriot Pottery Wares Analyzed with SIMS.

Hedley, I.G., Wagner J.-J. and Ramseyer, D. An Electrical Resistivity and Magnetic Survey of an Iron Age Hill Fort.

Kleiner, M., and Åström, P. The Brittle Sound of Ceramics—Can Vases Speak?.

Liversage, D. Impurity Patterns and Cultural History—An Enquiry into Compositional Patterns in the Bronze Age.

Lund, E. Archaeological Surveying with the Topometer: A Short Presentation of a Mechanical Mapping Method Exemplified by Case Descriptions.

Persson, P. DNA from a Human Bone from the Rössberga Megalith.

Roslund, C. EDM Technique Applied to the Prehistoric Monument 'Ale's Stones'.

Rottländer, R. Ancient Units of Length: Their Accuracy and Development.

Russ J., Hyman, M. and Rowe, M.V. Direct Radiocarbon Dating and Chemical Analysis of Ancient Rock Paintings.

Sablatnig, R., Menard, C. and Dintsis, P. A preliminary study on methods for a Pictorial Acquisition of Archaeological Finds.

Revue d'Archeometrie. Bulletin de Liaison du Groupe des Methodes Pluridisciplinaires, Contribuanta l'Archeologie, Centre National de la Recherche Scientifique (CNRS).

No. 17, 1993

Hesse, A. and Doger, E. Atelier d'amphores rhodiennes et constructions en pierre à Hisaronu (Turquie): un cas original de prospection électro-magnétique. DAIRE, M.Y., Photographie aérienne à basse et/ou haute altitudes: exemple d'apports méthodologiques en Bretagne.

Laborel, J., Morhange, C., Laborel-Deguen, F. and Le Campion, J. Les bioconstructions à Lithophyllum lichenoides, indicatrices des variations relatives du niveau de la mer, Problèmes méthodologiques indicatrices et application à l'Age du Fer. Exemples des côtes rocheuses de La Ciotat (Provence).

Meniel, M. De l'étude des ossements animaux de l'Age du Fer.

Buchsenschutz, O. Programme de recherches pour reconstituer l'économie de l'Age du Fer.

Pernot, M. Approche de l'artisanat du "Bronze" au Mont-Beuvray. La fabrication de fibules et l'organisation d'un atelier.

Schmitt, A. Apports et limites de la pétrographie quantitative: application au cas des amphores de Lyon.

Bearat, H. Analyses minéralogiques sur les peintures altérées de la villa gallo-romaine de Vallon.

Chevallier, P., Legrand, F., Gruel, K., Brissaud, I. and Tarrats-Saugnac, A. Etude par rayonnement synchrotron de moules à alvéoles de La Tène finale trouvés à Villeneuve-St-Germain et au Mont-Beuvray.

Gratuze, B., Giovagnolia, Barrandon, J.N., Telouk, P. and Imbert, J.L. Apport de la méthode ICP-MS couplée à l'ablation laser pour la caractérisation des archéomatériaux.

No. 18, 1994

Hesse, A. and Chagny, B.N. Relevé planimétrique de la surface du sol par photographie portée par un cerf-volant.

Dabas, M., Decriaud, J.P., Ducomet, G., Hesse, A., Mounir, A. and Tabbagh, A. Continuous recording of resistivity with towed arrays for systematic mapping of buried structures at shallow depths.

Rouger, E. Nouveaux apports de l'image numérique en archéologie.

Schvoerer, M., Guibert, P. and Ney, C. Chronologie par thermoluminescence de cultures préhispaniques de l'Ouest Mexicain: étude de céramiques provenant de deux sondages (puits 1 et 13) du site de Coamiles.

Goulpeaul, L. Analyse archéomagnétique de structures en hypocauste.

Leroy, M. and Ploquin, A. Approche archéométrique de la proto-industrie du fer: conditions de réduction des minerais de fer en Lorraine et chaîne opératoire dans la sidérurgie d'avant le haut-fourneau (un exemple d'utilisation d'une base de données d'analyses chimiques en paléoméallurgie du fer).

Bearat, H. and Dufournier D. Quelques expériences sur la fixation du phosphore par les céramiques.

Gratuze, B. Le verre: problématiques posées et réponses apportées par les méthodes de caractérisation physico-chimiques.

