



SAS Bulletin



Society for Archaeological Sciences

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President's Musings

SAS continues to be a dynamic organization, bouncing up and down in membership numbers, expanding to an increasingly international breadth, affiliating with a major journal, and working with the International Symposium on Archaeometry, 1996. This type of activity requires both work and communication, and no single person more fully embodies those two dimensions of SAS in recent years than Rob Sternberg. Though he did not know just what he was getting himself into five years ago, Rob made a commitment and followed through. His term as Editor of the *SAS Bulletin* has been a testimony to his determination and imagination. He took over from a slacker (yours truly!) and published a record number of pages. Maintaining some of the old features, such as interest-group news (exemplified by Martha Goodway's News of Archaeometallurgy), the Meetings Calendar (which Rob produced before he became Editor), Lab Profiles, and Book Reviews, he also added Internet data, more Conference Reports, a cumulative index, and a membership list. His diligence and intelligence made the *Bulletin* a valuable tool, with timely information and plenty of it. Even though he complains that this work has gotten in the way of his archaeometric research, he must like it, since he has allowed himself to be elected President of the SAS for 1997-1999! In doing this, he's positioned himself to do more important work in the promotion and development of archaeological science at a crucial time in history, and taken on another challenge. Rob, it may be tougher than learning your way around Pagemaker, but I think you are up to the task. Thanks for your excellent work with the *Bulletin*, and I look forward to continued cooperation in the future on behalf of the SAS.

Contributed by Dr. Patrick E. Martin, SAS President, Department of Social Sciences, Michigan Technological University, Houghton MI 49931-1295 USA; tel. 906-487-2070; fax 906-487-2468; e-mail pem-194@mtu.edu. □

News of Archaeometallurgy

The Historical Metallurgy Society and the Peak District Mines Historical Society have announced a conference on **The Archaeology of Mining in South-West Britain** to be held 12-14 April 1996 at the Seale-Hayne College campus of Plymouth University in Newton Abbot, Devon. For further information write P. Newmanm 6 Burnley Close, Newton Abbot, Devon TQ12 1YB, UK, or e-mail: <http://sable.ox.ac.uk/~salter/hms/swmine.html>.

The dates of May 1-5 have been set for the next annual meeting of Women in Mining. It will begin in Los Angeles and end in **Death Valley** with several days' visits to historical mining sites.

Ian MacLeod sent us some notes of the International Committee on Museums Conservation Committee (ICOM-CC) Metals Working Group conference **Metals '95**, held in Semur-en-Auxois, France, September 25-28th. There were several papers on hydrogen plasma used to treat archaeological iron, with the object as cathode or simply on a pyrex shelf inside the plasma, with or without the use of inert gases. Conservation projects of recent objects included a Nike missile, the prototype of the *Concorde*, the Alexander III Bridge in Paris and the submarine *Holland I*. This will be exhibited at Gosport, England, in the huge washing tank made for its treatment, which will be converted into a closed environmental chamber. Maurizio Marabelli reported on the

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use of polarization resistance measurements to monitor conservation treatment in the interior of bronze sculptures. This year's meeting of the Metals Working Group will take place at the ICOM-CC meeting in Edinburgh. For further information write Ian MacLeod, Coordinator of the Metals Working Group, at the Materials Conservation Department, Western Australian Maritime Museum, Cliff Street, Fremantle, Western Australia 6160, telephone 61-9-431-8499, fax 61-9-335-7224.

