GEOSCIENCE INFORMATION SOCIETY

# newsletter

Number 227, August 2007 ISSN 0046-5801

*CONTENTS*



## PRESIDENT'S COLUMN

by
Patricia B. Yocum

Our August newsletter is always an exciting issue. Each year it is filled with news of our upcoming meeting only a few months away. For the third consecutive year we start our conference on Saturday with Geoscience Librarianship 101, a rich, highly successful and free seminar on the basics of our field. We then add full program sessions on collection development, electronic resources, and, as in the previous two years, a special session on the USGS Library Services. Abstracts for the contributed papers and posters are given in detail and are sure to entice you by their breadth and originality. Round out the conference with our GSIS awards luncheon, reception, Board and Committee meetings, GSA programs and exhibits, and you have the makings of an intensive, rewarding meeting. Note that September 24 is the deadline for early registration via GSA. As a GSA affiliated society GSIS qualifies you for the member rate.

Conference costs for both GSIS and individuals continue to rise and finding a balance is a significant challenge. Our generous sponsors have been a great help in making our conferences memorable and we offer them our sincere thanks. GSIS has trimmed AV costs by using our own laptops and projector for program sessions. This year we sought to reduce expenses further by foregoing the Professional Issues session and the concluding field trip, reasoning that a conference shortened by a half day would spare attendees some hotel and meal expenses. If this change is agreeable GSIS may want to forego a fieldtrip every third year when the conference is in Denver. We are also currently exploring alternate ways to get feedback from attendees on the GSIS meeting.

In an effort to reduce the extremely heavy job of conference planning, Claudette Cloutier agreed to take on responsibility for organizing the oral and posters sessions while Suzanne Larsen agreed to handle all other aspects of the meeting. Claudette will also edit the conference proceedings. The division of labor has worked well, providing much needed balance in conference planning. Many thanks to both women for piloting this venture.

Other changes in our annual conference may also be advised. For certain we will continue to review conference commitments with an eye to containing costs especially for individual members. Meetings are a great venue for professional development. They must, however, be affordable in time and money if their benefits are to be realized broadly.

I invite your comments on these ideas and your suggestions for further improvements to our annual meeting. I look forward to hearing from you by email or in person in Denver.

## VICE PRESIDENT'S COLUMN

by
Suzanne T. Larsen

The 2007 Geoscience Information Society meeting schedule is nearly final. The conference hotel headquarters is the new Hyatt Regency directly across from the conference center. Many of our events will be held there. I invite you to see the conference schedule elsewhere in this issue.

Remember to purchase your tickets for the Awards Luncheon when you register for the meeting. If you have any dietary requirements, please make sure to note them when you purchase your ticket.

We have a number of generous sponsors to thank for supporting our meeting this year. Elsevier, the Geological Society of London, ESRI, Springer, CSA, Blackwell Book Services, the Gemological Institute of America, and Wiley have all funded sponsorships for the meeting.

## GEOSCIENCE INFORMATION SOCIETY 2007 Officers

**President**
Patricia B. Yocum
Shapiro Science Library
3026 Shapiro Science Library
University of Michigan
Ann Arbor, MI 48109-1185
phone: 734-936-3079
fax: 734-763-9813
e-mail: pyocum@umich.edu

**Vice-President (President-Elect)**
Suzanne T. Larsen
Earth Sciences and Map Library
UCB 184
University of Colorado
Boulder, CO 80309
phone: 303-492-4611
fax: 303-735-4879
e-mail: suzanne.larsen@colorado.edu

**Immediate Past President**
Adonna Fleming
207A Love Library
University of Nebraska
Lincoln, NE 68588-4100
phone: 402-472-3920
e-mail: afleming@unlnotes.unl.edu

**Secretary**
Andrea Twiss-Brooks
John Crerar Library
University of Chicago
5730 S. Ellis Avenue
Chicago, IL 60637
phone: 773-702-8777
fax: 773-702-3317
e-mail: atbrooks@uchicago.edu

**Treasurer**
Renee Davis
Simpson Library
University of Mary Washington
1801 College Ave.
Fredericksburg, VA 22401
Phone: 540-654-1758
e-mail: rdavis2@umw.edu

**Homepage: http://www.geoinfo.org**
Webmaster: Jim O'Donnell
Geology Library 100-23
Caltech
Pasadena, CA 91125
phone: 626-395-2199;
fax: 626-568-0935
e-mail: jimodo@caltech.edu

**Listserv:** https://lists.purdue.edu/mailman/listinfo/geonet
Moderator: Carolyn J. Laffoon
Purdue University Libraries, EAS
504 West State Street
West Lafayette, IN 47907-2058
phone: 765-494-0201
fax: 765-496-1210
e-mail: carolyn@purdue.edu

**Newsletter Editor**
Connie J. Manson
2525 Sleater Kinney Road N.E.
Olympia, WA 98506
phone: 360-459-1668
fax 413-280-2755
e-mail: cjm@thurston.com

**Publications Manager**
Ellie Clement
Cabot Science Library
Harvard University
One Oxford Street
Cambridge, MA 02138
phone: 617-496-8442
fax: 617-495-5324
e-mail: clement@fas.harvard.edu

**Publicity Officer**
Shaun J. Hardy
Carnegie Inst. of Washington
DTM-Geophysical Laboratory Library
5241 Broad Branch Road, N.W.
Washington, DC 20015
phone: 202-478-7960
fax: 202-478-8821
e-mail: hardy@dtm.ciw.edu

The GSIS Newsletter is published bi-monthly in February, April, June, August, October, and December by the Geoscience Information Society. Subscription is free to GSIS members. The annual non-member subscription rate is $40 to the U.S. and Canada, and $45 (by airmail) to other countries. All correspondence regarding dues, membership status, and address changes should be directed to the GSIS secretary.

GSIS members are encouraged to contribute materials for publication. Material for the August, 2007 issue should be received no later than July 27, 2007. Please send materials by e-mail to cjm@thurston.com

**GEOSCIENCE INFORMATION SOCIETY**
**2007 Annual Meeting, Denver Colorado October 27th - 31th**
**Schedule – As of August 1, 2007**

*Note: GSIS Committees meet separately as arranged by committee chairs*

**Saturday, October 27**

| | |
|---|---|
| 9:30 a.m. - 4:00 p.m. | Geoscience Librarianship 101: Auraria Campus |
| 6:00 p.m. – 9:00 p.m. | GSIS Executive Board Meeting: Hyatt Regency, Quartz AB |

**Sunday, October 28**

| | |
|---|---|
| 9:30 a.m. - 12:30 p.m. | GSIS Business Meeting: Hyatt Regency, Mineral Hall BC |
| 2:00 p.m. – 5:00 p.m. | GSIS Collection Development Forum: Hyatt Regency, Mineral Hall BC |
| 5:30 p.m. – 7:30 p.m. | Exhibits Opening & Welcome Reception: Denver Convention Center |

**Monday, October 29**

| | |
|---|---|
| 8:00 a.m. - 12:00 p.m | Technical Session: #T144 "Geoscience information: making the earth sciences accessible for everyone." Colorado Convention Ctr, Room 603 |
| 5:00 p.m. - | Alumni Receptions: Hyatt Regency |

**Tuesday, October 30**

| | |
|---|---|
| 9:00 a.m. -12:00 p.m. | GSIS E-Resources Forum: Hyatt Regency, Capitol Ballroom 5 |
| 12:00 p.m. – 2:00 p.m. | GSIS Luncheon and Awards: Hyatt Regency, Mineral Hall E |
| 2:00 p.m. – 4:00 p.m. | Special Session: "USGS Library: Looking forward" Hyatt Regency, Capitol Ballroom 6 |
| 6:00 p.m. -9:00 p.m. | GSIS Reception and Silent Auction: Hyatt Regency, Granite A |

**Wednesday, October 31**

| | |
|---|---|
| 8:00 a.m. - 12:00 p.m. | Posters: "Park your Public Lands by your Library": Colorado Convention Center, Exhibit Hall E/F |
| TBA | GSIS Executive Board Meeting |

**Geoscience Librarianship 101**
**Saturday, October 27, 2007 9:15 AM-4:30 PM**
**Auraria Library, 1100 Lawrence St., Denver, CO**
**Sponsored by Geoscience Information Society (GSIS)**

**by**
**Andrea Twiss-Brooks**

Geoscience Librarianship 101 is a free, one-day seminar on geoscience information resources and their organization. Topics will include collection development, reference services, and spatial geoscience information. More details on specific content and instructors will be available in early September on the GSIS website http://www.geoinfo.org and through the Geonet-L listserv. Previous sessions in Salt Lake City (2005) and Philadelphia (2006) were well attended and received. GSIS members are welcome and invited to encourage others to attend.

Registration is open to all information professionals as well as students in library and information studies. Registration deadline is September 25, 2007.

To register or request more information contact Shaun Hardy, GSIS Publicity Officer, Carnegie Institution of Washington, 5241 Broad Branch Rd., N.W., Washington, DC 20015, telephone: 202-478-7960, e-mail: hardy@dtm.ciw.edu.