Prices are 140 francs each, payable by international mail coupon to GMPCA (Groupe des Methodes Pluri-disciplinaires Contribuant à l'Archeologie). Requests must be sent with a return address to: Revue d'Archeometrie, Pole Regional Archeologique de l'Ouest, Laboratoire d'Archéométrie, Université de Rennes I, 35042 Rennes Cedex, France. □

Announcements

Call for Papers

Volcanic Hazards and Disasters in Human Antiquity

Volcanic activity has shaped human antiquity, abruptly with major disasters, sometimes more gently, but with consequent changes to the environment that have profoundly altered the course of human history. Whether that consequence was major destruction of our immediate surroundings, local burial of cultural debris, or climate change on global or local scales, the hazard remains. Yet volcanism also has been a factor in the preservation of our artifacts and paleoenvironment—tools, cities, landscapes—resulting in dramatic archaeological finds. The geological evidence and the archaeological remnants provide important lessons about our past and future.

We seek papers that describe all this in the geological and archaeological record: the disasters; the alteration of landscapes and lifestyles; the influence on local, regional and global scales; the techniques of finding such evidence; the lessons to be learned for modern living.

Collected papers would be published as a Geological Society of America (GSA) Special Paper, at least we have proposed this to GSA and they have concurred pending a table of contents. The nucleus of papers will be those given during the 1994 GSA Annual Meeting on "Volcanic Hazards and Disasters in Human Antiquity." The response at the meeting was overwhelming, the room was packed and the papers superb. We are extending the list of invited participants to those who could not be at GSA.

If you are interested, we ask for a tentative commitment with a proposed title for a paper. The deadline for contact is 1 August 1995. The assembled list will be sent to GSA to confirm publication, and distributed to all who respond so you can have an idea of how the special paper is coming together.

For further information, please contact:

Dr. Floyd W. McCoy, Windward College, University of Hawaii, Kaneohe, HI 96744, USA; tel: 808-235-7316; fax: 808-247-5362 (after Aug. 14);

Dr. Grant Heiken, Los Alamos National Labs, ESS-1 MSD462, Los Alamos, NM 87545, USA; tel: 505-667-8477; fax: 505-665-3285; e-mail: heiken@esslab.lanl.gov.

Workshop in Lithic Analysis University of Alberta, 14-25 August 1995

The Department of Anthropology, in collaboration with Special Sessions (Faculty of Extension), announces a special workshop in the application of refitting and related methods of analysis and interpretation. Held August 14-25, 1995, the workshop will be located at the University of Alberta. It will be instructed by Dr. Sheila Coulson from the Institutt for Arkeologi, Kunsthistorie og Numismatikk at the University of Oslo. The following topics will be covered.

1) Experimental replication as applied to refitting studies (participants will begin by knapping and then refitting their own debris).

2) How to accomplish refitting, including: when to apply the method; selection and preparation of materials; refitting a complete collection; refitting part of a collection (when to begin and when to stop); and illustrating and documenting refitting artifacts.

3) Through the results of refitting (and from the lectures) participants will learn about: technological sequences and production methods; identification of tools and pieces that were selected for use but not modified by retouch; identification of different raw material types and their properties; use of refitting to detect post-depositional disturbance; use of refitting to help determine excavation strategy; identification of prehistoric behavioral traits; application of *chaînes opératoires*; on-site activity analysis/spatial analysis; inter-site analysis, and model testing.

Registration will be limited to 12. Undergraduates will receive credit for ANTHR 486, graduates for ANTHR 586.

Participants should plan to bring their own collections, and all specimens must be labelled or marked. Ideally the material should be from a site that has been totally

excavated and where all the struck lithics have been collected and the soils sieved. However, since valuable information can be gleaned from less than perfectly excavated sites, do not reject materials that are reasonably complete but a little less than perfect.

For further information or to apply for registration, please contact:

Dr. David Lubell, Department of Anthropology, University of Alberta, Edmonton, AB T6G 2H4, Canada; fax: 403-492-5273; e-mail: David.Lubell@ualberta.ca.

Position Available

The Ohio State University, Department of Anthropology, invites applications for a tenured appointment in Archaeology at the Associate Professor level commencing October 1, 1996. The applicant must have an established grant record, an active program of field research, and publications in leading, peer-reviewed journals. Geographic focus in the Middle East or Latin America. Theoretical specialty open. Excellence in teaching and research required. The appointee's duties include teaching and advising at the undergraduate and graduate levels, including introductory archaeology and upper division region, method, and theory courses, and graduate seminars. Salary negotiable and commensurate with qualifications. Deadline for applications is September 15, 1995, or until position is filled. Send cover letter, vita, and names of three references to: William Dancey, Search Committee Chair, Department of Anthropology, The Ohio State University, 110 Lord Hall, 124 W. 17th Avenue, Columbus, OH 43210-1364, USA. The Ohio State University is an Equal Opportunity, Affirmative Action Employer. Women, minorities, Vietnam-era veterans, and individuals with disabilities are encouraged to apply.