The latest volume in the series published by the Materials Research Society, **Materials Issues in Art and Archaeology IV**, has just been issued as *MRS Symposium Proceedings Volume 352* [ISBN 1-55899-252-9]. The symposium was held in Cancun, Mexico, from 16-21 May 1994, and the volume was edited by Pamela V. Vandiver, James R. Druzik, Jose Luis Galvin Madrid, Ian C. Freestone, and George Segan Wheeler. The 900 pages include 82 papers on a wide variety of methods, materials, and issues. Papers on metals can be found in the sections on new methods, the imitation of one material by another, stable protective coatings, process reconstruction, technological style, source characterization, and materials characterization. The volume can be ordered (code: 352-J) from the Materials Research Society Publications Department, 9800 McKnight Road, Pittsburgh PA 15237-6006 USA, telephone 412-367-3012, fax 412-367-4373, for US\$68 including shipment within the US (\$60 to MRS members) and \$85 elsewhere. For distribution in Europe, Africa and the Middle East, write Clarke Associates - Europe Ltd., Fourth Floor The Rackhay, Queen Charlotte Street, Bristol BS1 4HJ, England, telephone 44-272-268864, fax 44-272-226437. The earlier volume, **Materials Issues in Art and Archaeology III** (*MRS Symposium Proceedings Volume 267*, ISBN 1-55899-162-X) can still be ordered (code: 267-J) for \$62 in the US (\$54 to MRS members) and \$70 elsewhere. They accept Visa, MasterCard, American Express and Diners Club.

There are papers devoted to metals by Garenne-Marot, Wayman and Pigott, Kusimba, Killick and Cresswell, and Miller in the *MASCA Research Papers in Science and Archaeology* [ISSN 1048-5325] *Supplement to Volume 11, 1994: Society, Culture, and Technology in Africa*, edited by S. Terry Childs. It is available, 108 pages hardbound, from University Museum Publications, 33rd and Spruce Streets, Philadelphia PA 19104 USA, telephone 215-898-4090, fax 215-898-6657, for US\$22.50 (\$17.50 for MASCA subscribers.) They accept Visa and MasterCard.

The proceedings of the International Symposium on the Catalan Forge held at Ripol in Catalonia 13-17 September 1993, **La farga catalana en el marc de l'arqueologia siderúrgica**, has just been published by the Ministry of Social and Cultural Affairs of the Government of Andorra [ISBN 99920-0-089-9]. Its 500 pages are in three sections.

One is on the Catalan forge, another on direct smelting in the Iberian peninsula. These are mainly in Catalan. The third section is in English or French and covers other parts of the world. An interesting paper by Vagn Fabritius Buchwald, "On the analysis and characterization of slags, with Danish bloomery slags as an example" (pp. 468-474), introduces the concept of a "glass factor" in the interpretation of ores, slags, and slag inclusions in iron objects. The volume was edited by Estanislau Tomàs I Morera; for more information, write Dr. Thomàs at Societat Catalana de Tecnologia, Travessera de Dalt 12, 08024 Barcelona, Spain; fax 34-3-200-4642.

The proceedings of the NATO Advanced Research Workshop on Prehistoric Gold in Europe held September 27 to October 1st, 1993, in Seon, Germany, **Prehistoric Gold in Europe: Mines, Metallurgy and Manufacture**, edited by Giulio Morteani and Jeremy P. Northover, has been issued in cooperation with NATO Scientific Affairs Division as Volume 280 in the *NATO Advanced Science Series E: Applied Sciences*. It is available [ISBN 0-7923-3255-5] from Kluwer Academic Publishers Group, P. O. Box 322, 3300 AH Dordrecht, The Netherlands; in Canada and the US from Kluwer Academic Publishers, 101 Philip Drive, Norwell MA 02061 USA. Peter Northover tells me that the volume costs £187, or US\$40 each if ordered in groups of 5 for teaching purposes. A second gold volume, on the workshop held in November 1994 in Limoges, just went to press.

The proceedings of the conference held at the British Museum in 1992 to celebrate the 500th anniversary of the discovery of the New World, **Trade and Discovery: The scientific study of artifacts from post-Medieval Europe and beyond**, was edited by Duncan Hook and David Gaimster and has been issued as British Museum Occasional Paper 100. Half of the volume is taken up with ceramics, glass, and contact studies (these are not limited to trade with the Americas); the rest is given over to metals—iron, lead and copper alloys as well as precious metals. It is available [ISBN 0 86159 109 7] from the Mail Order Department, British Museum Press, 46 Bloomsbury Street, London WC1B 3QQ England, telephone 44-171-323 1234, fax 44-171-436 7315, for £20 plus £1.90 postage and packing in the UK, £3 surface mail overseas. They accept Access, American Express, Diners Club, Eurocard and Visa.

