



THE GEOLOGICAL SOCIETY OF AMERICA

Geoscience Education Division

<http://gsaged.org/>

January 2009

From Your Newsletter Editor

Greetings, everyone. I hope you are all having a good school year despite the economic climate. It has been challenging to deliver quality education to students with declining resources. The next round of expected budget cuts here at my university will take us up to 25% over the last two years. That would be catastrophic in the private sector, worthy of a bailout! Yet we manage to innovate, make do, and soldier on. Imagine, though, what we could do with \$700 *billion*...ah, we can dream, can't we?

I hope to see some of you at the Southeastern Section GSA meeting in beautiful St. Petersburg, FL, March 12-13. I was unable to attend the 2008 GSA Annual Meeting in Houston, and so I missed renewing acquaintances with you at our business meeting and at the many, many GED sponsored paper and poster sessions. Budget cuts or not, I will be at the 2009 meeting October 18-21 in Portland, Oregon. If you have never been to Portland, you have missed visiting one of the most interesting cities in North America. A popular bumper sticker there says "Keep Portland Weird." That says it all, and alone is enough reason to go, not to mention the *spectacular* geology in that region.

As always, if you have items you would like to have included in the next newsletter, please e-mail them to me at mhafen@cas.usf.edu.

Mark Hafen
University of South Florida

GED Chair's Message

Greetings GED Members! It was very nice to meet and interact with so many of you at October's GSA meeting in Houston, where I assumed the duty of GED Chair. Please allow me to introduce the 2009 GED management board and provide an update on several GED activities and initiatives.

2009 GED Management Board

Chair:	Elizabeth Nagy-Shadman	eanagy-shadman@pasadena.edu
First Vice-Chair:	Eric Pyle	pyleej@jmu.edu
Second Vice-Chair:	Paul Baldauf	pb501@nova.edu
Secretary-Treasurer:	William Slattery	william.slattery@wright.edu
Past Chair:	Kristen St. John	stjohnke@jmu.edu
Newsletter Editor:	Mark Hafen	mhafen@cas.usf.edu
Website Manager:	Hugh Rance	hughrance@rcn.com
GSA Council Liaison:	Nancy McMillan	nmcmilla@nmsu.edu
Rep. to GSA Education Committee:	Virginia Peterson	petersvi@gvsu.edu

Highlights from 2008

- We ended 2008 with 1,112 members, the 5th largest of GSA's 17 divisions.
- As of the end of December 2008, the GED Fund has \$19,635 in net assets.
- There were 239 abstracts in Geoscience Education presented at the 2008 GSA Annual Meeting, the 3rd largest by discipline. In addition, GED sponsored 17 topical sessions, 4 discipline session, and 2 Pardee symposia.

- The Biggs Earth Science Teacher Award became our named Division Award in 2008. Congratulations to the **2008 Biggs Award** recipient **Karen Kortz** of Community College of Rhode Island! To learn more about Karen, visit <http://www.geosociety.org/awards/08speeches/biggs.htm>.
- For a second year, GED presented **Student Travel Awards** of \$250 each to support attendance at the GSA Annual Meeting by students presenting work in the field of geoscience education. Congratulations to the three 2008 awardees:
 - **Matthew Ludwig**, Western Michigan University, "Classroom Observation Methodologies to Assess Student Engagement"
 - **Daniel Bulger**, University of Georgia, "Implementation of a Voluntary Research-Based Project to Enhance Undergraduate Involvement In the Scientific Process In Mineralogy"
 - **Philip Stokes**, University of Arizona, "Spreading Roots: The Goals and Challenges of Establishing a Self-Sustaining Diversity Program in Southern Arizona"
- For a second year, GED presented a **Distinguished Service Award** to recognize a member who has given outstanding service to the Division. Congratulations to **Hugh Rance**, who manages the Division website!