**Topical Session #T144**
**"GEOSCIENCE INFORMATION:**
**MAKING THE EARTH SCIENCES ACCESSIBLE FOR EVERYONE"**
**Monday October 29, 2007**
**8:00 a.m. – 12:00 noon, Colorado Convention Center, Room 603**
**Claudette Cloutier, Chair**

Informed decision making for a sustainable earth depends on information being accessible to the public. Join us as we discuss how geoscience information is created, disseminated, organized, accessed, used and archived.

8:00 a.m. Introductory Remarks

8:10 a.m. Abstract ID #129116
**ENDURING SCIENCE: THE HERITAGE OF THE FIRST INTERNATIONAL POLAR YEAR, 1882-1883**
**WOOD, Kevin R.**, Joint Institute for the Study of the Atmosphere and Oceans, University of Washington, Seattle, WA 98115, Kevin.R.Wood@noaa.gov, OVERLAND, James E., Pacific Marine Environmental Laboratory, NOAA, 7600 Sand Point Way NE, Seattle, WA 98115, and FETTERER, Florence, National Snow and Ice Data Center, CIRES, University of Colorado, Boulder, CO 80303, fetterer@nsidc.org

The first International Polar Year took place in 1882 and 1883, before the rise in greenhouse gas pollution associated with global climate change. Carl Weyprecht, an Austrian scientist-explorer who was the inspiration behind the IPY, had forward thinking ideas about how to most profitably conduct polar research. In his Fundamental Principals of Scientific Arctic Investigation he proposed fielding coordinated expeditions that would collect comparable synoptic observations necessary to study very large-scale phenomena such as meteorology, geomagnetism and the aurora. The field program he suggested was successfully implemented but the hard-won synoptic observations were never fully analyzed. Long delays in the initial publication of the data and the lack of a central office tasked with coordinating data synthesis contributed to this disappointing result.

The fourth IPY began in March, 2007. Climate change, especially in the Arctic, adds urgency to the objective of taking a "snapshot" of current conditions using synoptic observations. And making observations accessible to everyone is proper not only because the public is aware and interested, but because to do so would help ensure that exceeding valuable data is used to its fullest potential. Now IPY research involves over 50,000 participants from 63 nations. How much of this research will be accessible in the future? What can be done to promote the flow and preservation of information? Are there lessons in data management from the first IPY than can be applied here?

Now, web services, distributed data archives and metadata standards are being employed to keep track of and work with data from 'virtual observatories': confederations of projects and instrumentation like the National Science Foundation's Arctic Observing Network. Metadata can insure that future generations will be able to find the data. So many types of data from so many sources is driving a move to self-describing data formats. In an age where most data are 'born digital' we still need to go back and preserve old analog data so that it can be used to investigate phenomena such as the Earth's climate that vary on timescales longer than the digital era.

8:30 a.m. Abstract ID # 127263
**THE REASON FOR DAHLI: MAKING THE HOLDINGS OF HISTORIC IPY INFORMATION ACCESSIBLE TO ALL**

**HOWARD, Allaina**, National Snow and Ice Data Center/CIRES, University of Colorado, 1540 30th St, Boulder, CO 80309, alhoward@nsidc.org and DUERR, Ruth, Operations/Archival Services, National Snow and Ice Data Center, 449 UCB, Boulder, CO 80309, rduerr@kryos.colorado.edu

The need for access drives a project to locate, digitize and make available historical materials from the previous three IPYs. The DAHLI project will provide a searchable online bibliography of records and publications from International Polar Year (IPY) events: 1882-1883, 1932-1933, and 1957-1958. This bibliography will constitute a new offering of scientific research, scientific observations, sociological and historical data. These items, still being discovered in archives around the world, are estimated to be several thousand items. Presently, these materials are scattered about the globe, largely uncatalogued and unpreserved. They are rare and typically only one or a few copies exist. At best they are difficult to discover and access, and at worst, in danger of total deterioration or destruction. These materials are the legacy of past IPYs and stand as milestones of scientific progress. They continue to be of scientific, historical, and sociological value, but their value cannot be exploited if inaccessible. As older generations of researchers retire, particularly those who participated in the 1957-1958 IPY/IGY, even the memory of these materials is lost. The need is imminent to identify and catalogue these materials while these researchers are still available to advise.

8:45 a.m. Abstract ID #127188

**DIGITIZATION OF GEOLOGY THESES AND DISSERTATIONS**

**MCCARTHY, Deborah** and HERT, Tamsen, University of Wyoming Libraries, 1000 E. University Ave, Dept. 3334, Laramie, WY 82071, THert@uwyo.edu

The University of Wyoming Libraries is in the process of digitizing all of our theses and dissertations, including our geology theses and dissertations, to make them easier to use and more accessible to the public.

As a result of a ruptured pipe, about 1800 theses and dissertations received water damage and were digitized, and this project led to discussions about digitizing the entire collection of theses and dissertations. Funding was obtained for the 2006/2008 biennium to digitize all 12,000 theses and dissertations, and the project was begun.

This project includes the color digitization of the hand colored, large format maps included in many geology theses and dissertations from the mid-twentieth century and earlier. The process, both physical and political, will be discussed, as will the challenges and outcomes.

9:00 a.m. Abstract ID #126226

**MANAGING AN OIL SHALE LEGACY COLLECTION**

**WHITEHEAD, Heather L.**, Arthur Lakes Library, Colorado School of Mines, Golden, CO 80401, hwhitehe@mines.edu

The Arthur Lakes Library at the Colorado School of Mines houses a legacy collection of oil shale materials, most dating from the 1920s to the 1980s. The collection is an aggregate from 23 donors, including individuals, government agencies, and corporate entities. Materials include technical reports, personal papers, and historical documents, organized by donor in archival boxes. Interest in oil shale as a potential energy source has been cyclical, and generates periodic interest in the legacy collection. Sustained, heightened interest in oil shale in the past few years resulted in a Library project to reassess the collection by present-day standards.

Users expect a modern research experience, with organized, indexed, easily accessible — preferably digitized — items. Project results indicate that with time and money we can begin to meet these expectations. However, some difficult information management issues will need to be addressed. Donor agreements may include restrictions on how their portions of the collection may be used. Corporate donations include potentially proprietary materials that were deemed “valueless” at the end of the last oil shale boom in the 1980s, but may have value again today. Pros and cons exist for organizing by material type versus organizing by donor. Digitization, although desirable, is problematic. Establishing who owns copyright for obtaining digital permissions will be time consuming. Responding to user expectations entails costs to the Library that need to be weighed against benefits to various user communities.

9:15 a.m. Abstract ID #131301

**METADATA: THE KEY TO THE PRESERVATION AND DISSEMINATION OF EARTH SCIENCE SPATIAL DATA**

**FLEMING, Adonna C.**, Geology Library, University of Nebraska - Lincoln, 10 Bessey Hall, 0344, Lincoln, NE 68588, dfleming2@unl.edu

Often the biggest roadblock to making GIS data available to the public is that the creator of the project either does not have the time or the skills to create the metadata, a crucial component to making spatial data findable on GIS data portals. This paper describes how one academic library stepped in to help its campus community develop and distribute FGDC compliant metadata to the Nebraska's GIS metadata portal, http://www.dnr.ne.gov/databank/geospatial.html for their GIS research projects.

The paper will highlight the details of the University of Nebraska – Lincoln Libraries' GIS metadata program, which includes metadata training workshops using ArcCatalog and MP Batch Processor, one-on-one consultations, and a partnership with the School of Natural Resources Conservation and Survey Division to clean-up existing metadata.

9:30 a.m. Abstract ID #131615

**BEYOND GOOGLE EARTH: REMOTE SENSING IMAGERY IN THE GEOSCIENCES**

**LAGE, Kathryn**, Jerry Crail Johnson Earth Sciences & Map Library, University of Colorado at Boulder, 184 UCB, Boulder, CO 80309, katie.lage@colorado.edu

No other types of geoscience information have been more in the public eye in recent years than aerial photography and satellite imagery. Remotely sensed images have become ubiquitous on television news, advertisements, and even on police drama television series like Numb3rs. Real estate websites, city and county websites, and online mapping sites such as Google Maps, Yahoo Maps, MapQuest and Google Earth all use imagery to impress, to illustrate geography, and to allow for analysis. Remotely sensed imagery is widely used in the earth sciences. Research applications range from fire detection, to vegetation and forest assessments, to the identification and analysis of geological features and events such as faults, drainage patterns, landslides, and volcanic eruptions.

Access to aerial and satellite imagery varies from

easy and free to complicated and expensive. Satellite imagery and aerial photography is often not well represented in library catalogs and, when records are present, they are often not specific enough to allow the patron to truly tell if the imagery will be of any use. For all its presence in the media and value for research, remotely sensed imagery is still difficult to organize and access.

This presentation will introduce different types of remotely sensed imagery, describe the organization of this class of data, and illustrate the many research applications of remotely sensed imagery. The session will explore the traditional and emerging methods of access and will highlight and demonstrate important resources for aerial and satellite imagery.

