

NEWSLETTER

of the

ARCHAEOLOGICAL GEOLOGY DIVISION

Geological Society of America

Volume 29, Number 2

December 2007



CALL FOR PROPOSALS, 2008 GSA ANNUAL MEETING October 5-9, Houston, TX DEADLINE DECEMBER 4

Although it seems as though we just returned from the 2007 Annual Meeting in Denver, it is time to think about next October in Houston. Next year's meeting will be jointly held between GSA, the Soil Science Society of America (SSSA), the American Society of Agronomy (ASA), the Crop Science Society of America (CSSA), and the Gulf Coast Association of Geological Societies with the Gulf Coast Section of SEPM (GCAGS), hosted by the Houston Geological Society (HGS). We have had wonderful representation of the Archaeological Geology Division in the last few Annual Meetings, and would like to continue that trend next year, particularly as the collaboration with the SSSA allows for sessions of mutual interest between soil scientists and archaeological geologists. Please consider submitting a session proposal for the meeting, but think fast! The deadline for submissions is December 4, 2007.

For more information, visit the Joint Meeting website at <https://www.acsmeetings.org/2008/>.



CELEBRATE THE DIVISION'S 30th ANNIVERSARY!

The Archaeological Geology Division, having been established by GSA Council on May 3, 1977, celebrated its 30th birthday this year. You can commemorate the occasion by donating \$15 to the Richard Hay Student Travel Award and receiving in return a t-shirt with a special 30th birthday logo. The shirts are available in a variety of sizes and in the geologically appropriate colors "sand" and "stone blue". See the order form at the end of the newsletter for details on obtaining one of these shirts, and you can wear your support for the Division and the Student Travel Award on your sleeve!

FOR MORE INFORMATION ON THE DIVISION, PLEASE VISIT THE DIVISION WEBSITE
<http://rock.geosociety.org/arch>

**ARCHAEOLOGICAL GEOLOGY DIVISION
MANAGEMENT BOARD, 2007-2009**

Chair

Andrea Freeman
Dept of Archaeology
University of Calgary
Calgary, AB T2N 1N4
(403) 220-2792
freeman@ucalgary.ca

Vice-Chair

Kathleen Nicoll
Dept of Geography, Univ of Utah
260 S. Central Campus Dr. Rm. 270
Salt Lake City, UT 84112
(801) 581-8218
kathleen.nicoll@geog.utah.edu

Secretary-Treasurer

C. Russell Stafford
Dept Geog, Geol, Anthro
Indiana State University
Terre Haute, IN 47809
(812) 237-3889
anstff@isugw.indstate.edu

Past Chair

Gary Huckleberry
3577 E. Nugget Canyon Place
Tucson, AZ 85718
(520) 615-2644
ghuck10@comcast.net

DIVISION SPONSORED AWARDS

**CLAUDE ALBRITTON FUND
FOR ARCHAEOLOGICAL GEOLOGY**

Under the auspices of the Archaeological Geology Division, family, friends and close associates of Claude C. Albritton, Jr. have formed a memorial fund in his honor at the GSA Foundation (see item in March, 1991 Newsletter). Initially, the fund was set up with a gift of several thousand dollars.

Members of the GSA Archaeological Geology Division, GSA members, and those who knew Claude Albritton are being asked to consider contributing to this fund. The Albritton Fund will provide scholarships and fellowships for graduate students in the earth sciences and archaeology.

Recipients of these awards will be students who have (1) an interest in achieving a M.S. or Ph.D degree in earth sciences or archaeology; (2) an interest in applying earth science methods to archaeological research; and (3) an interest in a career in teaching and academic research. Awards will be given in support of thesis or dissertation research, with emphasis on the field and/or laboratory parts of this research.

Deadline for submission: **May 31, 2008.**

RICHARD HAY STUDENT TRAVEL AWARD

The Archaeological Geology Division announces a \$650 travel grant for a student to attend the GSA's annual meeting. The grant is competitive and will be awarded based on the evaluation of the scientific merit of the research topic and the clarity of an expanded abstract for the paper prepared by a student for presentation in the Division's technical session at the meeting.

Deadline for submission: **September 20, 2008**

Submission of applications: Applications for both awards should be sent to archaeologicalgeology@hotmail.com. More information can be found at <http://rock.geosociety.org/arch/>. For further inquiries contact Awards Committee Chair Elizabeth Robertson at liz.robertson@usask.ca. To contribute to the Albritton Fund, send your gift to the GSA Foundation, designating the gift for this award.

RIP RAPP AWARD NOMINEES SOLICITED

The Archaeological Geology Division requests nominations for its annual Rip Rapp Archaeological Geology Award. The award is given for outstanding contributions to the interdisciplinary field of archaeological geology. Nominations should include a biographical sketch, a statement of outstanding achievements, and a selected bibliography of the nominee. To make nominations or for more information, contact Awards Committee Chair Elizabeth Robertson at liz.robertson@usask.ca. For additional details, please consult the Division website at <http://rock.geosociety.org/arch/>.

Deadline for receipt of nominations: **February 15, 2008.**

**OTHER FUNDING OPPORTUNITIES FOR
GRADUATE RESEARCH**

The **Student Funding Database** maintained by Ellery Frahm lists funding, grants, awards, and studentships for graduate students in geoarchaeology and related fields. The site has a straightforward interface, archive, and RSS feed. Newsletter readers are also asked to please help to keep this list updated. If your institution has a relevant funding opportunity, please send it to Ellery Frahm at frah0010@umn.edu. Thank you again to all those who have contributed! Visit the database at web.mac.com/elleryfracm/iWeb/Geoarch/ or do a Google search for "geoarchaeology funding."