There is a section on metals (pp.183-350) in the volume edited by David A. Scott and Pieter Meyers, **Archaeometry of Pre-Columbian Sites and Artifacts**, proceedings of the symposium organized by the UCLA Institute of Archaeology and the Getty Conservation Institute in Los Angeles 23-27 March 1992. It includes papers on silver and lead in Peru by Howe and Peterson (pp.185-198), copper alloy production at Bâtan Grande by Merkel, Shimada, Swann and Doonan (pp. 199-227), North American native copper by Childs (pp. 229-253), site seriation by NNA of copper by Hancock et. al. (pp.

255-25), gold processing in south Ecuador by Rehren and Temme (pp. 267-284), platinum alloys by Scott and Bray (pp.285-322), and gold analyses by Rovira (pp. 323-350). There is also a discussion of the meaning of metal color by Lechtman (pp. 3-12.) The volume [ISBN 0-89236-249-9] can be ordered from the Getty Trust Publications Distribution Center, P. O. Box 2112 - Dept CDN5, Santa Monica CA 90407-2112 USA, telephone 310-453-5352 or 800-223-3431, fax 310-453-7966, for US\$55 plus \$3 shipping in Canada and the US, \$5 overseas. Outside Canada, the US, the UK, Europe and the Middle East, order from Oxford University Press, 2001 Evans Road, Cary NC 27513 USA, telephone 800-451-7556, fax 919-677-1303.

As mentioned in a previous column, Sändig began reprinting the Braunschweig edition of Ludwig Beck's *Die Geschichte des Eisens in technischer und kultur-geschichtlicher Beziehung*. They have now issued all 5 volumes, bringing the history up to the original publication date (1891). The publisher's address is Sändig Reprint Verlag, Hans R. Wohlwend, Am Schrägen Weg 12, FL-9490 Vaduz, Liechtenstein. They will send a prospectus. The set (DM1480,-), or separate volumes, can also be ordered through Anton Siegl Fachbuchhandlung GmbH, Postfach 80 17 03, D-81617 München, Germany, fax 49-89-470 49 53. Telephone orders (089-47 52 43) are taken only within Germany; overseas orders can be charged to Visa or Discover. Send your e-mail address to 100612.1045@compuserve.com to receive Siegel's Internet Newsletter every few weeks on new books and software on conservation and museology.

There is considerable debate going on presently concerning **stable isotope studies**, some of which has been published in the *Journal of Mediterranean Archaeology*. Issue number 1 of volume 8 (June 1995) includes a special section on lead isotope analysis and the Mediterranean metals trade that includes three papers and four sets of comments. According to Paul Budd, the Ancient Metallurgy Research Group at the University of Bradford has begun a two-year Tin Isotope Project that will explore the fractionation of tin isotopes in bronze smelting, casting and fabrication with the aim of developing a technique for quantifying the extent of bronze recycling in antiquity. At Oxford, Dr. Brenda Rohl received her degree and has returned to Australia. Her dissertation, on lead isotope ratios of British ores and artifacts, will be published as a British Museum Occasional Paper.

The Archaeometallurgy Committee of the Historical Metallurgy Society is developing **data sheets** for use on site. Available are: 1. crucibles and molds, 2. precious metal refining, 3. iron working processes, 4. geophysical techniques applied to early metalworking sites, 5. bloomery iron smelting slags and other residues, 8. currency bars and other forms of

trade iron, 10. hammerscale, 11. metallographic examination, 12. chemical analysis of metalwork and metalworking debris. In preparation are: 6. bloom refining and iron smithing slags and other residues, 7. blooms billets, forging blanks and wast, 9. sampling strategies for metalworking residues and post-excavation work, and 13. metallurgical databases. They are available on request for an A5 stamped, addressed envelope from David Starley, Ancient Monuments Laboratory, English Heritage, 23 Saville Road, London W1x 1AB, England; telephone 44-171-973-3306; fax 44-171-973-3330; e-mail D.Starley@eng-h.gov.uk.