Opportunities and Initiative for 2009

- **Biggs Award Nomination deadline is February 1, 2009.** Nominations for the 2009 Biggs Earth Science Teaching Award, which recognizes innovative and effective teaching of earth science among early career faculty, are due by February 1, 2009. Information and nomination forms can be found at <http://gsaged.org/biggsaward/award2008.htm>. All nomination material should be sent to Paul Baldauf, pb501@nova.edu, Nova Southeastern University, Farquhar College of Arts and Sciences, Math Science and Technology Division, 3301 College Avenue, Fort Lauderdale, FL 33314.
- **GSA Fellow Nomination deadline is February 1, 2009.** GSA is actively soliciting Fellow nominations through its Divisions and Sections. We would like your help identifying GED members who have not been nominated in the past and are deserving of Fellowship. See more information, nomination forms, and a list of GED members who are currently GSA Fellows at http://gsaged.org/messages/gsa_fellowship.htm.
- **Management Board Vacancies.** In addition to our annual search seeking candidates for the position of second vice-chair to join the executive board (deadline April 1, 2009), we will also be seeking a new board member to replace long-time Secretary-Treasurer Bill Slattery, who has been a vital member of the GED Board much longer than the initial 2-year commitment (see call for nominations below).
- **Make a Donation – Double your Dues.** In 2008, GED established a Geoscience Education Fund through the GSA Foundation. The purpose of the fund is to support geoscience education awards, grants, and scholarships. Information about the Fund can be found at http://gsaged.org/messages/GED_Fund_guidelines.pdf. Donations can be made through the GSA Foundation web page <http://www.gsafweb.org/makeadonation.html>. Be sure to select Geoscience Education Fund under step 2. Recall that the dues for GED Membership is one of the lowest of all GSA Divisions, only \$5 per year!
- **Web page changes.** Hugh Rance has been working hard at incorporating updates and improving our Division web page <http://gsaged.org>. Find Division information, past newsletters, awards information and nomination forms, and peruse the many excellent geoscience education links. Have a suggestion? Contact Hugh at hughrance@rcn.com.

On behalf of the current management board, we look forward to serving the GED membership in the coming year. Please feel free to contact me or any of us with questions or comments.

Elizabeth Nagy-Shadman
2009 Chair, Geoscience Education Division

GED Seeking Officer Nominations

Seeking Officer Nominations for 2010, Geoscience Education Division, Geological Society of America

The Geoscience Education Division of the Geological Society of America is seeking candidates for the positions of (a) second vice-chair and (b) secretary-treasurer to join the management board.

The job of second vice-chair entails management board planning work, as well as supervising the Biggs Award,

student-travel awards, and other Division award processes. The second vice-chair moves up each succeeding year to first vice-chair, chair, and past chair, so the position is a four-year commitment.

The job of secretary-treasurer entails keeping records of management board and business meetings of the Division, documenting the financial business of the Division, maintaining liaison with financial staff at GSA headquarters, and serving as an *ex officio* member of all committees of the Geoscience Education Division. The secretary-treasurer serves a 2-year term. Attendance at the GSA Annual Meeting is strongly recommended, as it is for all GED officers.

If you are interested in running for this position, or if you would like to nominate someone else, please respond to Kristen St. John stjohnke@jmu.edu by April 1, 2009. We will request a brief bio and statement for the ballot. Elections will be held in June, with the new member officially joining the board at the 2009 GSA Annual Meeting.

Kristen St. John
James Madison University

Weigh In on Earth Science Literacy

The Earth Science Literacy Initiative (ESLI), funded by the National Science Foundation, was instituted to create an understanding of the principal concepts of the Earth sciences and put them into a document that would have applications for both research in and the public understanding of the Earth sciences. This is part of a larger geoscience Earth Systems Literacy effort.

The NSF-supported Earth Science Literacy Initiative has prepared a draft document outlining what every citizen should know about Earth science, and we are seeking community input on the draft. A first public draft was announced and was open for comments during October 2008. These comments have been incorporated into the document, and a second round of comments opened on December 15, 2008. We hope that you will take the time to provide your input, because this document will provide a clear and concise summary of the fundamental ideas in Earth science for policy makers, educators, students, and the general public.

This document complements the efforts of the Ocean, Climate and Atmospheric science communities in defining the big ideas and supporting concepts essential for an Earth-system literate public. The Earth Sciences draft was developed through an NSF-supported, 350-participant online workshop held in May 2008 and a 35-participant, in-person writing workshop held in July 2008. These workshops brought together scientists from a broad representation of the geosciences, including mineralogists, petrologists, resource explorationists, sedimentologists and stratigraphers, paleontologists, tectonists, geophysicists, geomorphologists, low-temperature geochemists and biogeochemists, continental dynamacists, volcanologists, geohazard specialists, and members of the freshwater hydrologic science community. The document has gone through several rounds of revisions since then, and though it is already the product of 10,000's of hours of work, we want to make sure that it represents the current state of Earth science understanding.

To view continuing updates to this draft document, go to <http://www.earthscienceliteracy.org>.

This is a critical time for our science – the geosciences can play a critical role in helping society meet the challenges of natural hazards and human impacts on the environment. Please help us make this document accurate and engaging! Please contact Michael Wysesession at michael@seismo.wustl.edu with any questions.