**DOUGLAS C. KELLOGG FUND FOR
GEOARCHAEOLOGICAL RESEARCH**

The Douglass C. Kellogg Award provides support for thesis or dissertation research, with emphasis on the field and/or laboratory aspects of this research, for graduate students in the earth sciences and archaeology. Recipients of the Kellogg Award will be students who have an interest in achieving the M.S., M.A., or Ph.D. degree in earth sciences or archaeology; an interest in applying earth science methods to archaeological research; and an interest in a career in geoarchaeology. Initially, the amount to be awarded on an annual basis was \$500. The amount of the award given to the recipient will increase as the fund grows and the amount of the annual interest increases. The 2008 Award will be presented at the 73rd Annual Meeting of the SAA.

Requirements:

- A one page letter that briefly explaining the individual's interest and how he or she qualifies for the award
- Curriculum vitae
- Five (5) copies of a 3 to 4 page, double-spaced description of the thesis or dissertation research that clearly documents the geoarchaeological orientation and significance of the research. One illustration may be included with the proposal.
- A letter of recommendation from the thesis or dissertation supervisor that emphasizes the student's ability and potential as a geoarchaeologist.

Deadline: December 1, 2007

Contact: Dr. Christopher L. Hill, Department of Anthropology, Boise State University, 1910 University Drive, Boise, ID 83725-1950; E-mail: chill2@boisestate.edu.

**GEOARCHAEOLOGY:
AN INTERNATIONAL JOURNAL**

Geoarchaeology: An International Journal is now on the ISI Web of Science Database. On May 1, 2007, Jamie Woodward (University of Manchester) and Gary Huckleberry became the new Co-Editors. All Editorial Board members are now Associate Editors and will play a more active role in processing manuscripts and selecting reviewers.

Geoarchaeology is published 8 times per year and has a broad, interdisciplinary scope dealing with the understanding of archaeological sites, their natural context, and the material artifacts recovered from them. Manuscripts may include subjects from disciplines within the earth sciences (e.g., geography, pedology, climatology, geology, oceanography, geochemistry, geochronology, and geophysics) or those from biological sciences. Manuscript submission and review is fully electronic and processed through Manuscript Central, a web-based program for managing documents in the peer-review process. For more information, go to the "For Authors" link at:

<http://www3.interscience.wiley.com/cgi-bin/jhome/36011>.

**CONTENTS OF RECENT
ISSUES OF GEOARCHAEOLOGY**

Volume 22 Issue 8 (December 2007)

Research Articles

Analysis of adobe wall composition at the Chaves-Hummingbird Site, New Mexico, by diffuse reflectance spectrophotometry (p 825-844) *William Balsam, Bobby Deaton, Michael Adler*

Geophysical and geochemical investigations at two early copper age settlements in the Körös River Valley, Southeastern Hungary (p 845-871) *Richard W. Yerkes, Apostolos Sarris, Tod Frothing, William A. Parkinson, Attila Gyucha, Meredith Hardy, Luigi Catanoso*

Quantifying prehistoric soil erosion - A review of soil loss methods and their application to a Celtic square enclosure (Viereckschanze) in Southern Germany (p 873-889) *Matthias Leopold, Jörg Völkel*

Geoarchaeology of stratified paleoindian deposits at the Big Eddy site, Southwest Missouri, U.S.A. (p 891-934) *Edwin R. Hajic, Rolfe D. Mandel, Jack H. Ray, Neal H. Lopinot*

Book Reviews by:

Russell K. Skowronek (p 935-936), Brian M. Fagan (p 937-939), Anastasia Steffen (p 939-942), C. Russell Stafford (p 942-944), Stuart W. Manning (p 945-947), Robert D. Drennan (p 947-949)

Volume 22 Issue 7 (October 2007)

Research Articles

Preliminary soil micromorphology studies of landscape and occupation history at Tabon Cave, Palawan, Philippines (p 685-708) *Helen Lewis*

Stratigraphic and geochronological context of human habitation along the Galana River, Kenya (p 709-728) *David K. Wright,*

Steven L. Forman, Chapurukha M. Kusimba, James Pierson, Jeaneth Gomez, Peter Tattersfield

Multidisciplinary investigations at Stalag Luft III allied prisoner-of-war camp: The site of the 1944 "great escape," Zagan, Western Poland (p 729-746) *J.K. Pringle, P. Doyle, L.E. Babits*

Sourcing fire ash on archaeological sites in the Western and Northern Isles of Scotland, using mineral magnetism (p 747-774) *M.J. Church, C. Peters, C.M. Batt*

Identification of lime plaster in prehistory using petrographic methods: A review and reconsideration of the data on the basis of experimental and case studies (p 775-796) *Panagiotis Karkanias*

Analysis of burnt schist outcrops in the Alps: Relation to historical archaeology and Hannibal's crossing in 218 B.C. (p 797-816) *William C. Mahaney, Michael W. Milner, Rana Sodhi, Ronald I. Dorn, Sal Boccia, Roelf P. Beukens, Pierre Tricart, Stéphane Schwartz, Eva Chamorro-Perrez, René W. Barendregt, Volli Kalm, Randy W. Dirszowsky*

Book Reviews by:

E. James Dixon (p 817-819), David L. Carlson (p 820-822), Katleen Deckers (p 822-824)

Volume 22 Issue 6 (August 2007)

Special Issue: Eastern Mediterranean and Near Eastern Geoarchaeology: Part 2

Introduction (p 557-558) *K. Deckers, M. Fuchs*

Research Articles

A reassessment of the Holocene stratigraphy of the Wadi Hasa Terrace and Hasa formation, Jordan (p 559-588) *Joseph Schuldenrein*

Geomorphology, site distribution, and Paleolithic settlement dynamics of the Ma'aloula region, Damascus Province, Syria (p 589-606) *Andrey E. Dodonov, Andrew W Kandel, Aleksandra N. Simakova, Mohammed al-Masri, Nicholas J. Conard*

Holocene climatic change and human settlement between the central Sahara and the Nile Valley: Archaeological and geomorphological results (p 607-620) *Olaf Bubbenzer, Heiko Riemer*