Submitted by Kristen Gremillion, gremillion.1@osu.edu

Electronic Discussion List for Archaeology

ARCH-METALS on the Newcastle-based mailbase system is now available for the discussion of all aspects of archaeometallurgy. For those with access to e-mail send the following single line command:

join arch-metals first_name last_name

to the address mailbase@mailbase.ac.uk. Further information about mailbase can be obtained from Chris Salter, salter@vax.ox.ac.uk.

Peter Northover has passed on the information that the journal *Archaeomaterials* has regrettably ceased publication.

From HMS News, #28, Winter 1994 □

Conferences (continued from p. 12)

included bone chemistry, bone conservation, marine diets and heavy metal toxicity, seasonal hunting and mortality profiles, butchery practices, paleoentomology, morphometric data from domestic animals, heat alteration of buried bone, and the application of bone roundness and weathering criteria to understanding assemblage formation.

The symposium papers are listed below:

1. Reassessment of Barium and Strontium as Paleodietary Indicators; James Burton and Lori E. Wright (McMaster University), Department of Anthropology, University of Wisconsin, 1180 Observatory Drive, Madison, WI 53706, USA; 608-262-4505; JHBurton@macc.wisc.edu.

2. Some Implications of High Protein Marine Diets in Prehistoric South Pacific Economies; Foss Leach, Archaeozoology Lab, Museum of New Zealand, Box 467, Wellington, New Zealand; 64-4-387-8254; foss@grv.grace.cri.nz.

3. The Role of Insects in Zooarchaeology; Scott Elias, INSTARR, University of Colorado, Box 450, Boulder, CO 80309, USA; 303-492-5158; saelias@culter.Colorado.edu.

4. Butchery Evidence from the North-Western European Late Upper Paleolithic; Ruth Charles, Donald Baden-Powell Quaternary Research Centre, 60 Banbury Road, Oxford, Oxfordshire OX2 6PN, UK; 0865-274-722; rcharles@vax.ox.ac.uk.

5. Cautionary Tales from the Crypt: Inferences from Prey Mortality in Ethnographic Contexts; Christopher J. O'Brien, Department of Anthropology, 5420 Social Sciences, University of Wisconsin, Madison, WI 53706, USA; 608-262-2866; CJOBrien@macc.wisc.edu.

6. Uses of Morphometric Data for Studying Domestic Animal Populations; David B. Landon and Michael Toplyn (Harvard University), Department of Social Sciences, Michigan Technological University, Houghton, MI 49931, USA; 906-487-2366; dbland@mtu.edu.

7. Thermal Alteration of Subsurface Faunal Remains; Joanne L. Bennett and Walter E. Klippel, Department of Anthropology, University of Tennessee, Knoxville, TN 37996, USA; 615-974-4408; Klippel@UTKVM.UTCC.UTK.edu.

8. Conservation of Archaeological Bone; Jessica S. Johnson, Texas Memorial Museum, Materials Conservation Lab, PRC #122, 10100 Burnet Road, Austin, TX 78758, USA; 512 471-6090; tqaa345@utxvm.cc.utexas.edu.

9. Roundness and Weathering: Prospective Qualitative Measures for the Zooarchaeological Analysis of Plowed, Floodplain Sites; Frank J. Dirrigl, Jr., University of Connecticut, P.O. Box 562, Enfield, CT 06083, USA; 203-745-1981; INVERTE@UConnVM.UConn.edu.

Submitted by David B. Landon, Department of Social Sciences, Michigan Technological University, Houghton, MI 49931, USA; tel: 906-487-2366; e-mail: dbland@mtu.edu. □



A.D. 1050-1150, from Cahokia

INTERNATIONAL SYMPOSIUM ON ARCHAEOLOGY

MAY 20-24, 1996
URBANA, ILLINOIS, USA

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The 30th International Symposium on Archaeometry will be held on the campus of the University of Illinois at Urbana-Champaign, Illinois, USA, May 20-24, 1996, under the auspices of the University's Program on Ancient Technologies and Archaeological Materials (ATAM).