9:45 a.m. Abstract ID #128944

**I HAVE SOMETHING TO SAY ABOUT THAT PIECE OF EARTH: ENABLING INTERACTION WITH GEOSCIENCE MAP DATA**

**MILLER, Christopher C.**, EAS Library, Purdue University, CIVL, West Lafayette, IN 47907, ccmiller@purdue.edu

Generally, the technologies and designs of Web 2.0 have altered the way users engage information and have thus elevated the expectations they bring to information sources online. And while the Web 2.0 paradigm is at work in some pockets of academia, it is missing or undeveloped in others. Libraries, who typically must concern themselves not with the next big information thing but rather the next 100 years of information, have been slow to engage the more transient world of modern web content interaction and its social networking structures.

It doesn't have to be that way, however, and one of the staples of Web 2.0, the mashup, offers the model that can let geoscience libraries in particular have their long-term, secured, controlled digital geospatial collections and their user/patron-empowerment, too. Without a heavy shift of infrastructure.

This session will discuss present work being done at Purdue University Libraries on how modern or historic geospatial data can be disseminated to, then consumed by, users who have grown accustomed not only to intuitive, efficiently-styled web applications, but also to the notion that these online apps are most useful when information can be added back to them via forum discussions, annotations, or other user-feedback mechanics. Specifically, ways to add user interaction and the social flow of para-information using xml mark-up of text and open source map server software will be discussed.

10:00 a.m. Break

10:15 a.m. Abstract ID #127229

**CONNECTING TO THE PAST: ACCESSING EARLY GEOLOGICAL LITERATURE IN DIGITAL COLLECTIONS**

**ZELLMER, Linda R.**, Geology Library, Indiana Univ, Geology Building, Room 601, 1001 East Tenth Street, Bloomington, IN 47401, lzellmer@indiana.edu

Almost every researcher would like to access the literature in their field without having to go to the library. However, unlike other sciences, some geologists do use older publications from government agencies, societies and other sources. Some early geological publications are available online, but the trick is knowing where to look for them.

Many government agencies, including the U.S. and state geological surveys, are providing access to current geological publications online. Some of these agencies are also scanning and providing access to their older publications. Geological information is also available through non-geological collections and databases, including Making of America, Lexis-Nexis Congressional, the American Periodical Series and Early American Newspapers. Each of these resources can be used to access the full text of early geological articles and publications. A survey of the geological information available in these full text databases reveals some interesting results. While some of these resources do not provide access to traditional scholarly articles, the information is still useful for tracing the development of geologic thought and historical geological events.

10:30 a.m. Abstract ID #131203

**GEOREF AND GOOGLE SCHOLAR -- SIMILARITIES AND DIFFERENCES**

**TAHIRKHELI, Sharon**, American Geol Institute, Alexandria, VA 22302-7563, snt@agiweb.org

Internet surfers have demonstrated an increasing tendency to depend on Google (or one of its domains like Google Scholar) for every information need. When combined with tight library budgets this observed tendency can lead library administrators, librarians, researchers, and students to question why they should pay for subject-specific bibliographic services when a free search engine like Google Scholar is available. Major differences abound between a structured bibliographic system like GeoRef and the one-size-fits-most approach of Google Scholar. Currency, comprehensiveness, ease of use, user expectations, search features, ability to integrate in library systems, and access to full-text differ significantly between Google Scholar and bibliographic services like GeoRef. An outline of the current differences between the two systems will be developed. Through an examination of the similarities and differences between Google Scholar and some of the

implementations of GeoRef, the strengths and weaknesses of each system for a variety of purposes will be presented.

10:45 a.m. Abstract ID #129256
**CONNECTING LIBRARY USERS WITH FREE GEOSCIENCE DATABASES**

**SOMMER, Shelly**, Institute of Arctic and Alpine Research (INSTAAR), University of Colorado, CB 450, Boulder, CO 80303, shelly.sommer@colorado.edu

Many freely-accessible databases that support geoscience education and IPY are appearing on the Web from universities and research institutes. Subjects include northern environments, Antarctic management, and IPY research; grey literature, photographs, and maps are often included. Many of these databases are off the radar of the traditional library database collections, yet can be valuable sources for students and researchers. The INSTAAR Information Center is conducting workshops to introduce its users to these databases. In the process, the Information Center, despite its small collection and tiny budget, achieves higher visibility within its community and connects with new groups of library users. This paper describes how the workshops are constructed and some lessons learned.

11:00 a.m. Abstract ID #125435
**MISSION 15 51: ENGAGING THE PUBLIC IN SHIPBOARD RESEARCH THROUGH AN INTERACTIVE WEB SITE**

**SHAROFF, Jessica**, JOI Learning, Joint Oceanographic Institutions, 1201 New York Ave, NW, Suite 400, Washington, DC 20005, jessica.sharoff@gmail.com and SJO-GABER, Karinna, JOI Communications, Joint Oceanographic Institutions, 1201 New York Ave, NW, Suite 400, Washington, DC 20005, karinna.sjogaber@gmail.com

Joint Oceanographic Institutions (JOI) Program Assistants Jessica Sharoff and Karinna Sjo-Gaber served as education and outreach specialists aboard the NOAA vessel Ronald H. Brown in April 2007. Their primary goal during the expedition was to inform the public about life at sea and climate variability research led by Al Plueddemann, Woods Hole Oceanographic Institution Chief Scientist. Plueddemann and his team deployed the latest Northwest Tropical Atlantic Station (NTAS) mooring in a series of seven, enabling scientists to understand more about the air-sea interface in this part of the ocean. Groups from Scripps Institution of Oceanography and the National Data Buoy Center were also represented on the Brown.

Most people are unaware of ongoing oceanographic and atmospheric science research and its global implications, producing a general lack of interest in these types of projects. To effectively generate curiosity among the public, Sjo-Gaber and Sharoff offered a rare glimpse into their adventure at sea through an interactive Web site: MISSION 15 51. They connected with various media outlets, museums, classrooms, education forums, journals and science organizations to publicize the research project and education and outreach efforts.

The site was created with science articles, inquiry based activities, and interactives appropriate for viewers of all ages. Advances in ship technology made it possible to add new information each day and the Web site served as a communication medium between the specialists and their visitors. Members of the interested public and classrooms wrote questions and comments to Sharoff and Sjo-Gaber throughout the expedition. MISSION 15 51 has drawn almost 3,000 followers from around the world and continues to be an active site; follow-up events have also been scheduled in Washington, DC and New York City science museums to maximize outreach.

In this session, participants will learn how Web technologies can be used to bridge the gap between scientists and the public through the variety of interactives on MISSION 15 51. Additionally, Sjo-Gaber and Sharoff aim to show how this project can be used as a template for future ship to shore outreach programs to educate audiences about oceanographic research through the Web.

11:15 a.m. Abstract ID #124099
**USING ENVIRONMENTAL GEOLOGY TO TEACH RESEARCH SKILLS TO UNDERGRADUATE STUDENTS**

**ZIPP, Louise S**. and SWOGER, Bonnie J. M., Milne Library, SUNY Geneseo, 1 College Circle, Geneseo, NY 14454, zipp@geneseo.edu

Environmental geology is a subject capable of engaging undergraduate students with differing interests. These real-life tangible problems contain elements of social and natural sciences that connect with students' concern for social justice. At SUNY Geneseo, Chemistry 100, a one-hour class, seeks to give freshman chemistry majors a broad-based sense of the discipline and an introduction to chemical methods and research. Using constructivist pedagogy, librarians taught research skills to these introductory students by way of the environmental issues surrounding the current hot topic of pharmaceutical substances in surface water. Building upon research presented by geologists at the 2006 GSA annual meeting, librarians introduced the issues through active learning exercises conducted over two class sessions. Students created a list of characteristics to distinguish scholarly from non-scholarly sources and received guidance on choosing resources appropriate to their needs. They practiced searching several databases including Academic Search Premier and SciFinder Scholar, where they also retrieved substance-related data.

Learning outcomes were based on ACRL Information literacy Standards for Science and Engineering/Technology. Following the second session, a brief in-class assessment evaluated student perceptions of the sessions and learning outcomes. Students were generally enthusiastic about the classes, the newly-discovered information resources, and the roles that chemists might play in a complex environmental issue. Assessment revealed that the use of an environmental geology topic can be useful for engaging lower level undergraduate students and can provide a vehicle for teaching basic research skills.

11:30 a.m. Abstract ID #128254

**GEOSCIENCE LIBRARIES, STILL IN A TIME OF CHANGE**

**SCOTT, Mary W.**, Geology Library, The Ohio State Univ, 180 Orton Hall, 155 S. Oval Dr, Columbus, OH 43210, scott.36@osu.edu

For the past 37 years, the Geoscience Information Society members have been documenting change and prophesizing of the future of our libraries and information centers. The card catalog has become an OPAC, the Bibliography and Index of Geology is now GeoRef, and the reference questions that were once in person or by telephone now come via e-mail, IM, Chat, and occasionally in person.

After an analysis of the subject content of the papers presented to the Geoscience Information Society from 1969 through 1993, Derksen and O'Donnell (1995) made some predictions for the Geoscience Information Center in the year 2000. The analysis of the papers presented after 1993 show some shift in their trends and topics but their predictions have come to pass. This paper presents the new trends and makes new predictions for the Geoscience Library in the year 2017.