Long-term site formation processes at the natural springs Nadaouiyeh and Hummal in the El Kowm Oasis, Central Syria (p 621-640) *Jean-Marie Le Tensorer, Reto Jagher, Philippe Rentzel, Thomas Hauck, Kristin Ismail-Meyer, Christine Pümpin, Dorota Wojtczak*

The correlation between Hamra and the Paleolithic on the Coastal Plain of the Southern Levant (p 641-651) *Stanislav A. Laukhin, Vadim A. Ranov, Valerya A. Volgina*

The impact of geology and geomorphology on cave and rockshelter archaeological site formation, preservation, and distribution in the Zagros mountains of Iran (p 653-669) *Saman Heydari*

Advantages and limitations of thermoluminescence dating of heated flint from Paleolithic sites (p 671-683) *Daniel Richter*

FEATURED RESEARCH

Geoarcheology of a Middle Archaic Site in Wyoming: Contexts for Exploration.

Mark L. Howe, Karin Bryan, Craig Bromley. Bureau of Land Management, Lander Field Office, Lander, Wyoming.

Field work for the Bureau of Land Management in Lander, Wyoming over the last several months has revealed a large (40 acre) Middle Archaic to Late Prehistoric site with a small Historical Component. This site is situated near a permanent spring at an elevation of about 7100 ft and an outcrop of Chert and possible Quartzite deposits on the northwest side of the site. The site itself has yielded a surface collection of over 20 projectile points of various source material and 20 different kinds of material ranging from Obsidian, Chalcedony, Chert, Quartzite, Basalt and Quartz. This area is composed of sage and grassland with native rocks of Sandstone and Granite to the West and North and is located in the geologic setting of the extreme southern end of the Wind River Range (Love and Christianson: 1985).

Soil development in the site is low on the bedrock outcrops to mature soils in the ravine and adjacent slopes. Investigations for site chronology and scope have yielded buried deposits consisting of hearths (Photo 1), bands of staining (Photo 2) and exposure of adjacent stains and artifacts caused by our friends the range allotment cow. The site recording has spanned several months due to weather conditions, project workload and finding the site boundaries of which gave us the name of the site: Griff's Hell Site, named after the project proponent.

The majority of buried material centered near the southern part of the site in the ephemeral arroyo leading north to the permanent spring source. The areas in the arroyo and the trails leading off the adjoining topography helped to find the cultural deposits. Trowel scrapings with late October light helped to expose a fire pit in Photo 1 and further analysis of the photo revealed a second stain to the right that was not observable during the recording of the site. Both stains show considerable promise for further analysis with intact deposits below them in the hearth floor (Photo 1). To the south of these hearths about three meters away we found peculiar horizontal staining (Photo 2) that continued south along the arroyo side on the east wall.



Photo 2. Close-up of staining (trowel points north).



Photo 1. Hearth with secondary hearth to the right.

by about 15 cm on average with some concretions on the bottom of the lowermost stain. The stains show a mottled appearance with no observable artifacts associated with them and continued in the arroyo south and north. Further testing will be required to warrant if these are cultural or naturally derived features.

Site recording along Point Ridge revealed another stain with artifacts that was exposed by cattle. Our initial analysis leads us to believe this is a well-stratified site ranging in age from at least Middle Archaic to Late Prehistoric with a substantial trade network in and out of the area (McKean Obsidian Point, Bifaces of Dendritic Chert, and McKean Quartzite Points) and consisting of seasonal occupation.

Bibliography

Love, J.D., and Christiansen, A.C., 1985, Geologic Map of Wyoming: U.S. Geological Survey, scale 1:500,000.

FEATURED RESOURCE

Computers and Geoarchaeology: A Soil Analysis Support System for Archaeologists

Collaboration of geoarchaeologists and computer scientists at the University of Stirling in the UK has produced an internet geoarchaeological resource designated SASSA (Soil Analysis Support System for Archaeology). It is a mobile knowledge-based tool for use by archaeologists in the field for recording, analysis and interpretation of soils and sediments. It is free and easily accessible at the home page www.sassa.org.uk.

It is standard practice for archaeologists on site to undertake a basic assessment of sediments in the field employing, for example, the Munsell Soil Colour Chart and a hand texture flow chart to determine quantities of sand, silt and clay in the soil. A more comprehensive, and perhaps accurate, assessment requires the expertise of a specialist. However, a geoarchaeologist or pedologist is rarely permanently on site to fully describe the samples, pose the relevant questions, apply the appropriate analytical techniques, or critically evaluate the results. It is in that context that the SASSA facility provides on-site access to these procedures by linking to specialist literature through a computer programme. It is hoped that use of the tool, although not replacing the knowledge of an expert geoarchaeologist, will aid and guide the novice soil analyst in the steps to take, whilst also providing sufficient background information about the science to minimise error.

The system does, in fact, incorporate two systems: the field tool (which provides users in the field with help recording and interpreting soils) and the Wiki (a knowledge base that contains background tutorials, information about analytical techniques and case studies). The field tool is designed to be used for reference and teaching not just during fieldwork, but also in the classroom, by students, academics and commercial archaeologists. It has links to the Wiki to explain the

purpose of recording specific features such as soil colour, stoniness and soil porosity. It also forms a useful record for the geoarchaeologist, who is rarely on site all the time, but will at the end of the excavation phase have a more complete record of images and artefact descriptions than would otherwise be the case. In order to cope with the changing locations of archaeological excavations, the field tool can be accessed on a mobile device such as a PDA (Personal Digital Assistant) or a tablet computer, allowing descriptions of sediments to be entered directly. In the absence of such equipment, information from the original field context sheets may be entered later on the more traditional desktop at the excavation headquarters. As network connectivity at an archaeological site cannot be guaranteed, due to the nature of the environment or remoteness of locations, the programme can be downloaded to be stored on a computer. Alternatively, there is a

downloadable USB version of SASSA, i.e. 'SASSA on a stick'. However, these will clearly lack any recent upgrading of the field tool, or updating of information on the Wiki, until an internet connection is restored. The field tool can be used by simply signing in at the link from the SASSA home page.