Nicole LaDue
National Science Foundation

Din-o-mite Opportunity at the Dinosaur Academy

We run something called the Dinosaur Academy: an educational camp for high school students. It's the perfect 7-day paleo-experience for science enthusiasts! College credit is also available. This is one of the only certification programs for fossil preparation, field basic works, and molding and casting. The Dinosaur Academy will run from June 21-28, 2009. There is also a Teachers' Workshop, which takes you into the fields of geology and paleontology, through hands-on research and activities. This workshop takes place July 29-August 2, with

2 credit hours available through the University of Wyoming Outreach School. Last year, all of the teachers went home with handouts and activities to use in their classrooms, and even got to collect their own fossils.

The Dinosaur Academy is supported by the Big Horn Basin Foundation. The BHBF is what runs the non-profit part of the group, whether it be students and teacher or volunteers. Check us out at <http://www.bhbfonline.org/>, where anyone can download the certification requirements or our research papers, etc. Contact Bill Wahl for more information at wwahl2@aol.com

Bill Wahl
Paleontologist/Preparation Lab Manager

Drill, Baby, Drill: The DOSECC Summer Internship Program

DOSECC (Drilling, Observation and Sampling of the Earths Continental Crust) internships promote involvement in projects where drilling has provided data and materials for study. Interns can undertake research related to ongoing or past drilling efforts. Grad students, undergrads, and primary and secondary school teachers – worldwide – are eligible.

Internship funding will be available in the summer of 2009, and budgets of \$2000 to \$5000 are appropriate. Applications must be received by **March 1, 2009** and awardees will be announced April 1, 2009. In the past, a high percentage of applicants have been successful.

Application details are listed on our website: <http://www.dosecc.org/html/internship.html>. Or email the DOSECC Education and Outreach Manager, David Zur dzur@dosecc.org.

David M. Zur
DOSECC Education and Outreach Manager

Geology Seminar on Craters of the Moon (Sort of)

Through our partner the Sawtooth Science Institute, Craters of the Moon National Monument and Preserve will be offering a two day Geology Seminar on the geology of the park: July 17th and 18th, 2009. The workshop fee is \$50, and if you want 1 hr. of college credit through Idaho State University, there is also a recording fee of \$50.

Call the Sawtooth Science Institute (208) 788-9686 to register. For details on the contents of the seminar or for more information, call Doug Owen at the park (208) 527-1331. For geologists who may have an interest in winter ecology, there is also a Winter Ecology Snowshoe Workshop being held in the park on February 7th and 8th, 2009, also offered through the Sawtooth Science Institute.

Douglass E. Owen
Park Ranger Naturalist/Park Geologist
Craters of the Moon National Monument and Preserve

Charles Darwin, in da House!

Waubonsee Community College is proud to announce a rare appearance of Charles Darwin! We will be hosting the award-winning performance of Brian Fox as Charles Darwin on 12 February 2009, in celebration of Darwin's 200th birthday. There will be an evening presentation, and presentations during the day for local schools. Come to Waubonsee to ask Mr. Darwin those questions you always wanted to, but couldn't! Please contact David Voorhees at (630) 466-2783 or dvoorhees@waubonsee.edu or the Waubonsee Earth Science Department web page <http://chat.wcc.cc.il.us/~earth/newsevents.htm> for more details as they...**evolve**.

David H. Voorhees
Waubonsee (IL) Community College

Congrats to One of our Own

The Carnegie Foundation for the Advancement of Teaching and the Council for Advancement and Support of Education (CASE) have named GED member **Maud Walsh** the 2008 Louisiana Professor of the Year. Walsh, an associate professor in the School of Plant, Environmental & Soil Sciences at Louisiana State University, was selected from nearly 300 professors in the United States. She was nominated in recognition of her excellent contributions to undergraduate education. Send your congratulations to Maud at evwals@lsu.edu.

Report from the GSA Committee on Education

The Committee on Education serves as advisor and advocate to the Society on issues and programs that have the potential to stimulate interest in the importance and acquisition of basic knowledge in the Earth sciences at all levels of education. Committee members work with the GSA Education and Outreach staff, and with other interested scientific and education organizations, to develop informal, pre-college (K-12), undergraduate, and graduate earth-science education and outreach objectives and initiatives.

Recent activities of the Education Committee

Nature of Science

National discussions related to evolution and global warming make clear the need for public understanding of the Earth sciences perspective on the nature of science and use of the scientific method to advance science. Recently, the committee was involved in preparation of [The Nature of Science and the Scientific Method](http://www.geosociety.org/educate/NatureOfScience.htm), a document now available on the Society website at www.geosociety.org/educate/NatureOfScience.htm. This document is intended to provide a concise resource along with possible talking points.

Attracting Geoscience Majors

Many societal issues require an increased awareness and comprehension of the geosciences among the general public and an increasing pool of bright and creative individuals who pursue geoscience as a career. Few matriculating college students are aware of the importance of an understanding of the geosciences in their lives or the potential for careers in geoscience-related fields. The committee is actively working on two initiatives that may help address this challenge.