Derksen, C. R. M., and O'Donnell, J., 1995, What we did / what we do / what we'll do: Geoscience Information Centers in a time of change, 1970-2000, in Haner, B. E., and O'Donnell, J., eds, Geoscience Information Society Proceedings, v. 25, p. 1-12.

11:45 a.m. Abstract ID #124732

**GOING VIRTUAL: OPPORTUNITIES AND CHALLENGES FOR GEOLOGY LIBRARIES AND USERS**

**JOSEPH, Lura E.**, Geology Library, Univ of Illinois at Urbana-Champaign, 223 Natural History Building, MC102, 1301 West Green Street, Urbana, IL 61801, luraj@uiuc.edu

At the University of Illinois, Urbana-Champaign, a new School of Earth, Society and Environment is being formed. The school will incorporate the departments of Atmospheric Sciences, Geography, and Geology. The new school needs the space that the Geology Library currently occupies. There is no other space available for most of the print material other than the remote shelving facility. The availability of off-site storage space for print material, electronic journals and books, and a digital repository provide opportunities for a new "virtual" geology library model, however, numerous challenges also exist. This talk will examine many of the opportunities and challenges, and well as some of the planning necessary to move toward the new model.

## GEOSCIENCE INFORMATION/COMMUNICATION (POSTERS)
## "Park your Public Lands by your Library"
## Wednesday October 31, 2007
## 8:00 a.m. – 12:00 p.m., Colorado Convention Center
## Exhibit Hall E/F

**1. DIS 128296: GEOLOGIC RESOURCE EVALUATION PROGRAM - PRODUCTS AND USES**

**RANSMEIER, Melanie V.** and HYBELS, Georgia A., Geologic Resources Division, National Park Service, PO BOX 25287, Denver, CO 80225, Melanie_Ransmeier@nps.gov

The goals of the Geologic Resource Evaluation Program (GRE) within the National Park Service are to raise awareness about geology and the role geologic features and processes play in the environment. The GRE team provides 270 natural area parks with a geologic scoping meeting, digital geologic map data, and park-specific geologic report. These products are designed to enhance stewardship of park resources by providing valuable information about geologic formations, hazards, and links between geology and other natural resources. Park staff are currently using digital geologic data to identify and protect threatened plant and animal habitat, locate cave entrances, identify areas with potential paleontologic resources, plan for infrastructure, protect visitors from hazards, and educate the public. GRE reports identify key geologic resource management issues, geologic features and processes important to park ecosystems, and include a brief geologic history of the park area. As of May 2007, the GRE team has held scoping meetings for 183 parks, completed 96 map products, and 30 geologic reports.

## 2. DIS 127796: LARGE SCALE MAPPING AND NEW INTERPRETATION OF THE GEOLOGY IN PROXIMITY TO THE VISITOR CENTER: EVIDENCE FOR A MISSING CINDER CONE AND REFINED MAPPING OF VOLCANIC FEATURES, CRATERS OF THE MOON NATIONAL MONUMENT AND PRESERVE, IDAHO

**RIVERA, Tiffany A.**, Department of Geosciences, Boise State University, 1910 University Dr, Boise, ID 83725, tiffanyrivera@mail.boisestate.edu, KEANE, Shaina M., School of Earth and Environmental Sciences, Washington State University, PO Box 642812, Pullman, WA 99164, OWEN, Douglass E., National Park Service, Craters of the Moon National Monument and Preserve, Arco, ID 83213, and CARESS, Mary E., 421 Calle Familia, San Clemente, CA 92672

Recent detailed field mapping at Craters of the Moon National Monument and Preserve (CRMO) near the visitor center revealed evidence for a missing cinder cone, named the South Highway Cone (SHC), partially swallowed during magma chamber collapse and rafted away by younger flows. Recognition of a largely missing SHC agrees with earlier workers' data showing the volume of material rafted from the North Crater cinder cone (NC) cannot be contained within the modern NC breach. Paleomagnetic data collected by earlier workers from a SHC remnant on the north flank of NC shows that these two cones may be coeval. The northern rim of SHC acted as a topographical boundary for the Highway (Hwy) Flow, diverting most of the flow eastward along the cone. We re-interpret the Hwy Flow as also flowing 300m to the west between SHC and cinder mounds of unknown source and age. We believe that a normal-faulted segment of the Hwy Flow, marked by draperies, signifies a former magma chamber collapse. The drapery features are areas of the flow that drained over the fault scarp, suggesting the flow was likely contemporaneous with faulting. The collapse may have consumed a substantial portion of SHC and later covered by the NC Flow. The NC Flow was diverted around previously entrained rafted blocks, boulders of the Hwy Flow, and cinder material hypothesized to be from SHC. High standing monoliths surrounded by the NC Flow, which have been interpreted by others as volcanic necks, also support the proposition for a missing cone.

Moreover, we have identified two previously unmapped eruptive fissures that cut cinder mounds of the NC complex as well as unmapped non-eruptive fissures that are parallel to but offset from the Big Craters eruptive fissure and vent complex. Finally, we recognized several areas of platy jointing within the Hwy Flow, indicating internal shear occurred within the flow. Locating features such as these supports the need for intimate mapping of CRMO. Using field data, we generated a 1:12,000 digital geologic map of our re-interpretations and a “Points of Interest” section. This accompanying section promotes mapping and understanding of volcanic terrains by offering the reader a series of features with explanations for their formation. The publication will be available to the public via the CRMO website and encouraged for use by geology field camps.

## 3. DIS 123704: RANGELANDS WEST: AGRICULTURAL GEOSCIENCE ON THE WEB

**KAWULA, John D.**, Rasmuson Library, Univ of Alaska, P.O. Box 756817, University of Alaska, Fairbanks, AK 99775, ffjdk@uaf.edu

Rangelands, or land that is vegetated predominately by grasses, grass-like plants, forbs, or shrubs, comprises about 40% of the land mass of the U.S. as well as significant portions of Western Canada and other parts of the world. The Western Rangelands Partnership, a unique alliance of Range Scientists, Librarians, and Extension personnel affiliated with land-grant universities, maintains a website that consolidates important information pertaining to Rangelands ecology and management. This website (http://rangelandswest.arid.arizona.edu or http://rangelandswest.org) is used by professionals and practitioners for management of both public and private land for the sustainability of western rangelands.

Although the website's content is largely agricultural, significant portions concern geoscience topics including state by state descriptions of soils, water, climate, drought and wildfire; inventory, monitoring, and assessment techniques; land management practices; and policy issues such as mining, fossil fuel extraction, and watershed and riparian management. In addition, each state's delegation adds content and web links for locally relevant material. For example, the Montana segment includes a digital archive of a noted Range Scientist's field notes, photographs, and papers. Other state specific additions include several links to geospatial and climate websites, mineland restoration activities, topical bibliographies, and lists of academic theses.

## 4. DIS 131409: HIGH RESOLUTION GPR INVESTIGATION OF A LAKE MANLY SHORELINE DEPOSIT, DEATH VALLEY, CALIFORNIA

**LARSON, Phillip Herman**[1], MC DONALD, Jacob Michael1, DRYER, William Patrick[1], PASCAL, Eric Geoffrey1, JOL, Harry M.[1], CRAIG, Mitchell[2], WARNKE, Detlef A.[2], and TEITLER, Lora[3], (1) Geography and Anthropology, University of Wisconsin-Eau Claire, 105 Garfield Avenue, P.O. Box 4004, Eau Claire, WI 54702, larsonph@uwec.edu, (2) Dept. of Geological Sciences, California State Univ., East Bay, 26800 Carlos Bee Blvd, Hayward, CA 94542, (3) Geological Sciences, California State U., East Bay, Hayward, CA 94542

Pluvial Lake Manly inundated Death Valley, California, during the Pleistocene. At its maximum extent, it was approximately 185 km long and 180 m deep. Fluctuating lake levels have been linked to regional

climate changes with the various lake stands collectively referred to as Lake Manly. Today, evidence of the former lake and its lake level fluctuations are recorded in paleo-shoreline deposits and/or erosional scarps throughout Death Valley. The purpose of our ground penetrating radar (GPR) study was to investigate a Lake Manly coastal depositional feature located at one of the higher lake stands (50 m asl). The barrier bar deposit which is cut by Beatty Junction Road within Death Valley National Park is approximately 500 m long, 50 - 100 m wide, and 5 - 6 m in height. Prior geophysical studies on the barrier suggested that higher frequency GPR datasets be collected to provide higher resolution stratigraphic images of the barrier's interior. We utilized a pulseEKKO 1000 GPR system with an automated odometer along two shore parallel and seven cross barrier transects. GPR data sets were topographically corrected with laser leveling equipment and georeferenced with a Trimble ProXR GPS unit. To show the general framework of the shoreline deposit, 225 MHz data were collected along all nine transects while higher frequency antennae (450 and 900 MHz) were used along selected lines to provide higher resolution images. The lines varied in length from 41 m to 266 m with traces collected every 0.1 m to 0.03 m depending on antennae frequency. A common midpoint survey provided a near surface velocity of 0.142 m/ns. Based on this velocity, the depth of penetration was 1.8 m for the 225 MHz antennae, 0.9 m for the 450 MHz, and 0.45 m for 900 MHz. Using radar stratigraphic analysis, the GPR transects show continuous to semi-continuous, horizontal reflection patterns. Along selected locations on cross barrier profiles dipping reflection patterns can be observed with dip angles ranging from 6.1 to 26.6 degrees. Exposed stratigraphy where the road-cut bisects the barrier bar deposit correlates well with the interpreted GPR data.