In addition to the descriptive facility, the field tool includes a potentially useful interpretation function. In this case, use is made of decision trees to assist soil interpretation on-site. It acts to help identify the likelihood of certain soil properties being present at a given site, addressing such questions as: Is the soil natural? Buried? Affected by bioturbation? Affected by waterlogging? Showing evidence of burnt material? Information is provided in the form of a checklist of features associated with, for instance, bioturbation, as well as uncertainties in detecting bioturbation. At the end of the questions, the user is given a percentage probability that the deposit is affected by bioturbation along with links to information about how the interpretation was made and ideas of further field and laboratory tests that could be carried out.

Whilst the field tool is capable of working in isolation, it offers a superior experience when operated in unison with the Wiki as it provides the user with a wider set of reference material, obtainable through information access points (Figure 1). The 'Wiki' class of software tool, similar to the on-line encyclopaedia 'Wikipedia', allows geoarchaeological

The screenshot shows a web-based data entry form for soil analysis. It includes several dropdown menus and a text input field. At the top right and bottom right of the form are 'Save Data' buttons. Blue information icons (i) are placed to the right of several dropdown menus.

Dominant Stone Size	Coarse pebbles [20-60 mm]	i
Stone Frequency	slightly stony [1% - 15%]	i
Stone Distribution	clustered	i
Stone Rounding	rounded	i
Stone Lithology/Types	2-5 stone types	i
Stone Orientation	random	i
General comments	Quartz, quartzite and sandstone including possible hammerstones and grinding stones	

Figure 1: A page of the field tool from a level on stoniness showing data boxes completed. The blue symbol to the right of the data boxes connects the user to the Wiki where they can find information on what can be learnt from recording this feature.

knowledge to be uploaded and modified by registered users rather than just the site developer. This ensures that the information it contains remains accurate according to the current state of knowledge, as well as its evolution with the subject. However, unlike Wikipedia, which is edited by volunteers (basically anyone with access to the internet), the SASSA Wiki is edited only by people who are given editor rights by the SASSA administrators (currently at the University of Stirling). The approved editors have experience in geoarchaeology and/or have published in geoarchaeological journals, so preventing uploading of content not substantiated by the academic community. Editing for those with the required rights is relatively easy as SASSA incorporates an edit option, from which a new page appears where changes or additions may be made (Figure 2).

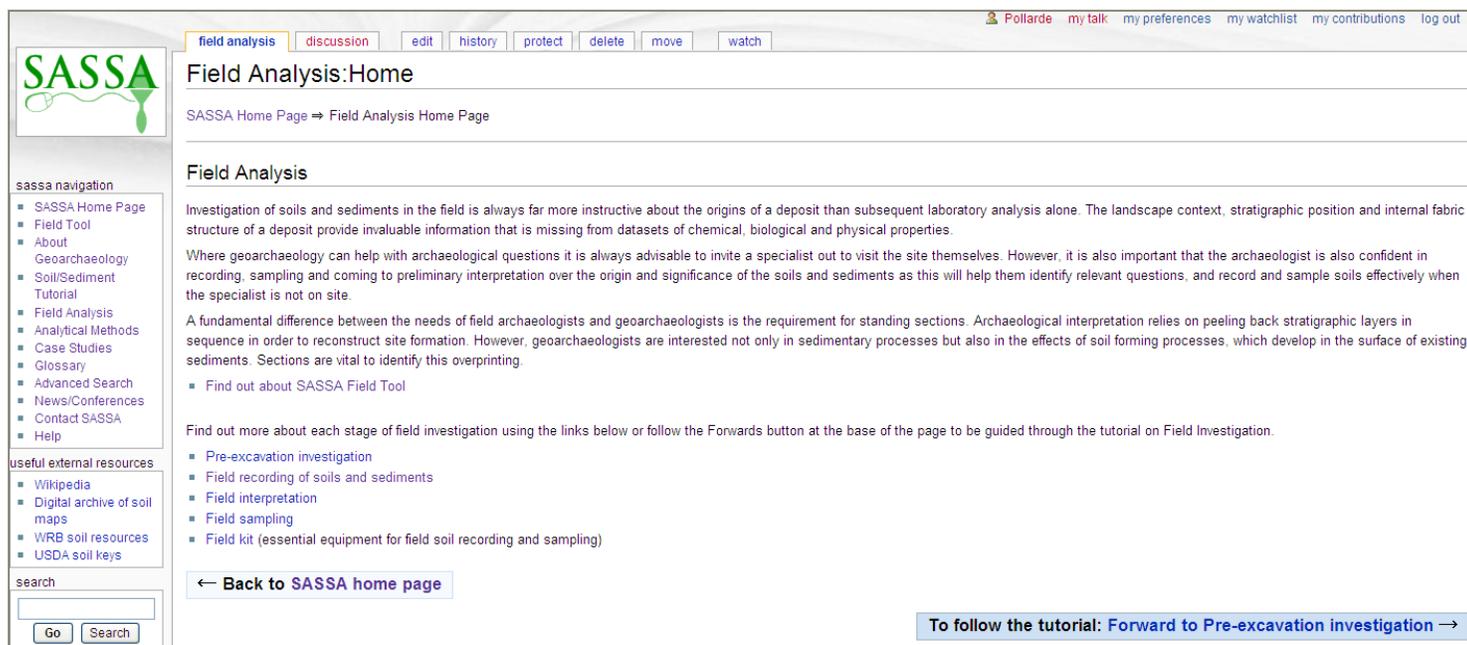


Figure 2: An example of a Wiki page from which the user can follow the links for a tutorial on field analysis or can use the left tool bar to go to different parts of SASSA including case studies, glossary or the field tool.