Historical Metallurgy, *The Journal of the Historical Metallurgy Society*, is catching up with its publication schedule. Volume 28 Number 1 (1994) has already reached us in the colonies. According to Justine Bayley Number 2 is expected to be in the mail before Christmas, with both issues of Volume 29 (1995) mailed by Eastertime.

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; e-mail cal.meg@ic.si.edu. □

Conference Report

Archaeological Prospection 1995 Bradford, UK, 12-13 September 1995

Variety was certainly the keynote of the Archaeological Prospection 1995 conference, held at the University of Bradford, UK, on 12th and 13th September. The techniques discussed ranged from acoustic probing of the shallow subsurface to photo-imaging of features hidden beneath the plaster of standing buildings; the scale varied from the interpretation of a magnetic anomaly from a single posthole to aerial photography covering the East Anglian Fens, and the geographical areas represented were as diverse as Slovakia, Turkey, Japan and China. Despite the diversity, common themes ran through the sessions, particularly emphasizing the challenge of improving and refining the interpretation of results and the need for maintaining and monitoring professional standards.

The organizing committee was drawn from the Department of Archaeological Sciences at the University of Bradford, Geophysical Surveys of Bradford and Geoscan Research. Their aim was to provide a forum for the discussion of a series of detailed and specific papers on aspects of

tion of archaeologists and other users of the results obtained from these techniques. There is often insufficient time for such detailed discussions at meetings with broader themes such as Archaeometry, but archaeologists are poorly represented at more specialist geophysics meetings. The conference seemed to have found an appropriate niche as it attracted 80 participants from 10 different countries, including those involved in research and development, practitioners of prospection and those who use the results.

The conference commenced with a session entitled **Determining Problems and Suggesting Solutions in Shallow Depth Determination**. The papers discussed the potential and problems of determining the depth of archaeological features from the anomalies detected by methods as diverse as ground penetrating radar, acoustic probing, seismic refraction and resistivity measurements. This led into a session looking at **The Interplay Between Display and Interpretation** in which recent developments in the processing, interpretation and final presentation of information provided by geophysical techniques were presented. The first day concluded with a session entitled **Aspects of Remote Sensing in Archaeology**, which took participants from aerial photography in the UK and Slovakia, back down to earth with an examination of ground based remote sensing of standing buildings, and discussed how such diverse information might be combined to aid interpretation.

The second day began with a series of papers on **Soil Science in Prospection**, which focused particularly on the use of magnetic susceptibility and phosphate analysis in archaeological prospection, innovative ways in which they can be measured and the limitations of the techniques. In order to direct attention to the application of many of the methods and techniques previously discussed in the conference, much of the remainder was taken up with **Archaeological Prospection in Action**. The seven papers in this session presented results from prospection at sites including the settlement mound at Troia; a Hittite settlement in Turkey; a Medieval refuge and Celtic and Roman house and temple in Germany; graves in San Xia, China; hillforts and a Roman Fort and Vicus in England and a broch site in Shetland. Papers with broader themes also discussed the development in the use of geophysical techniques in Ireland and China. This session provided impressive evidence of what can be achieved by prospection on archaeological sites. The conference concluded with a wide-ranging structured discussion session entitled **Practice and Professional Standards in Archaeological Geophysics** in which delegates looked towards future expansion in the use of archaeological geophysics and how this might be encouraged, while still ensuring the maintenance of professional standards.

The oral presentations were supplemented by 14 poster presentations and a variety of commercial displays of software and hardware.

Discussions with participants suggested that the conference provided a useful overview of current research in archaeological prospection and helped towards setting the agenda for the future. The meeting was supported by Wileys, publishers of the journal *Archaeological Prospection*, and many of the papers will be published in forthcoming issues, giving readers of this review the opportunity to see for themselves the diversity of recent developments in archaeological prospection.