## 5. DIS 131772: COLORATION AND DIAGENETIC HISTORY OF JURASSIC NAVAJO SANDSTONE AT COYOTE BUTTES, VERMILION CLIFFS NATIONAL MONUMENT, ARIZONA

**SEILER, Winston M.** and CHAN, Marjorie A., Geology and Geophysics, University of Utah, 135 South 1460 East, Room 719, Salt Lake City, UT 84112-0111, seiler@earth.utah.edu

The Coyote Buttes, in Jurassic Navajo Sandstone straddling the Arizona and Utah border at the northern margin of the Vermilion Cliffs National Monument, is renowned for its stunning diagenetic coloration expressed within delicately sculpted, cyclic eolian cross-strata. The wide range of red, orange, pink, and purple hues is largely due to iron oxide grain coatings and cement that is predominantly hematite. Yellow to brown coloration is indicative of goethite. White (bleached) color occurs where some of the iron-oxide coatings have been removed. Coloration is constrained by both sedimentary and tectonic structures at microscopic to outcrop to regional scales.

Sandstone coloration is categorized into four main, large-scale (10's m thick) diagenetic facies: 1) a primary, basal red facies; 2) a red and white banded transition facies; 3) a bleached upper facies; and 4) a secondary red facies associated with the re-introduction of iron-rich fluids along a fault trace. Both the red and white banded and bleached facies are commonly overprinted with two cross-cutting, Liesegang-related zones (m's thick): one of numerous, narrow, cm-scale, multi-colored Liesegang bands, and the second containing multiple orange chemical reaction fronts including iron oxide micro-concretions.

Stratigraphic relationships of reaction fronts show that large-scale diagenetic facies are due primarily to advective fluid flow and iron mobilization within the host rock. Small (cm-scale) and large (10's-m scale) bleaching patterns in the outcrop clearly indicate the upward migration and accumulation of a chemically reducing and bleaching fluid. Smaller-scale, Liesegang-type reaction fronts are due to diffusive mass transfer causing the chemical precipitation of iron oxide mineralogies.

The location draws thousands of wilderness enthusiasts and photographers each year, primarily to a unique geomorphic feature – "The Wave" – where impressive colors accent cross-strata resembling a cresting ocean wave. This study contributes to a better understanding of the intense diagenetic coloration and fluid flow history that distinguishes the Coyote Buttes as an exceptional geologic resource.

## 6. DIS 127326: NEW GEOLOGIC MAP OF THE LOWER DIRTY DEVIL RIVER-HITE CROSSING AREA, GLEN CANYON NATIONAL RECREATION AREA, SOUTHERN UTAH

**WILLIS, Grant C.** and EHLER, J. Buck, Utah Geological Survey, PO 146100, 1594 W. North Temple, Salt Lake City, UT 84114-6100, grantwillis@utah.gov

For several years, the Utah Geological Survey, in cooperation with the National Park Service, has been working on a series of detailed geologic maps covering Glen Canyon National Recreation Area (GCNRA). Accurate, detailed geologic maps are essential to the management of the fragile desert lands because of their proximity to Lake Powell, which receives about 1.8 million recreation visits per year. We recently completed a geologic map of the largest remaining insufficiently mapped part of GCNRA, the Dirty Devil River-Hite Crossing area in the northern part of the recreation area. The map covers an area of about 400 km2 near the north end of Lake Powell where the Colorado River enters the lake (depending upon lake level). Exposed strata range from the Pennsylvanian Honaker Trail Formation, exposed in the bottom of lower Cataract Canyon, to the Middle Jurassic Page Sandstone, which caps a few remote mesas. Exposures are unusually good, permitting detailed examination of the 3-dimensional relationships of map units. The southwestern pinch-out of the Permian White

Rim Sandstone and the western pinch-out of the Triassic Hoskinnini Sandstone are both within the area, presenting the opportunity to understand how these units correlate with adjacent strata. The Triassic Chinle Formation is extensively involved in and mantled by massive landslide complexes that extend the length of the outcrop belt. Nevertheless, sufficient exposures reveal rapid lateral variations over distances of just a few tens to hundreds of meters. These changes, which include lithologic changes, channeling, and pinch-outs, make mapping of the Chinle members challenging, but also reveals much about the terrestrial depositional setting of this formation. The area is cut by a northwest-trending fault zone consisting of over a dozen small fault splays, most having less than 5 m of displacement, that trend oblique to the major structural fabric of the area. This zone has been the focus of vertical hydrocarbon migration as evidenced by bleached zones and "dead" interstitial oil residue.

**7. DIS 131321: TIMELINE INTERPRETATION AND TIME SCALE COGNITION EXPERIMENTS FOR THE TRAIL OF TIME AT GRAND CANYON NATIONAL PARK**

**SEMKEN, Steven**[1], BUENO WATTS, Nievita[2], AULT, Charles[3], DODICK, Jeff[4], ALVARADO, Chery[1], PINEDA, Monica[5], DUNBAR, Kevin[6], KARLSTROM, Karl[7], CROSSEY, Laura[7], and WILLIAMS, Michael[8], (1) School of Earth and Space Exploration, Arizona State University, Tempe, AZ 85287-1404, semken@asu.edu, (2) School of Earth and Space Exploration and Mary Lou Fulton College of Education, Arizona State University, Tempe, AZ 85287-0211, (3) Department of Education, Lewis and Clark College, Portland, OR 97219, (4) Center for Science Teaching, Hebrew University of Jerusalem, Givat Ram, Jerusalem, 91904, Israel, (5) Department of Psychology, Arizona State University, Tempe, AZ 85287-1104, (6) Department of Psychological and Brain Sciences and Department of Education, Dartmouth College, Hanover, NH 03755, (7) Department of Earth and Planetary Sciences, University of New Mexico, Albuquerque, NM 87131-0001, (8) Department of Geosciences, University of Massachusetts, Amherst, MA 01003-9297

The Trail of Time is a walking timeline trail now under construction along the South Rim of Grand Canyon, from Yavapai Observation Station to Grand Canyon Village. It will extend 4.5 km, with each meter marked to represent one million years of geologic time. Interpretative resources on Grand Canyon geology and culture will be deployed along its route. The Trail of Time will be the world's largest geoscience exhibit at the world's grandest geoheritage site. A Time Accelerator Trail (TAT), a logarithmically scaled timeline approximately 250 m long and appended to the main Trail, will help visitors adjust their temporal frames of reference from personal or familiar time scales (years to decades), through historic and archaeological time scales (centuries to millennia) to deep time (millions of years), by periodic changes in scale enroute, from one meter per year to one meter per million years. The time interval marked by the TAT begins at the present and ends at 6 Ma, when Grand Canyon downcutting started.

While linear timelines are constructs commonly used to teach about geologic time in formal and informal settings, their effectiveness has not been fully assessed. The logarithmic time scale introduces complexities that should be understood before the TAT is implemented. The TAT also represents a unique laboratory for the study of learning about deep time. We are implementing off-Canyon studies of the proposed TAT, in which different subjects recruited locally represent typical Grand Canyon visitors. The experimental setting is a scaled-down (74 m), portable rolled paper version of the TAT, on which realistic time markers and placards can be readily placed and adjusted. Research questions include: (1) Do subjects understand the purpose of the TAT?; (2) What happens cognitively when subjects walk the variably-scaled timeline?; (3) Can subjects correctly identify the time represented at any point along the TAT?; and (4) What cognitive challenges will subjects reveal while traversing the TAT? More than 50 subjects of diverse age, ethnicity, and background have participated. The experiments have yielded useful pedagogical recommendations for the full-scale TAT, especially clarity of scale changes and comprehensive labeling of time markers. Coding and analysis of recordings for time cognition studies are in progress.

**8. DIS 130548: FIELD MAPPING AS A TOOL IN PUBLIC EDUCATIONAL OUTREACH: A CASE STUDY FROM THE FAMOUS CHAZY REEF EXPOSURES ALONG GOODSELL RIDGE, ISLE LAMOTTE, VERMONT**

**GRIFFING, David H**. and FLOWER, Martha, Dept. of Geology and Environmental Science, Hartwick College, Oneonta, NY 13820, griffingd@hartwick.edu

The Isle LaMotte Preservation Land Trust has recently turned an 81 acre portion of Isle LaMotte, Vermont (northern Champlain Islands), into a nature preserve with a visitor center/museum. The Goodsell Ridge Natural History Preserve provides public access to the world famous Middle Ordovician reef exposures in the Chazy Group. A primary goal of this preserve is to convey the significance and geologic history of these rock exposures to the general public. Several challenges exist for visitors exploring the site; among them are troubles with identification of fossil and sedimentary features. First, unlike many dinosaur fossil sites where large bones have been excavated for view, the general public is largely unfamiliar with the three-dimensional forms of the fossil invertebrates involved. Second, the calcium carbonate fossils are preserved within limestone, so many of the reef features contrast poorly on weathered surfaces and require close examination. Third, glacial erosion and post-glacial weathering of the limestone has created many irregular, two-dimensional transects through both the reef

structures and their component features.