SASSA is an ongoing work, and older pages tend to be more comprehensive and balanced, as they have a longer period over which to be compiled, supplemented and discussed by various editors. A diverse and worldwide editor base also provides access and breadth of subject matter that may be otherwise inaccessible or little documented. However, some topics may still not be covered well, whilst others may be treated in great depth. The SASSA Wiki content has currently 718 pages. Links from the home page lead to tutorials on geoarchaeology; the formation of different types of soils and sediments; the recording and interpretation of soils and sediments in the field; and specialist analytical techniques. This is complemented by a glossary explaining useful geoarchaeological terms, a list of case studies written by people with geoarchaeological expertise, and help pages to aid the user navigate or contribute to SASSA. Further links provide information on searching SASSA, news and conferences in geoarchaeology and contact details for the SASSA authors. All the links above are found on the left tool bar of the SASSA site (Figure 2). The Wiki also has links to the field tool from here.

Acceptance of the SASSA tools by the intended user community is critical to the success of this project. The SASSA system has already been subjected a number of evaluation sessions. Though these need to continue, it is considered that as more people discover the website and provide further feedback for improvements and additions, and the editorial base among geoarchaeologists is widened to improve geographic, thematic and technical content, so the likelihood of its acceptance and regular use becomes more assured.

Contact Dr. Ted Pollard at the School of Environmental and Biological Sciences, University of Stirling, Stirling FK9 4LA, UK (e-mail: e.j.pollard@stir.ac.uk), if you would like editor rights to the SASSA Wiki. Otherwise, the Wiki content can be viewed without signing in, and it is also possible to sign in to use the field tool.

SOCIETY FOR ARCHAEOLOGICAL SCIENCES

The Society for Archaeological Sciences (SAS) was founded to establish a forum for communication among

scholars applying methods from the physical sciences to archaeology and to aid the broader archaeological community in assessing the potentials and problems of those methods. Base membership (including subscription to the SAS Bulletin)

is \$20. For membership inquiries, please contact Rob Sternberg, Department of Earth and Environment, Franklin & Marshall College, Lancaster, PA 17604-3003 USA. Phone: (717) 291-4134; Fax: (717) 291-4186; or e-mail: Rob.Sternberg@FandM.edu.

OF NOTE

Boise State University, Boise, Idaho, has created a **B.A. in Geoarchaeology**. This is a new interdisciplinary major that combines courses from the geosciences, anthropology as well as biology and chemistry. The degree combines contributions from the earth sciences (e.g. petrology, geomorphology, stratigraphy, and geochemistry) and anthropology (e.g., human prehistory, paleoecology, evolutionary and paleontology). Contacts for the major are: Dr. David Wilkins dwilkins@boisestate.edu and Dr. Christopher Hill chill2@boisestate.edu.

Students in geoarchaeology and related fields are encouraged to join the new **Geoarchaeology Student Listserv**, a moderated e-mail-based forum, offering a way to interact both professionally and socially. List members can get to know one another, share information and experience, pass around job and conference announcements, organize field trips and sessions, connect at conferences, vent frustrations, and talk about other subjects subscribers would like to discuss. For information about the listserv, please visit <http://web.mac.com/elleryfrahm/iWeb/Geoarchlist/> or do a Google search for "GSA AGD listserv." Please encourage your students to sign up too!

Looking for an accessible way to explain to students, a colleague, or the public what a "geoarchaeologist" or "archaeological scientist" does? The **Geoarchaeology News Blog** scours news websites for articles about geoarchaeology and archaeological science so that visitors can learn more about these fields from low-jargon newspaper stories. Other information, such as conference announcements, can also be found here. Visit this news blog at <http://web.mac.com/elleryfrahm/iWeb/GeoArchSci/> or do a Google search for "geo arch sci."

Free Near East Obsidian Sourcing: The University of Minnesota Electron Microprobe Laboratory has now allotted instrument time for obsidian sourcing using Minnesota's Obsidian of Anatolia and the Near East (MinOAN) reference collection, currently being studied by Ellery Frahm. This service is free of charge thanks to the lab, although a few conditions do exist. The obsidian artifacts must, of course, have originated in Turkey, Syria, Lebanon, Iraq, or elsewhere in the Near East for the MinOAN collection to be useful. Interested researchers should email Ellery with a brief proposal that includes the region, approximate number of artifacts, research goals, etc. Researchers at any level, from graduate students to emeritus faculty, and in any country are eligible and encouraged to participate in this research program. More information can be found at

<http://web.mac.com/elleryfrahm/iWeb/Obsidian/> or do a Google search for "minnesota obsidian sourcing."

The nonprofit streaming-media website, **The Archaeology Channel** www.archaeologychannel.org/ is consistently updated with new video programs. One of the more recent is Anthropology Field Notes 1. Featuring interviews with today's news-makers, host Faith Haney of Central Washington University explores cultural anthropology and archaeology. In this first episode of the series, Faith visits with Trent de Boer, Washington Department of Transportation archaeologist and publisher of the e-zine, Shovel Bum. Then she examines artifacts from New Guinea, Oceania and India in the CWU Anthropology Museum with former collections manager Martha Duskin Smith and University of South Carolina anthropologist Karl Heider, ethnographer of New Guinea indigenous groups. Visit the website for information on how to become involved through membership.

FROM THE NEWSLETTER EDITOR

Hello, I hope this latest edition of the AGD newsletter finds you all well. To those who contributed material for this newsletter, thank you very much. If you sent something to me and do not see it here, I apologize; my laptop was stolen quite recently, and the last time I backed up my hard drive was, well, not so recent. (Public service announcement: back up your computers frequently! Don't let this happen to you!) If you resend the material, it will appear in the next edition, and again, I apologize for the inconvenience. As always, we welcome featured research and news from the membership, as well as ideas and suggestions for making the newsletter a more valuable resource. Please send any and all to me at jensmith@wustl.edu. Best wishes for the approaching holiday season and the New Year.