Symposium topics will include:

- Biomaterials (bones, residues, etc.);
- Dating (organic and inorganic materials);
- Field archaeology (prospection and geoarchaeology);
- Technology/provenance of
 - a) metals,
 - b) ceramics/glass, and
 - c) stone/pigments/plaster.

A one-day theme session will be held on **Biological Remains and Organic Residues**. This session will include invited speakers along with submitted presentations.

Abstracts will be reviewed by an international committee of specialists ("convenors"). Oral presentations and invited review papers will reflect the range of submitted abstracts and the interests of participants.

A pre-conference tour of Chicago museums and conservation laboratories and a post-conference tour of the spectacular mound site of Cahokia will be offered.

Those interested in receiving the Call for Papers for Archaeometry '96 should send their full name, address, telephone, fax, and e-mail information to: Conferences and Institutes, University Inn, 302 E. John, Suite 202, Champaign, IL 61820, USA, as soon as possible. Or e-mail to: laurie_wink@ceps.uiuc.edu.

Meetings Calendar

Susan Mulholland, Archaeometry Laboratory, University of Minnesota-Duluth, 10 University Drive, Duluth, MN 55812, USA; tel: 218-726-7957; fax: 218-726-6181; e-mail: smulholl@ua.d.umn.edu

New listings are marked by a * ; new information for previous listings indicated by a +. More information on some meetings is given in previous bulletins as indicated, e.g., "12(4):13" for volume 12, number 4, page 13.

1995

- July 2-14. International Union of Geodesy and Geophysics, 21st General Assembly. Boulder. IUGG General Assembly, c/o American Geophysical Union, 2000 Florida Ave. NW, Washington DC 20009, USA; fax: 202-328-0566; e-mail: iugg_xxiga@Kosmos.AGU.org. Symposia include: Human impact and the Earth's environment; Archaeosecular and palaeosecular variations (convenor Charles Barton, Australian Geological Survey Organisation, GPO Box 378, Canberra, ACT 2601, Australia; fax: 61-6-249-9986; e-mail cbarton@agso.gov.au).
- July 3-5. Archaeological Science Conference; held in co-operation with the Council for British Archaeology Archaeological Science Committee. Liverpool. The Science Conference Organisation, Department of Archaeology, 14 Abercromby Square, University of Liverpool, PO Box 147, Liverpool, L69 3 BX, UK. Abstract deadline: November 1994. Papers invited on all aspects of the applications of science within archaeology.
- * July 4-6. Archaeological Science Conference; organised in conjunction with the Council for British Archaeology Archaeological Science committee. Liverpool. Archaeological Science Conference Organiser, SACOS, University of Liverpool, Hartley Building, Brownlow Street, Liverpool L69 3BX, UK. General themes include: human evolution, chronology, ecosystems, technology and trade, prospection, data processing and management, geoarchaeology, biochemical analysis.