An undergraduate-led mapping project of seven exposures designated as "discovery areas" aids visitors in recognizing integral features within the fossil reef strata. A detailed survey of the "discovery areas" provides maps for the location of fossil, sedimentary and modern landscape features that tell portions of the geological history of this site. Interpretive text explaining specific features within each "discovery area" is linked to exhibits within the farmhouse/museum that attempt to answer important questions, such as: 1) What are fossils and how do they preserve?; 2) What are reefs and why are they important to us?; 3) Why are these fossil reefs so important to our understanding of Earth history?; and 4) How did ancient reefs come to be exposed in a farm field in a northern cool-temperate climate area well away from the ocean? Care is taken to insure that museum concepts and text provided is both scientifically accurate and clear for the preserve visitors, as well as the local volunteers who are actually constructing the museum displays on a small budget.

## 9. DIS 125950: DEVELOPMENT OF LANGKAWI GEOHERITAGE INFORMATION SYSTEM FOR CONSERVATION AND SUSTAINABLE USE

**SARMAN, Marilah** and KOMOO, Ibrahim, Institute of Environment and Development, University Kebangsaan Malaysia, Bangi, 36000, Malaysia, marilah@pkrisc.cc.ukm.my

The Langkawi islands have many valuable geoheritage sites. To date, 91 geosites have been identified and 28 of them have been scientifically evaluated in detail. These geosites are made up of a diversity of rocks, fossils, structures and landforms. In order to conserve and develop the geoheritage sites in a sustainable manner, we compiled a comprehensive standard Langkawi Geoheritage Information System (LGIS). This study focuses on a geoheritage-resources information system consisting of general information, geoheritage characterization, and geosite management components. Prior to the development of these components, data from the previous studies and geoheritage mapping were collected and categorized. The general information parameters give details of the locality and size of each geosite area. Characteristic information focuses on detailed descriptions of geosite diversity as well as evaluation for scientific, aesthetic, recreational and cultural values. Geosite management data include land ownership, threat, condition and legal status. The LGIS can be used systematically to determine the value of each geosite through comparability and ranking. It can also be used directly for conservation purposes based on its scientific value. From the collected LGIS information, the most suitable approach to conserve geoheritage resources in Langkawi would be to create 3 geological parks, 6 geological monuments, 26 protected sites, and 59 landscapes of scenic beauty.

The Forestry Department of Peninsular Malaysia will conserve geoheritage resources in their permanent forest reservations. Currently 6 geological monuments, 7 protected sites and 4 landscapes of scenic beauty from LGIS are located in the Langkawi permanent forest reservations. All these geosites are suitable to be developed for geotourism purposes, especially those that have recreational, aesthetic, cultural and educational values. Twenty-one geosites are located in tourist areas mainly along the coast and in caves and hills; these should be publicized for geotourism by promotional activities such as the creation of geotrails on land and water for rock and fossil collecting.

## 10. DIS 131443: VISITOR PRECONCEPTIONS AND MEANING-MAKING AT PETRIFIED FOREST NATIONAL PARK

**BUENO WATTS, Nievita**[1], SEMKEN, Steven[2], ALVARADO, Cheryl[2], and PINEDA, Monica[3], (1) School of Earth and Space Exploration and Mary Lou Fulton College of Education, Arizona State University, Tempe, AZ 85287-0211, nievita.bueno@asu.edu, (2) School of Earth and Space Exploration, Arizona State University, Tempe, AZ 85287-1404, (3) Department of Psychology, Arizona State University, Tempe, AZ 85287-1104

When observing the spectacular natural landscapes of our National Parks, how do visitors make meaning of the geology? Deeper understanding of visitor preconceptions can inform the design and implementation of more effective geoscientific displays and interpretative programs. We investigated visitors' ideas about geological processes, features, and history at Petrified Forest National Park in northern Arizona, a place renowned for its colorful badlands and fossil wealth. With the cooperation of Park staff, data were collected from semi-structured interviews of 80 visitor groups (n = 235) encountered at a popular viewpoint locality. Volunteer subjects were asked to explain the formation of the landscape, describe the depositional environments coded in the rocks (including the origin of fossil logs) and account for the present high elevation of the Colorado Plateau. These results were analyzed using the Verbal Analysis methodology of Chi (1997). In the absence of accurate geological understanding of the landscape, visitors frequently used familiar-place knowledge, based on specific places with which the visitor has had prior experience. Qualitative analyses indicate that visitors variously make meaning by (1) relating landscapes to familiar places; (2) building on religious explanations; (3) superimposing past landscapes on modern ones; and (4) patching together bits of information from media sources. Visitors were also found to have difficulty in visualizing climate changes. We recommend that future exhibits and interpretative programs incorporate content and activities that directly address these preconceptions.

## 11. DIS 131541: USE OF INFORMAL EDUCATION SITES TO FACILITATE PALEOENVIRONMENTAL INTEGRATION IN A NATION-WIDE ONLINE PALEONTOLOGY COURSE

**CLARY, Renee M**., Geosciences, Mississippi State University, P.O. Box 5448, Mississippi State, MS 39762, rclary@geosci.msstate.edu and WANDERSEE, James H., Educational Theory, Policy, and Practice, Louisiana State University, Room 223 F, Peabody Hall, Baton Rouge, LA 70803

Laboratory examination of fossil specimens is typically a fundamental component of university paleontology courses. In online settings, students investigate hands-on specimens from individual fossil kits, but the number of specimens is invariably reduced from a traditional classroom setting. As a result, the limited number of specimens and lack of collaborative identifications make it more difficult to maintain paleoenvironmental context in the course. To circumvent this potential problem, we developed individualized application exercises to provide a richer paleoenvironmental context for our students.

At a research university in the US, Earth Science teachers enrolled in an online paleontology course (N=16) were required to apply content knowledge and integrate paleoenvironmental settings through self-selected local informal education sites. Teachers were required to locate specimens representing a variety of phyla, and discuss the morphological characteristics, geographical ranges, and depositional environments for each species.

The teachers further identified and researched paleoenvironments represented by a minimum of three unique informal exhibits, and then incorporated their research into mini-units of paleoeducational activities they designed for their own middle or secondary students.

In an anonymous electronic survey, approximately 70% of teachers selected the informal site activity as their favorite course assignment. Content analysis of anonymous comments revealed three consistent findings: 1) paleoenvironmental investigation at informal sites integrated the course material; 2) informal site investigation had great value and impact on formal geoscience learning; and 3)teachers perceived that their own students' interest for this type of activity was very high.

## 12. DIS 125989: IMAGES OF GEOLOGIC FEATURES IN NATIONAL PARKS AVAILABLE FREE ONLINE

**BAKER, Richard G.**, Department of Geoscience, Univ of Iowa, Iowa City, IA 52242, dick-baker@uiowa.edu

This abstract offers access to over 2600 images of geologic features, mostly from U.S. national parks, which can be copied without charge for educational use. These images were scanned at high resolution and placed in an archival collection which can be used by permission for publications. The collection was also saved at lower resolution for use in PowerPoint or other presentation software for classroom use. It can be accessed at: http://cdm.lib.uiowa.edu/cdm4/browse.php?CISOROOT=/geoscience.

The screen that comes up shows the first 20 images in the collection. Select (click on) an image, and an enlarged view appears with metadata provided below. The collection is searchable in several ways. Choose the park name in the metadata, and all images will be shown for that park. Alternatively, select an item listed after, for example, the subject categories, and all images on the subject will be shown, regardless of park. A specific search engine is also available by selecting Advanced Search at the top of the page. Click “Selected Fields” and choose a field to search. Choosing “Show Terms” will provide a list of topics under each field. Select a term and then click on search, and you will see all items fitting that term.

Once you have an image you wish to use, you need only to copy and paste it into PowerPoint or other presentation program.

## 13. DIS 130154: NSIDC'S ONLINE GLACIER PHOTOGRAPH DATABASE: HELPING THE PUBLIC “SEE” CLIMATE CHANGE

**HOWARD, Allaina M.**[1], BALLAGH, Lisa M.[2], SCOTT, Donna J.[3], and HICKS, Gloria J.[1], (1) Information Center, National Snow and Ice Data Center, 449 UCB, 1540 30th St, Boulder, CO 80309, alhoward@nsidc.org, (2) National Snow and Ice Data Center, 449 UCB, 1540 30th St, Boulder, CO 80309, (3) User Services Office, National Snow and Ice Data Center, 449 UCB, 1540 30th St, Boulder, CO 80309

Since 2001, the National Snow and Ice Data Center's Online Glacier Photograph Database has aided researchers and students by providing Internet access to the collection of historic glacier photographs. The online database now contains over 3,000 images. Many of these photographs are currently accessible through a Google Earth file, which enables users to view the photographs in a virtual context. Our efforts to update the collection and to work with users involve collaboration between different departments within NSIDC and our digitization contractor, HOV Services.