-Jennifer Smith

WORKSHOPS, SCHOOLS, AND SHORT COURSES

The **International School in Archaeology and Cultural Heritage** will occur in May 2008 in Ascona Switzerland, as a collaboration between ETH Zurich, the University of Siena, Italy, the Research center FBK in Trento, Italy, and the University of California Merced. The School will give participants the opportunity to obtain a detailed overview of the main methods and applications of modern technology to archaeological and conservation research and practice. Furthermore, the School will focus on 3D technologies – surveying methods, documentation, data management and data interpretation - in the archaeological research and practice. The School will be open to ca 60 participants at graduate level, to those carrying out doctoral or specialist research, to established research workers, to members of State Archaeology Services and to professionals specializing in the study and documentation, modeling and conservation of the archaeological heritage. The deadline for the registration is 31 March 2008. Grants provided by UNESCO and ISPRS will be available for students with limited budgets and travel possibilities. Please email

info@3darchaeology.org with any questions or for further information, please visit:

<http://www.3darchaeology.org>

Registration is now open for the **2007/2008 short-course programme in Environmental Palaeoecology and Aquatic Ecology**, offered by the Environmental Change Research Centre, University College London. This programme is in collaboration with Queen Mary College (QMUL) and the Centre of Ecology and Hydrology (CEH). The courses available include: Quantitative Environmental Palaeoecology, Introduction to Planktonic Foraminiferal Analysis, Ostracod Analysis, Introduction to Plant Macrofossil Analysis, Introduction to Pollen Analysis, Introduction to Fish Ecology, Stable Isotopes and Environmental Change, Chironomids: Water Quality and Climate Change, Introduction to the Ecology and Identification of Aquatic Macrophytes, Numerical Analysis of Biological and Environmental Data, Introduction to Diatom Analysis. For full details, dates and an application form for the courses please visit <http://www.ecrc.ucl.ac.uk/shortcourses> or contact the course co-ordinator David Hunt at d.s.hunt@ucl.ac.uk.

As the author of the Springer bestseller "MATLAB Recipes for Earth Sciences - 2nd Edition," Martin Trauth will again teach a **shortcourse on data analysis in geosciences** at the University of Potsdam between March 10 – 14, 2008 in German and a second course at the University of Muenchen (Munich) between February 25 – 29, 2008 in English. If you are interested in participating in one of these courses, please email Martin Trauth at trauth@geo.uni-potsdam.de and use "MATLAB RECIPES" as the subject of your mail. For more info about the course: http://www.geo.uni-potsdam.de/mitarbeiter/Trauth/flyer_2008.pdf

The **National Park Service's 2008 workshop on archaeological prospection techniques** entitled *Current Archaeological Prospection Advances for Non-Destructive Investigations in the 21st Century* will be held May 19-23, 2008, at the Kelly Inn, Fargo, North Dakota. Lodging will be at the Best Western Kelly Inn with the meeting room at O'Kelly Event Center at the Kelly Inn. The field exercises will take place at the Biesterfeldt Site (a protohistoric village site on the Sheyenne River). Co-sponsors for the workshop include the National Park Service, the Archaeological Conservancy, Minnesota State University-Moorhead, and the State Historical Society of North Dakota. This will be the eighteenth year of the workshop dedicated to the use of geophysical, aerial photography, and other remote sensing methods as they apply to the identification, evaluation, conservation, and protection of archaeological resources across this Nation. The workshop will present lectures on the theory of operation, methodology, processing, and interpretation with on-hands use of the equipment in the field. The workshop this year will have a special focus on the soil magnetism and on the effects of plowing on geophysical signatures and site integrity. There is a tuition charge of \$475. Application forms are available on the Midwest Archeological

Center's web page at <http://www.cr.nps.gov/mwac/>. For further information, please contact Steven L. DeVore, Archeologist, National Park Service, Midwest Archeological Center, Federal Building, Room 474, 100 Centennial Mall North, Lincoln, Nebraska 68508-3873: tel: (402) 437-5392, ext. 141; fax: (402) 437-5098; email: steve_de_vore@nps.gov.

UPCOMING MEETINGS

February 10-15, 2008 Western Tasmania, Australia
13th Australian and New Zealand Geomorphology Group (ANZGG) conference. The major theme of the conference is: Ancient and modern: late Cenozoic modification of Australasia's relict landscapes. Please visit the conference web page to download the first circular and expression of interest form: www.anzgg.org/Tasmania_2008_home.htm.

March 5-7, 2008 Valencia, Spain **GLASSAC-08 Congress.** The aim of this event, held at the Aula Magna of Valencia University Historic Building, is to create a focus on the applications of glass science in art and conservation. We hope to enhance communication among scientists belonging to different fields with artists and conservators. The congress will give an opportunity to work together and discuss the latest results in a variety of topics including: Bronze Age glass • Hellenistic glass • Islamic glass • Roman glass • Mould-blown glass • Glass decoration and enamel • Medieval stained glass window • Façon-de-Venise glass • Glass in the 18th and 19th century • Contemporary glass • Glass technology production • Raw materials • Dating and provenance of glass • Restoration and conservation of glass • Glass corrosion and weathering • Archaeometry of glass.

Further information about the meeting is available at the conference web site www.uv.es/glassac. If you would like to attend the congress and have not yet registered, please visit the site as soon as possible and submit the registration form. Note there is an early registration fee if you register and pay by January 15th. The conference registration fee includes all open sessions, conference sponsored materials, refreshment breaks, lunch, conference proceedings, and the social dinner.