Contributed by Dr. Cathy Batt, Department of Archaeological Sciences, University of Bradford, Bradford, BD7 1DP United Kingdom; e-mail C.M.Batt@bradford.ac.uk. □

Call for Papers

Symposium on Materials Issues in Art and Archaeology V Boston, MA December 2–6, 1996

HOW TO SUBMIT AN ABSTRACT

The Symposium on Materials Issues in Art and Archaeology V (see page 5, following), will take place in Boston, MA, December 2–6, 1996 as part of the Fall Meeting of the Materials Research Society (MRS). The abstract deadline is June 21, 1996. To submit an abstract, please adhere to the following guidelines:

- **E-Mail:** Send your request for an abstract template to fall96@abstracts.mrs.org. In the text of the request, include the words **send form**. To request any other information from MRS, e-mail your request to info@mrs.org.
- **MRS WWW Homepage:** An abstract template can be accessed and submitted via <http://www.mrs.org>. Follow the links there to Meetings, How to Submit an Abstract.

Address questions concerning content to:

Pamela Vandiver, CAL, Smithsonian Institution, Washington DC 20560 USA; tel. 301-238-3700 x162; fax 301-238-3709; e-mail pbv@cal.si.edu. □

Materials Issues in Art and Archaeology V, Boston, MA, U.S.A.

MATERIALS RESEARCH SOCIETY, FALL MEETING, DEC 2-6, 1996

Abstract Deadline: 21 June 1996

Co-sponsored by The Getty Conservation Institute and the Conservation Analytical Laboratory of the Smithsonian Institution

This symposium will provide a multidisciplinary forum for scientific and technological issues in art, archaeology, conservation, and preservation. Of particular interest will be contributions which explore the interface and overlap among traditional materials science, the history of technology, and the archaeological and conservation sciences, or that investigate new methods and applications of materials science in art and archaeology. Some areas of interest for this symposium are:

ANCIENT AND HISTORICAL MATERIALS TECHNOLOGIES

- Identification of workshops and crafts, analysis of production and utilization sites, production events, tools, and techniques
- Compositional, structural, and other technical studies of artifacts and site-specific analysis of complexes of craft practices
- Technology transfer and scientific reconstruction of the impact and implications of trade
- Field identification of materials and the permanent labeling of objects

CONSERVATION AND PRESERVATION SCIENCE

- Environmental and structural monitoring, control, and stabilization
- Modeling and testing of materials and objects of art, archaeology, and architecture, including related conservation materials
- Deterioration and treatment of materials of art, archaeology, and architecture

Abstracts should be typed camera-ready on the standard MRS abstract form (see previous page for more information) and sent prior to 21 June 1996 to MIAA-V Symposium Abstracts, Materials Research Society, 9800 McKnight Road, Pittsburgh, PA 15237 USA, or FAX 412-367-4373. MRS can be contacted at 412-367-3003.

Technical Organizing Committee:

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Meetings Calendar

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New listings are marked by an *; 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.

1996

May 20-22. American Quaternary Association 14th Biennial Meeting. Flagstaff, Arizona, USA. Jim Mead, Dept. of Geology, Northern Arizona University, Flagstaff, AZ 86011, USA; fax: 520-523-9220; email: jim@vishnu.glg.nau.edu.

May 20-24. International Symposium on Archaeometry. Urbana-Champaign, Illinois. Sarah Wissemann, ATAM Program, University of Illinois, 116 Observatory, 901 S. Mathews, Urbana, IL 61801, USA; tel: 217-333-6629; fax: 217-244-0466; email: wisarc@ux1.cso.uiuc.edu. 18(3).

May 21-26. 22nd Annual Workshop and Conference, International Institute for Conservation of Historic and Artistic Works-Canadian Group. Montreal, Quebec, Canada. Johanne Perron, IIC-GC Congress '96, MBAM, C.P. 3000, succ. H, Montreal, Quebec, Canada H3G 2T9; tel: 514-285-1600; fax: 514-285-4019.

May 24-26. 3rd Eastern States Rock Art Conference. University of Maine, Machias, Maine, USA. Mark Heddon, Maine Historic Preservation Commission, 55 Capitol St., Augusta, ME 04333, USA.

May 28-June 1. 13th International Bronze Conference. Cambridge, Massachusetts, USA. Amy Brauer, Arthur M. Sackler Museum, Harvard University Art Museums, 32

Quincy Street, Cambridge, MA, 02138, USA; email: brauer@husc.harvard.edu.