- July 10-16. International Exhibition of Publications on Archaeology; organized by the Association of Cypriot Archaeologists, the Cyprus Association of Bibliophiles, and the House of Cyprus and Cypriological Publications (MAM). Nicosia. MAM, PO Box 1722, 1512 Nicosia, Cyprus; tel: 357-2-464698; fax: 357-2-465411.
- July 11-18. International Workgroup for Palaeoethnobotany, 10th Symposium. Innsbruck. Dr. Klaus Oeggl, Institut für Botanik der Leopold-Franzens-Universität Innsbruck, Sternwartestrasse 14, A-6020, Innsbruck, Austria.
- July 17-Aug. 11. AMS-SIAM (American Mathematical Society-Society for Industrial and Applied Mathematics) Summer Seminar in Applied Mathematics. Park City, Utah. AMS-Summer Seminary Conference Coordinator, AMS Meeting and Conference Department, PO Box 6887, Providence, RI 02940, USA; e-mail: dls@math.ams.org.
- * Aug. 3-10. XIV International Unions of Quaternary Research. Berlin, Germany. Anne Linn, USNC/INQUA-HA-460, National Academy of Sciences, 2101 Constitution Ave. NW, Washington, DC 20418, USA; tel: 202-334-2744.
- * Aug. 14-25. Edmonton. Lithic Analysis Short Course. Dr. David Lubell, Department of Anthropology, University of Alberta, Edmonton, Alberta, Canada T6G 2H4; tel: 403-492-3879; fax: 403-492-5273.
- Aug. 29-Sept. 2. ECAART 4—European Conference on Accelerators in Applied Research and Technology. Zürich. Martin Suter, Chairperson ECAART 4, ETH Hönggerberg, Institute of Particle Physics, Building HPK, CH 8093, Zürich, Switzerland; tel: 41-1-633-2033; fax: 41-1-633-1067; e-mail: suter@imp.phys.ethz.ch.
- Aug. 30-Sept. 8. International Rock Art Congress. Pinerolo-Torino, Italy. Robert G. Bednarik, Australian Rock Art Research Association, PO Box 216, Caulfield South, Vic 3162, Australia.
- * Sept. 4-8. 7th Flint Symposium. Ostrowiec Swietokrzyskia, Poland. Romuald Schild, Institute of Archaeology and Ethnology, Polish Academy of Sciences, 00140, Warsaw, Al. Solidarnosci 105, Poland; tel/fax: 22-240100.
- Sept. 4-8. From the Jomon to Star Carr: Hunter-gatherers of East and West Temperate Eurasia. Universities of Cambridge and Durham. Peter Rowley-Conwy, Department of Archaeology, University of Durham, 426 Sadler Street, Durham, DH1 3NU, UK; tel: 91-374-3632.
- * Sept. 12-13. Archaeological Prospection. Bradford. Dr. Cathy Batt, Department of Archaeological Sciences, University of Bradford, Bradford BD7 1DP, UK; tel: 01274 383533; e-mail: C.M.Batt@Bradford.ac.uk.
- Sept. 14-19. Prehistory of Mining and Metallurgy. London and Bangor, UK. Dr. Paul Craddock, Department of Scientific Research, British Museum, London WC1B 3DG, UK; tel: 44-71-323-8797.
- * Sept. 15-16. Durango Conference on Southwest Archaeology. Durango, Colorado, USA. Randy McGuire, Department of Anthropology, SUNY, Binghamton, NY 13901, USA; 607-777-2737.
- * Sept. 25-28. An International Conference on Metals and Conservation; ICOM CC Metals Working Group. Semur en Auxois. Dr. Ian MacLeod, 8 Rue des tanneries, 21140 Semur en Auxois, France; tel: 33 80 96 64 09; fax: 33 80 97 29 43. Issues to be discussed include determining the age of degradation, the optimum conservation treatment and the bulk treatment of archaeological and industrial collections.