5-7 March 2008 Boulder, Colorado **Institute of Arctic and Alpine Research (INSTAAR) 38th Annual International Arctic Workshop.** The meeting is open to all interested in the Arctic, and will consist of a series of talks and poster sessions covering all aspects of high-latitude environments, past and present. Previous Arctic Workshops have included presentations on arctic and antarctic climate, archeology, environmental geochemistry, geomorphology, hydrology, glaciology, soils, ecology, oceanography, Quaternary history, and more. Student participation is a vital component of this workshop. A limited number of students giving a talk or poster will receive financial assistance, including registration and hotel support. For more information, please go to instaar.colorado.edu/AW or contact ArcticWS@colorado.edu. Deadline for Registration and Abstracts: **Wednesday, 13 February 2008**

March 26-30, 2008 Vancouver, BC, Canada
Society for American Archaeology 73rd Annual Meeting.
As always, the SAA Annual Meeting will have sessions of interest to archaeological geologists and geoarchaeologists alike. Attendees, don't miss the Geoarchaeology Interest Group (GIG) business meeting.

April 13-18, 2008 Vienna, Austria **European Geosciences Union General Assembly 2008** A number of sessions of interest to archaeological geologists will be held at the EGU meeting in Austria (see below). The deadline for abstracts is 14 January 2008, though if you are seeking Financial Assistance then you should submit this by 7th December 2007. For more information please visit the meeting website: <http://meetings.copernicus.org/egu2008/>.

Sessions of interest include: Remote Sensing of Rivers: This session will be broad in its treatment of remote sensing and river applications. They are looking for papers that cover the range of remote sensing data types and techniques, ranging from optical sensors to lidar, radar and sonar. Papers may address methodological advances in remote sensing of river environments (which include the active channel and floodplain), new applications of remote sensing in river systems, or ways in which remote sensing can enhance our conceptual and theoretical understanding of rivers. If you are interested in joining the session, please send to W. Andrew Marcus marcus@uoregon.edu and Mark Fonstad mfonstad@txstate.edu: (1) a statement that you wish to join the session; (2) a talk title; and (3) a list of co-authors and their affiliations.

CL32: Advances in Quaternary Geochronology
Reconstructing past climates and earth system responses to climate and environmental change relies heavily on precise and accurate chronologies. Radiocarbon dating continues to play a vital role in providing chronological control over the last 50,000 years, but advances in recent years on a range of other geochronological techniques that are applicable to the Quaternary have made a much wider diversity of methods available. In this session, applications are particularly welcome that aim to (1) reduce, quantify and express dating uncertainties in any dating method, including high-resolution radiocarbon approaches, (2) use established geochronological methods to answer new questions, (3) use new methods to address longstanding issues, or (4) combine different chronometric techniques for improved results. Applications may aim to understand long term landscape evolution, provide rates of geomorphological processes, or provide chronologies for records of climate change.

GM 2.4: Geomorphic response to Holocene environmental change: Simplicity or complexity?
Environmental changes have triggered a variety of responses in geomorphic systems at different spatial and temporal scales. In general, system response is dependent on the magnitude of change, and assumptions about this relationship are commonly made in establishing direct causal links between the geomorphic record and the history of environmental change. But even small changes in relatively simple geomorphic systems can lead to rather complex responses. Depending on internal system dynamics, a response may be buffered and/or

delayed, and result in rather complex causal relationships between environmental change and the geomorphic record. Understanding the underlying complexity in cause and effect relationships is a necessary prerequisite for successful reconstruction of Holocene environmental changes from the geomorphic record.

HS5.4 - Linkages between the sediment cycle and aquatic ecology: impacts of sediment and sediment-water interactions on habitats and ecosystems
The movement and storage of sediment within aquatic systems has the potential to alter the physical, chemical and/or biological functioning of aquatic habitats. Ecosystem response to a range of environmental changes includes changing sediment quantities and quality which can be both positive and negative given that the mineral and organic sediments transfer and provide nutrients and contaminants. As aquatic species from bacteria to fish are resident in sediment, or feed on the material, the implications for changing sediment quality and quantity on habitats and ecosystems are broad. Contributions are welcome for both large and small scale investigations of sediment-water interactions (organic and inorganic) influencing aquatic ecosystems and habitats.

NH8.1 Natural and Anthropogenic hazards in karst areas
Due to a number of particular geologic and hydrogeologic features (fractured rocks, presence of karst cavities and conduits, rapid concentrated flow), karst areas are among the most vulnerable settings of the world to man-induced and/or natural hazards. Occurrence of subsidence phenomena, floods, and slope movements may be very frequent, causing serious damage in several karst areas. Agriculture and land use changes may lead to degradation of the karst landscape through the practice of stone clearing and crushing, potentially favouring development of erosion and eventually resulting in rocky desertification. The conveners look forward to receiving a significant number of contributions from karst areas worldwide; papers dealing with case studies in karst are solicited, and contributions presenting a multi-disciplinary approach to the problem particularly encouraged.

GM4.4 Surface and subsurface karst geomorphology.
Modern techniques and modelling have brought a lot of new insight into karst processes and resulting landforms. Surface and Subsurface karst morphology are a key to understand the nature and the genesis of cave and karst systems. All human activities in karst areas including all kinds of construction, agriculture, fresh water supply, waste disposal – just to mention some – need detailed knowledge about karst systems. The aim of this session is to bring together researchers dealing with both surface and underground dissolutional and depositional karst features in different climatic and geographical situations. Innovative contributions are sought on topics from across the whole spectrum of active and past karst geomorphological processes and their resulting landforms.

April 25-26, 2008 Carbondale, Illinois **25th Center for Archaeological Investigations Visiting Scholar Conference** This conference, "Human Variation in the New World: A meeting of archaeology and biological anthropology", addresses the need for a synthesis on human

variation in the Americas prior to European colonization. The meeting will bring together archaeologists, skeletal biologists, and anthropological geneticists into a dialogue about cultural and biological diversity over the many millennia of human occupation in the New World. Please see the conference poster, helpful guidelines for abstract preparation, and additional conference information online at:

<http://www.siu.edu/~cai/bma/vsconf.htm>.