May 30-June 2. Society for Industrial Archaeology, Annual Conference. Sacramento, California, USA. Patrick Martin, Dept. of Social Sciences, Michigan Technological University, 1400 Townsend Drive, Houghton, MI 49931, USA; tel: 906-487-2070; fax: 906-487-2468; email: pem-194@mtu.edu.

June 10-14. Public Lecture Series - Global Change and the Americas. NASA/Goddard Space Flight Center. Paula Webber, USRA, 7501 Forbes Boulevard, Suite 206, Seabrook, MD 20706, USA; tel: 301-805-8396; email: paula@gvsp.usra.edu.

June 12-15. Annual Meeting of the American Institute for Conservation of Historic and Artistic Works. "Collaboration in the Visual Arts." Jay Kureger, National Gallery of Art, DCL, 6th St. and Constitution Ave. NW, Washington, DC 20005, USA; tel: 202-452-9545; fax: 202-452-9545.

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; email: dnichols@greenwood.cr.usgs.gov. 18(1):19.

July 20-24. British Archaeological Association Annual Conference. Bristol. Helen Caton, BAA Conference, PO Box 31, Bristol BS99 1PW, UK.

August 3-9. 5th in Triennial Oxford Conferences in Archaeoastronomy: "Cultural Aspects of Astronomy: An Intersection of Disciplines." St. John's College, Santa Fe, New Mexico, USA. Rolf Sinclair, Division of Physics, National Science Foundation, 4201 Wilson Blvd., Arlington, VA 22230, USA; tel: 703-306-1809; fax: 703-306-0566; email: rsinclair@nsf.gov; URL: <http://www.phys.umn.edu/zeilik/oxfordV>.

August 4-11. 24th Meeting of the Mexican Society of Anthropology: "Anthropology and History of Western Mexico. Tepic, Nayarit, Mexico. Linda Manzanilla, Instituto de Investigaciones Antropológicas, UNAM-Cd. Universitaria, 04510 Mexico D.F.; fax: 52-5-622-96-51; email: Imanza@servidor.unam.mx.

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.

August 25-30. IIC 16th International Congress, International Institute of Historic and Artistic Works: "Archaeological Conservation and its Consequences." Falconer Center, Copenhagen. IIC, 6 Buckingham St., London WC2N 6BA, UK; fax: 44-171-976-1564. The Congress will offer new perspectives on the conservation of archaeological sites and finds, both on land and underwater.

Sept. 8-14. XII Congress of the International Union of Prehistoric and Protohistoric Sciences. Forlì, Italy. Secretaria XIII Congresso U.I.S.P.P., Via Marchesi, 12-47100 Forlì, Italia; tel: 39-543-35725; fax: 39-543-35805.

Sept. 30-Oct. 3. 6th International Conference on Ground Penetrating Radar. Sendai, Japan. Dr. Motoyuki Sato, GPR '96 Technical chairperson, Department of Resources Engineering, Faculty of Engineering, Tohoku University, Sendai 980-77, Japan; tel: 81 (22) 217-7399; fax: 81 (22) 217-7401; email: gpr96@earth.tohoku.ac.jp; URL: <http://www.earth.tohoku.ac.jp/gpr96.html>. Abstract deadline: 5 April 1996.

Oct. 9-11. 4th International Congress, Association for the Study of Marble and Other Stones Used in Antiquity. Bordeaux, France. Université de Bordeaux III-CNRS, Maison de l'Archeologie, Applied Physics Lab., CRIAA, F-33405 Talence