Collaborating with internal departments to fulfill a user request is our primary activity at NSIDC. The photographs of the Franz Josef glacier provide an example of the life cycle of a user request. A person contacts our User Services Office (USO) to request the Franz Josef glacier photographs because they saw them on our “All About Glaciers” web site. Since they are not in the Online Glacier Photograph Database, USO contacts the information services staff who locates the original prints in the archives and scans them. USO then sends the digital images to the user. Ultimately, these photographs

are sent offsite to be scanned to the specifications of the glacier photograph digitization project and added to the queue of glacier photograph updates. Once this process is completed, many more users will be able to access these images via the online collection.

Learn about the latest images in the collection, what's next in terms of updates, and how NSIDC is working to create a multifaceted online collection.

## 14. DIS 129367: DIGITAL ASSET MANAGEMENT FOR GEMOLOGY AND RELATED GEOSCIENCES

**DIRLAM, Dona Mary**, COLBERT, Judy, TSIAMIS, Peggy, BOHANNON, Sharon, DAILEY, Kathleen, SCHUMACHER, Kevin, JONATHAN, Cathleen, and RUCINSKI, Paula, Richard T. Liddicoat Gemological Library and Information Center, Gemological Institute of America, The Robert Mouawad Campus, 5345 Armada Drive, Carlsbad, CA 92008, ddirlam@gia.edu

Librarians from the Richard T. Liddicoat Gemological Library & Information Center at the Gemological Institute of America (GIA) led the initiative to establish a cross-departmental task force to digitize, preserve, and provide access to its geoscience visual resources.

GIA's mission is to ensure the public trust in gems and jewelry through education, research, and laboratory services. For over 75 years, photographs of gemstones, mining areas, and gemology have been vital to GIA staff meeting this mission through teaching gemology and publishing its research journal Gems & Gemology.

In 2004, librarians with 14 departments launched a digital asset management (DAM) system for the increasing number of digital resources. For the first phase, the task force began with digital images, since a DAM system is key to maintaining our images.

With a collection of over 50,000 35mm photographic slides, the first concern was the conservation of the slides by scanning them. Another concern was accessing the images in an international organization with campuses in 11 countries. Also, how to meet the needs of those seeking to license images for publications, websites, and other electronic media.

The key to successful implementation lies in planning the policies and procedures. Many questions need to be answered before searching for the right software solution and the required computer equipment.

Another step in the planning process is consideration of the metadata requirements. Information is vital to identify the content of an image, give useful details such as the photographer and copyright information, and provide access to the images during searching. A thesaurus of keywords is essential to aid in a database search.

Future expansion of GIA's DAM system will provide access to more geoscience resources as digital video and audio files, maps, books, articles, and gemology databases are included. These will enhance GIA's outreach via its web presence as it educates an ever-expanding public and supports scientists and policy makers of the international community.

## 15. DIS 128717: A PLAN OF ACTION FOR ORGANIZING THE RESOURCES FOUND IN THE VIRGINIA DIVISION OF MINERAL RESOURCES LIBRARY

**HODKINSON, Sarah Z.**, School of Information and Library Science, University of North Carolina- Chapel Hill, 910 Constitution Drive, Apt. 219, Durham, NC 27705, sarah.z.hodkinson@gmail.com

This Library Science master's project was intended to provide the Virginia Division of Mineral Resources (VDMR) in Charlottesville, VA with a plan of action for increasing the effectiveness of their library. The VDMR library should be the premier Geology library in the Commonwealth of Virginia, but they have not had a full-time librarian on staff since the mid 1990s, and very little has been done to maintain the library since that time. In this plan of action, basic library procedures have been outlined, along with a list of recommendations for maintaining and improving the library's services.

## 16. DIS 127029: ACTIVE LEARNING TECHNIQUES TO TEACH INFORMATION LITERACY SKILLS

**SWOGER, Bonnie J.M.** and ZIPP, Louise S., Milne Library, SUNY Geneseo, 1 College Circle, Geneseo, NY 14454, swoger@geneseo.edu

Traditional methods of software and database instruction normally rely on extensive demonstrations of these tools. Students are traditionally passive, or instructed to follow along with the instructor through a series of pre-determined examples.

Librarians used active learning techniques to teach chemistry students to locate substance information using “SciFinder Scholar,” a user-friendly platform for Chemical Abstracts. We found that students responded enthusiastically to the lesson and were less likely to engage in other online activities during class. Working with classroom faculty, librarians prepared an lesson geared specifically to an assignment presented at the beginning of the class session.

Demonstrations by the librarians were very short, and only offered an introduction to the basic features of the tool. Students were then asked to work in groups, answering broad, open ended questions that encouraged and led them to explore the SciFinder Scholar interface. Each group was asked to explore a slightly different aspect of the SciFinder Scholar search interface and to select a member of their group to present their findings to the class. Group presentations were highly variable,

allowing instructors and librarians to emphasize the features that would have traditionally been presented in a lengthy demonstration.

After completing the assignment, students were asked to complete a brief survey assessing learning outcomes and students attitudes. While most of the students had not used SciFinder Scholar before, a majority responded that they would use it in the future. Usage statistics for the database indicate a large increase in usage following the instruction sessions.

The active learning techniques and group-work methods used in this class can be applied to instruction with other software or research databases. Mineralogy, Geochemistry, and other geology classes will also find SciFinder Scholar useful for locating chemical data.

**17. DIS 128155: THE PURDUE UNIVERSITY EARTH AND ATMOSPHERIC SCIENCES LIBRARY THROUGH THE AGES**

**LAFFOON, Carolyn J.**, EAS Library, Purdue University, CIVL, West Lafayette, IN 47907, carolyn@purdue.edu, FOSMIRE, Michael, PSET Libraries, Purdue University, Physics, West Lafayette, IN 47907, and MILLER, Chris C., EAS Library, Purdue Univ, CIVL, West Lafayette, IN 47907

A history of the Purdue University Earth and Atmospheric Sciences Library is presented through annotated pictures, maps, and aerial photos of campus. Originally presented April, 2007, at the 40th Anniversary Celebration of the Department of Earth and Atmospheric Sciences, Purdue University.

## Geoscience Information Society Award Winners for 2007

*It is a great pleasure to note that the following awards will be presented at the Society's Annual Awards Luncheon on Tuesday October 30 at the 2007 GSA Annual Meeting in Denver:*

**Mary B. Ansari Distinguished Service Award**
Recipient: John Mulvihill (Vienna, Virginia; American Geological Institute, retired).

**Mary B. Ansari Best Reference Work Award**
Recipients: Scott Elias (Royal Holloway, University of London, S.Elias@rhul.ac.uk), editor-in-chief, for the *Encyclopedia of Quaternary Science,* published by Elsevier, 2007

**Outstanding Website Award**
Recipient: Robert Stewart (Texas A&M University, rstewart@ocean.tamu.edu), for *Ocean World* (http://oceanworld.tamu.edu), an outreach project of the Department of Oceanography and Jason Education Project at Texas A&M University.

**Best Paper Award**
Recipient: Lura E. Joseph (University of Illinois at Urbana-Champaign, luraj@uiuc.edu) for her paper "Image and figure quality: a study of Elsevier's Earth and Planetary Sciences electronic journal back file package," published in *Library Collections, Acquisitions, & Technical Services,* vol. 30, no. 3-4, September-December 2006.

**Best Guidebook Award** *(2 winners this year)*
Recipients: Carol S. Prentice (USGS Meno Park, cprentice@usgs.gov), Judith G. Scotchmoor (University of California Museum of Paleontology, jscotch@berkeley.edu), Eldridge M. Moores (University of California, Davis, emeritus, moores@geology.ucdavis.edu), and John P. Kiland (KPW Structural Engineers, Oakland, CA), editors, for their publication *1906 San Francisco Earthquake Centennial Field Guides*, published by the Geological Society of America, 2006; and Spencer G. Lucas (New Mexico Museum of Natural History and Science, spencer.lucas@state.nm.us), Kate E. Zeigler (University of New Mexico, kaerowyn@unm.edu), Virgil W. Lueth (New Mexico Bureau of Geology and Mineral Resources, vwlueth@nmt.edu), and Donald E. Owen (Lamar University, owende@hal.lamar.edu), for *Geology of the Chama Basin*, New Mexico Geological Survey Fall Field Conference Guidebook 56, published in 2005.