- * Sept. 25-28. Land Satellite Information In The Next Decade. Vienna, Virginia, USA. Co-sponsored by the Landsat Management Team, National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, and the U.S. Geological Survey. American Society for Photogrammetry and Remote Sensing. ASPRS, 5410 Grosvenor Lane, Suite 210, Bethesda, MD 20814, USA; tel: 301-493-0290; fax: 301-493-0208; e-mail: asprs@asprs.org. Four technical sessions, two plenary sessions will address space systems and data distribution, data providers, advanced technology, and international users. A series of one-day workshops, an extensive exhibit of the latest in remote sensing technology, and several social events will provide attendees the opportunity to preview the next generation of sensors and platforms.
- Oct. 9-11. Association for the Study of Marble and Other Stones Used in Antiquity (ASMOSIA) IV Conference. Bordeaux, France. Universite de Bordeaux III-CNRS, Maison de L'Archeologie, Applied Physic Lab, CRIAA, F-33405 Talence Cedex, France; tel: 33-56-84-51-60; fax: 33-56-84-51-57; e-mail: normherz@uga.cc.uga.edu.
- * Nov. 2-5. American Society for Ethnohistory Annual Meeting. Kalamazoo, Michigan. Donald Fixico, Department of History, Western Michigan University, Kalamazoo, MI 49008, USA; tel: 616-387-4629; fax: 616-387-3999.
- Nov. 6-9. Geological Society of America, Annual Meeting. New Orleans, Louisiana. Vanessa George, Geological Society of America, 3300 Penrose Place, Boulder, CO 80301, USA; tel: 303-447-2020; fax: 303-447-1133.
- * Nov. 8-11. Southeastern Archaeological Conference. Knoxville, Tennessee. SEAC Conference, Department of Anthropology, University of Tennessee, Knoxville, TN 37996-0720, USA; tel: 615-974-4408; fax: 615-974-2686. Abstract deadline: 1 August.
- * Nov. 9-12. 28th Annual Chacmool Conference—Archaeology Into the New Millennium: Publish or Perish. Calgary. 1995 Conference Committee, Department of Archaeology, University of Calgary, 2500 University Drive N.W., Calgary, Alberta, Canada T2N 1N4; fax: 403-282-9567; e-mail: 13042@UCDASVMI.Admin.UCalgary.CA. This conference will focus on archaeology in the public realm.
- Nov. 15-19. American Anthropological Association, Annual Meeting. Washington, DC. American Anthropological Association 4350 North Fairfax Drive, Suite 240, Arlington, VA 22203, USA; tel: 703-528-1902.
- * Nov. 22-25. International Association of Computing in Archaeology. Rome. Prof. Paolo Moscati, Istituto, per l'archeologia etrusco-italica-CNR, Viale di Villa Massimo 29, 00161 Roma, Italy; tel: 39 6 85 30 19 34; fax: 39 6 44 23 93 79. Themes include spatial analysis and field archaeology.
- * Nov. 27-Dec. 1. Materials Research Society, Fall Meeting. Boston. MRS, 9800 McKnight Road, Pittsburgh, PA 15237, USA; tel: 412-367-3003; fax: 412-367-4373.
- * Dec. 27-30. Archaeological Institute of America, Annual Meeting. San Diego. AIA, 656 Beacon Street, Boston, MA 02215, USA; fax: 617-353-6550.
- 1996
- * April 10-14. Society for American Archaeology, Annual Meeting. New Orleans. SAA, 900 Second Street NE, Suite 12, Washington, DC 20002, USA; tel: 202-789-8200.
- * April 22-26. 8th International Conference on Luminescence and Electron Spin Resonance Dating. Canberra. LED 96, Mrs. Judy Papps, Quaternary Dating Research Centre, ANH, RSPAS, Australian National University, Canberra, ACT 0200, Australia; tel: 61-6-249-4764; fax: 61-6-249-0315; e-mail: Judy.Papps@anu.edu.au. Topics include dosimetry, equipment technology, Quaternary and archaeological dating applications. Pre-conference field trips to laboratories at Adelaide, Wollongong and Canberra.
- May 20-24. International Symposium on Archaeometry. Urbana-Champaign, Illinois. Sarah Wisseman, ATAM Program, University of Illinois, 116 Observatory, 901 S. Mathews, Urbana, IL 61801, USA; tel: 217-333-6629; fax: 217-244-0466; e-mail: wisarc@ux1.cso.uiuc.edu.
- * June 22-29. Ninth International Palynologic Congress. Houston, Texas, USA. Organized by the International Federation of Palynological Societies and the American Association of Stratigraphic Palynologists. D.J. Nichols, U.S. Geological Survey; fax: 303-236-5690; e-mail: dnichols@greenwood.cr.usgs.gov. Symposia topics and field trips for the 9th IPC are in the planning stages. There will be a maximum of 700 oral presentations. There will also be space for 250-300 posters. More details will be provided in the 2nd IPC Circular. Symposia topics may include: ecology and paleo-environmental reconstruction; entomopalynology & archaeological palynology; melissopalynology and forensic palynology; new frontiers and applications in palynology; palynomorph preparation techniques; palynomorph sampling; palynostratigraphy & sequence stratigraphy; pre-Quaternary and Quaternary studies; TEM and SEM applications in palynology.
- Aug. 4-14. 30th International Geological Congress. Beijing. Secretariat Bureau, 30th International Geological Congress, PO Box 823, Beijing 100037, P.R. China; tel: 86-1-8327772; fax: 86-1-8328928. 17(3):23.
- * Aug. 25-30. International Institute for Conservation of Historic and Artistic Works, 16th International Congress. IIC, Buckingham Street, London WC2N 6BA, UK; tel: 0171 839 5975; fax: 0171 976 1564.
- Sept. 8-14. 13th Congress of the International Union of Prehistoric and Protohistoric Sciences. Forlì. Alla Segretaria del XII Congresso U.Z.S.P.P., Casa Saffi, Via S. Marchesa 12, I-47100 Forlì, Italy; fax: 39(0)-543-35805.
- * Oct. 26-29. Eastern States Archaeological Federation, 62nd Annual Meeting. Wilmington, Delaware, USA. Abstracts due June 1. Faye L. Stocum, DE SHPO, #15 The Green, Dover, DE 19901, USA; tel: 302-739-5685. □



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