- Cedex, France; tel: 33-56-84-51-60; fax: 33-56-84-51-57.
- Oct. 26-29. Eastern States Archeological Federation, 62nd Annual Meeting. Wilmington, Delaware. Abstracts due June 1. Faye L. Stocum, DE SHPO, #15 The Green, Dover, DE 19901, USA; tel: 302-739-5685.
- Oct. 28-31. Geological Society of America Annual Meeting. Denver, Colorado, USA. Vanessa George, Geological Society of America, 3300 Penrose Place, Boulder, CO 80301, USA; tel: 303-447-2020; fax: 303-447-1133.
- Nov. 10-Dec. 13. Pan-American Course on the Conservation and Management of Earthen Architectural and Archaeological Heritage; co-organized by the Instituto Nacional de Cultura del Perú-Dirección Regional La Libertad (INC-DRLL), International Centre for Earth Construction-School of Architecture of Grenoble (CRATerre-EAG, Gaia Project), the International Centre for the Study of the Preservation and the Restoration of Cultural Property (ICCROM, Gaia Project), and the Getty Conservation Institute (GCI), with support of the World Heritage Fund of UNESCO. Chan Chan, Trujillo, Peru. Training Program, The Getty Conservation Institute, 4503 Glencoe Avenue, Marina del Rey, CA 90292, USA; tel: 310-822-2299; fax: 310-821-9409. Application due 15 Dec. 1995. The course is geared toward professionals and technicians in anthropology, archaeology, architecture, engineering, conservation, and other disciplines involved with the conservation and management of cultural heritage. The course will be conducted in Spanish.
- Nov. 20-24. American Anthropological Association Annual Meeting. San Francisco, California, USA. American Anthropological Association, 4350 North Fairfax Drive, Suite 640, Arlington, VA 22203, USA; tel: 703-528-1902.
- * Dec. 2-6. Materials Research Society Fall Meeting. Boston, Massachusetts, USA. Materials Research Society, 9800 McKnight Road, Pittsburgh, PA USA; tel: 412-367-3003; fax: 412-367-4373. The 5th symposium in Materials Issues in Art and Archaeology will be held at this meeting. Abstract deadline: 21 June 1996. 18(4):4-5.

1997

- unknown. Millennial Observance of Viking Invasion of 997. Tavistock, West Devon, England. Julian Barnicoat, 10 Cuxton Meadows, Buckland Monachorum, Yelverton, Devon, PL20 7NG, UK.
- Feb. 10-13. Australasian Archaeometry: Retrospectives for the New millennium, 6th Australasian Archaeometry Conference. Australian Museum, Sydney, Australia. Secretariat, 6th Australasian Archaeometry Conference, AINSE< PMB 1, Menai NSW 2234, Australia; tel: 61-2-439 8220; fax: 61-2-439 6561; email: tuniz@atom.ansto.gov.au.
- April 2-6. Society for American Archaeology, Annual Meeting. Opryland, Nashville, Tennessee, USA. SAA, 900 Second St. NW, Suite 12, Washington, DC 20002, USA; tel: 202-789-8200.
- April 7-11. Materials Research Society, Spring Meeting. San Francisco, California, USA. Materials Research Society, 9800 McKnight Road, Pittsburgh, PA 15237, USA; tel: 412-367-3003; fax: 412-367-4373.
- August 28-Sept. 3. IV International Conference on Geomorphology. Bologna, Italy. IV International Conference on Geomorphology, Planning Congressi s.r.l., Via Crociali 2, I-40138 Bologna, Italy.
- Sept. 8-12. 12th International Numismatic Congress. Berlin, Germany. Staatliche Museen zu Berlin - Preussischer Kulturbesitz, Munzkabinett, Bodestraße 1-3, D-10178 Berlin, Germany.
- Oct. 20-23. Geological Society of America, Annual Meeting. Salt Lake City, Nevada, USA. Vanessa George, Geological Society of America, 3300 Penrose Place, Boulder, CO 80301, USA; tel: 303-447-2020; fax: 303-447-1133.

Dec. 1-5. Materials Research Society, Fall Meeting. Boston, Massachusetts, USA. Materials Research Society, 9800 McKnight Road, Pittsburgh, PA 15237, USA; tel: 412-367-3003; fax: 412-367-4373. □

Contribute to future issues of the SAS Bulletin

Contributions are welcomed on the topics of:

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Book reviews should be coordinated with the book review editor, and new meetings with the meetings calendar editor.

Send contributions on diskette or e-mail them to:

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Society for Archaeological Sciences

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