For further information contact :
Shaun J. Hardy
GSIS Publicity Officer
202-478-7960
hardy@dtm.ciw.edu

**Earth Science Week October 14-20, 2007**
"The Pulse of Earth Science"
Sponsored by American Geological Institute
For more information see www.earthsciweek.org
For a complimentary toolkit, contact Geoff Camphire at info@earthsciweek.org or 703.379.2480

**33rd International Geological Congress**
Geoscience World Congress 2008
6–14th August 2008, Oslo
http://www.33igc.org/

| GEOSCIENCE INFORMATION SOCIETY 2007 Midyear Report (by Renee Davis 7/27/07) | | | | |
|---|---|---|---|---|
| | **Income Budgeted** | **Income Actual** | **Expense Budgeted** | **Expense Actual** |
| **EXECUTIVE BOARD** | | | | |
| President | | | $450.00 | $0.00 |
| Vice-President | | | $425.00 | $0.00 |
| Past-President | | | $25.00 | $0.00 |
| Secretary | | | $125.00 | $0.00 |
| Treasurer | | | $125.00 | $43.75 |
| **Subtotal** | **$0.00** | **$0.00** | **$1,150.00** | **$43.75** |
| | | | | |
| **MEETINGS** | | | | |
| 2006 Meeting | | $57.95 | | $57.95 |
| 2007 Meeting (rooms and AV) | $250.00 | | $1,500.00 | $485.00 |
| 2007 Business Meeting refreshments | $500.00 | | $700.00 | $0.00 |
| 2007 Meeting Reception | $2,500.00 | | $2,000.00 | $0.00 |
| 2007 Meeting Exhibit Booth (furniture & drape) | $0.00 | | $550.00 | $0.00 |
| 2007 Awardees lunch | | | $250.00 | $0.00 |
| 2007 Speaker Honorarium / Gift | | | $600.00 | $0.00 |
| 2007 Meeting: fieldtrip | $0.00 | | $0.00 | $0.00 |
| **Subtotal** | **$3,250.00** | **$57.95** | **$5,600.00** | **$542.95** |
| | | | | |
| **DUES** | | | | |
| Institutional | $900.00 | $1,400.00 | | |
| Personal | $4,500.00 | $5,135.00 | | |
| Sustaining | $270.00 | $135.00 | | |
| Retired | $200.00 | $200.00 | | |
| Student | $60.00 | $60.00 | | |
| Pooled Sponsorship | $250.00 | $235.00 | $60.00 | $0.00 |
| **Subtotal** | **$6,180.00** | **$7,165.00** | **$60.00** | **$0.00** |
| | | | | |
| **PUBLICATIONS** | | | | |
| Publications Manager | | | $500.00 | |
| Directory of Geoscience Libraries | $0.00 | $0.00 | | |
| Mailing labels | $300.00 | $250.00 | | |
| Newsletter: printing | | | $2,000.00 | $448.84 |
| Newsletter: mailing | | | $500.00 | |
| Newsletter: subscriptions | $250.00 | $585.00 | | |
| Newsletter: back issues | $0.00 | | | |
| Newsletter: cancellation refunds | | | $0.00 | $40.00 |
| Proceedings, v. 37 (2006) | $0.00 | | $0.00 | |
| Proceedings, v.36 (2005) | $1,000.00 | | $2,000.00 | |
| Proceedings, v.35 (2004) | $180.00 | | | |
| Proceedings, v.34 (2003) | $135.00 | | | |
| Proceedings, v.33 (2002) | $45.00 | | | |
| Proceedings, prior volumes | $45.00 | | | |
| Index | $0.00 | | | |
| Reprints | | | | |
| Royalties | | | | |
| **Subtotal** | **$1,955.00** | **$835.00** | **$5,000.00** | **$488.84** |

| GEOSCIENCE INFORMATION SOCIETY 2007 Midyear Report (by Renee Davis 7/27/07) | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Income Budgeted** | | **Income Actual** | | **Expense Budgeted** | | **Expense Actual** |
| **REPRESENTATIVES/APPOINTEES** | | | | | | | |
| AGI Member Council rep | | | | | $25.00 | | |
| AGI Gov't Affairs Program rep | | | | | $25.00 | | |
| Congressional Science Fellow | | | | | $100.00 | | |
| CUAC (2 reps @ $200 each) | | | | | $400.00 | | |
| Publicity Officer | | | | | $50.00 | | |
| Auditor | | | | | $25.00 | | |
| | | | | | | | |
| **Subtotal** | **$0.00** | | **$0.00** | | **$625.00** | | **$0.00** |
| | | | | | | | |
| **COMMITTEES & SERVICE POSITIONS** | | | | | | | |
| Archivist | | | | | $150.00 | | |
| Best Paper | | | | | $25.00 | | |
| Best Reference Work | | | | | $25.00 | | |
| Collection Development | | | | | $25.00 | | |
| Distinguished Service Award | | | | | $100.00 | | |
| Exhibits | | | | | $85.00 | | |
| New display case/Repairs | | | | | $0.00 | | |
| GeoRef Users Group/E-Resources | | | | | $25.00 | | |
| Guidebooks | | | | | $50.00 | | |
| International Initiatives | $600.00 | | | | $25.00 | | |
| Membership | | | | | $50.00 | | |
| Membership brochure | | | | | $30.00 | | |
| Photographer | | | | | $25.00 | | |
| Nominating | | | | | $75.00 | | |
| Preservation | | | | | $25.00 | | |
| Website Advisory | | | | | $135.00 | | $134.91 |
| **Subtotal** | **$600.00** | | **$0.00** | | **$850.00** | | **$134.91** |
| | | | | | | | |
| **MISCELLANEOUS** | | | | | | | |
| AGI member society dues | | | | | $240.00 | | $240.00 |
| GAP contribution | | | | | $400.00 | | |
| GIS International Fellow | | | | | $0.00 | | |
| Ansari Best Reference Award | | | | | $500.00 | | |
| Ansari Distinguished Service Award | | | | | $400.00 | | |
| Geoscience Librarianship 101 | $600.00 | | | | $800.00 | | |
| Gifts (unrestricted) | $300.00 | | $305.00 | | $100.00 | | |
| Gifts- Professional Develop Fund | $250.00 | | $85.00 | | $200.00 | | |
| Bank / Visa card charges | $0.00 | | $33.25 | | $50.00 | | $16.00 |
| Interest | $1,000.00 | | $610.88 | | | | |
| **Subtotal** | **$2,150.00** | | **$1,034.13** | | **$2,690.00** | | **$256.00** |
| | | | | | | | |
| **TOTAL** | **$14,135.00** | | **$9,092.08** | | **$15,975.00** | | **$1,466.45** |

## GSIS PUBLICATIONS LIST

**Proceedings of the Annual GSIS Meetings** (ISSN 0072-1409) $45.00 each; standing orders are $45.00/year. (Proceedings volumes 1 through 25 are out of print and available from:
Out-of-print Books on Demand, University Microfilms, Inc., 300 North Zeeb Road, Ann Arbor, MI 48106)
-v. 35, 2004, published 2005 *Geoinformatics*, ed. by L. R. Musser (ISBN 0-934485-37-2)
-v. 34, 2003 *Geoscience Information Horizons: Challenges, Choices, and Decisions*, ed. by L. E. Joseph. (ISBN 0-934485-36-4)
-v. 33, 2002 *New Heights in Geoscience Information: Access and Technology*. ed. by L. G. Dunn. (ISBN 0-934485-35-0)
-v. 32, 2001 *Geoscience Information: A Dynamic Odyssey*, ed. by M. M. Noga. (ISBN 0-934485-34-8)
-v. 31, 2000 *Electronic Information Summit: New Developments and Their Impacts*, ed. by S. N. Tahirkheli. (ISBN 0-934485-33-X)
-v. 30, 2000 *Communication Divides: Perspectives on Supporting Information Bridges in the Geosciences*, ed. by Lois Heiser, (ISBNO-934485-32-1)
-v. 29, 1999 *Accreting the Continent's Collections*, ed. by C. R. M. Derksen and C. J. Manson, (ISBN 0-934485-31- 3)
-v. 28, 1998 *The Costs and Values of Geoscience Information*, ed. by C. J. Manson. (ISBN 0-934485- 29-1)
-v.27, 1997 *Expanding Boundaries: Geoscience Information for Earth System Science*, ed. by B. J. DeFelice. (ISBN 0-934485- 23-2)
-v. 26, 1996 *Crossing the Bridge to the Future: Managing Geoscience Information in the Next Decade*, ed. by N. L. Blair. (ISBN 0-934485-26-7)

**Proceedings of the International Geoscience Information Conferences**
--6th,1998 S*cience Editing and Information Management*, *Proceedings of the Second International AESEI CBEI EASE Joint Meeting*, Sixth International Conference on Geoscience Information, and Thirty-second Annual Meeting, Association of Earth Science Editors, ed. by C. J. Manson. (ISBN 0-934485-30-5) $ 25.00
--5th, 1994 *Geoinfo V, Proceedings of the 5th International Conference on Geoscience Information*, ed. by Jiri Hruska. (ISBN 0-934485-27-5) $45.00 (2 vols.)

**Directory of Geoscience Libraries, North America.**
5th Edition, 1997. (ISBN 0-934485-25-9) Paper. $ 35.00

**GSIS Newsletter** (ISSN 0046-5801) published bi- monthly; calendar year subscriptions only. United States and Canada $ 40.00; other countries (via airmail) $ 45.00

**Mailing labels:** Geoscience Information Society member mailing labels: Single use labels $150.00.

Send orders to:

**Ellie Clement**
**Cabot Science Library / Harvard University**
**One Oxford Street**
**Cambridge, MA 02 138**
**phone: 617.496.8442**
**fax: 617.495.5324**
**e-mail: clement@fas.harvard.edu**

**Payment must be made in U.S. dollars.**


**Connie J. Manson**
**2525 Sleater Kinney Road N.E.**
**Olympia, WA 98506**