Submission Deadline: 15 December 2007.

All additional inquiries may be sent to Benjamin Auerbach, conference organizer, via e-mail auerbach@siu.edu.

May 12-16, 2008 Siena, Italy **37th International Symposium of Archaeometry** The aim of the Symposium is to promote the development and use of scientific techniques in order to extract archaeological and historical information from the cultural heritage and the paleoenvironment. In general, papers submitted should deal with the development and/or application of scientific techniques for extracting information related to human activities of the past, including the biological nature of man himself and the environment in which he lived. Papers that deal with weathering and deterioration of archaeological objects or monuments will be welcome provided they are relevant to one of the main themes of the Symposium. **Abstract Deadline: 1 Dec 2007.** For more information, visit www.unisi.it/eventi/isa2008/.

June 15-19, 2008 Birmingham, UK **12th International Conference on Ground Penetrating Radar (GPR 2008)** A special session on GPR Studies in the Polar Regions will be held at GPR 2008. For further information on the conference, Call for Papers, etc., please see: <http://www.gpr2008.org.uk/>. **Deadline for Abstract Submission is December 7.** Notification of acceptance December 21; final photo-ready paper due April 30.

June 23-24, 2008 Reading, UK **New Directions in Experimental Geoarchaeology** Although experimental archaeology has a long history within the discipline, there has been an emphasis upon the reconstruction and use of material culture. This forthcoming conference (part of a new multi-disciplinary project at the University of Reading, UK) will highlight new geoarchaeological approaches to experimental research. A central focus of the conference will be the development of new geoarchaeological methodologies for future experimental research. If you are interested in presenting a paper or poster, please send a title and abstract (maximum 300 words) to Dr Alex Brown at a.d.brown@rdg.ac.uk by Monday 14 January 2008. If you are interested in attending the conference and would like to receive updates on the programme and organisation, please contact Rowena Banerjee r.y.banerjee@rdg.ac.uk. Further details of the conference (including accommodation information) will be posted shortly at www.shes.rdg.ac.uk/SHESResearch/Archaeology/Science/Experimental.htm.

June 29-July 4, Dublin, Ireland. **Developing International Geoarchaeology (DIG) at the World**

Archaeological Congress. *Developing International Geoarchaeology* is the title of two very successful recent international conferences bringing together geoarchaeologists from around the world. The goal of DIG is to bring together a wide variety of international researchers, practitioners and students in what is a diverse and interdisciplinary field in order to facilitate discussion, stimulate research, and promote international scholarship in geoarchaeology.

This proposal is to expand the DIG remit and audience, by running a series of sessions and poster sessions focused on developing geoarchaeological approaches internationally, as a theme at the World Archaeological Congress, aimed at the world archaeological audience. The intent is to present work interesting to an international and interdisciplinary audience, to elicit discussion of geoarchaeological approaches, and to make new connections between archaeologists from different parts of the world. The theme will also be associated with an international archaeological soil micromorphology workshop, to be run independently at UCD in the 2-3 days prior to WAC.

The DIG theme was proposed at the latest DIG conference in Cambridge 2007, where it received widespread approval. This was followed by a web mailing to geoarchaeologists worldwide, calling for session, paper and poster proposals. To date, five sessions have been proposed through the theme organisers; the current state of play is as follows: **Session 1:** Subsistence and Sustainability of Ancient Societies in Arid Environments. **Session 2:** The Cultural Use of Caves and Rockshelters. **Session 3:** The Temporality of Houses. **Session 4:** Dating and Geoarchaeology. **Session 5:** Agricultural Landscapes. **For additional information, contact** Dr. Helen Lewis, School of Archaeology, University College Dublin, Belfield, Dublin 4, Ireland; helen.lewis@ucd.ie; +353-1-716-8169.

August 6-14, 2008 Oslo, Norway **33rd International Geological Congress** Abstract submission and early registration are now available online at www.33igc.org. An updated Science Programme has just been posted. Sessions on geoarchaeological themes are grouped as: "Geoarchaeology IEA" and include: IEA-01 General contributions to geoarchaeology, IEA-02 Geoarchaeology and geomorphology as geological constraining tools, IEA-03 Geophysical and geochemical archaeology, IEA-04 The geoarchaeological perspective: Human interactions with the geosphere, IEA-05 Geology and cultural heritage, IEA-06 Geoarchaeology and archaeometry. Symposium IEA-04, Human interactions with the geosphere, is particularly aimed at eliciting examples of how human societies have coped with (and caused) environmental changes in the past, and how these can influence our choices of sustainable practices today and in the future. For more information, contact Lucy Wilson, lwilson@unbsj.ca.



GEOLOGICAL SOCIETY OF AMERICA
Archaeological Geology
Division



**Celebrate the 30th Anniversary of the Archaeological Geology Division
Order your t-shirt today!**

Your Shipping Address:

Name _____
Address _____
City, State, & Postal Code _____
Contact Phone/e-mail _____

Please make your \$15 check payable to "GSA-Archaeological Geology Division"

Payment includes t-shirt production, shipping, and a small donation to the Richard L. Hay Student Paper/Poster Award.

Please indicate number of t-shirts (in the space) according to size and color:

Small (stone blue)	_____	Medium (stone blue)	_____
Small (sand)	_____	Medium (sand)	_____
Large (stone blue)	_____	X-large (stone blue)	_____
Large (sand)	_____	X-large (sand)	_____
XXL (stone blue)	_____		
XXL (sand)	_____		

Send orders to:
Dr. Rolfe Mandel
Kansas Geological Survey
1930 Constant Ave., West Campus
University of Kansas,
Lawrence, KS 66047-3726

Orders must be received by January 1, 2008.