A. Dual Enrollment

One challenge relates to the relative scarcity of high-school-level requirements or even offerings of Geoscience courses. The lack of an AP Geology course or exam contributes to this problem. The practice of offering dual credit/dual enrollment geoscience courses for high school students has been successful in some places in attracting pre-college students to the geosciences and could help to increase the pool of undergraduate geology majors. The committee is actively researching successful Dual Credit/Dual Enrollment programs across the country in order to generate a document that outlines best practices and potential challenges with the intent of producing a reference document to encourage this pre-college outreach approach.

B. Connecting with 2-year Colleges

The committee also believes that faculty at 2-year institutions are important partners in the outreach to pre-college and early college students and are potentially a population that has been underserved by the Society. The committee is currently exploring how the Society can better serve 2-year/community college geoscience faculty. The committee is in the process of surveying faculty members of this community and will use the results of the survey and discussions at a 2-year college faculty forum at the 2009 GSA Annual Meeting in Portland to make recommendations to GSA Council.

Make-up of the GSA Education Committee

The makeup of the committee has recently been revised to consist of the following **12 voting members**, serving 4-year terms, plus *ex officio* members:

- 1 - 2yr college faculty representative
- 1 - 4yr college faculty representative
- 1 - Graduate educator representative
- 1 - K-12 teacher representative
- 1 - Informal science educator (museum, visitor center, interpretation officer, etc.)
- 1 - Graduate student (2-year term)
- 1 - Undergraduate student (2-year term)
- 1 - Geoscience Education Division representative
- 2 - Section representative (on a rotating basis through all the Sections)
- 2 - At-large members
- 1 - GSA Past-President shall serve as an *ex officio*, non-voting member
- 1 - GSA Education and Outreach Director, *ex officio*, as non-voting Headquarters Liaison

The committee welcomes ideas and input from all GSA members. A good way to provide comments or make suggestions to the committee is through the current Division representative to the committee, Ginny Peterson petersvi@gvsu.edu. We strongly encourage members to nominate themselves or others to serve on this important committee. The Education committee meets formally 2 times per year, once at the Annual Meeting and a second time in early spring. In 2009, the spring meeting will be held at the Southeastern Section meeting in St. Petersburg, FL.

Ginny Peterson
GED Representative to the GSA Committee on Education
Grand Valley State University

Geothermal Geoscience Certificate in New Zealand

Postgraduate Certificate in Geothermal Energy Technology, 20 July - 13 November, 2009. This is a 5 month course at the University of Auckland, New Zealand, in geothermal geoscience and geothermal engineering, and is aimed at graduates who wish to work in the geothermal industry, and engineers and scientists who are already working in geothermal who want to extend their knowledge and gain a tertiary qualification. For more information, visit <http://www.iese.co.nz/> or contact olwen.morgan@auckland.ac.nz.

Juliet Newson
Dept of Engineering Science Geothermal Reservoir Group
University of Auckland

Survey Says...?

The GSA Committee on Education is looking for feedback to discover how GSA can best serve geoscience faculty at two-year institutions. If you are among that faculty group, we would very much appreciate your input. Please follow this link to a survey designed for geoscience faculty at two-year institutions:

<http://www.zoomerang.com/Survey/?p=WEB228KVR3V92F>

A more detailed explanation of the survey can be found on the first page.

In addition, we would also appreciate feedback from faculty who are NOT GSA members. If you have contact information for other geoscience faculty at two-year institutions, please forward this information to them. The more feedback the committee can gather, the more effective we can make the response strategies.

Thank you for your time. We greatly appreciate your participation!

Aida Awad
Chair, GSA Committee on Education

Earth Science Resources through CoreKids

The scientists and staff of the Michigan Geological Repository for Research and Education (MGRRE) share geology and Earth science resources with K-12 teachers, students and parents through their CoreKids program. CoreKids was founded to help bridge the gap between Earth science and the public.

CoreKids program representatives visit classrooms and other groups in SW Michigan, host field trips to the MGRRE on the Western Michigan University campus, and make their presentations available to others as Learning Modules on their website.

To find out more about the program, or to download any of their resources, visit their new website at <http://www.wmich.edu/corekids/index.htm>.

Susan Grammer, WMU-CoreKids Coordinator susan.grammer@wmich.edu
Mike Grammer, WMU-CoreKids Faculty Advisor

Summer Field Course in Morocco

The Cultural and Natural Resources of Morocco
GEOG 4910 / 5510 (3 credit hours)
Oklahoma State University
May 23 to June 7, 2009

This study abroad summer course, offered through Oklahoma State University, College of A&S Outreach, will focus on themes of cultural and natural resources in Morocco and include fascinating and exciting experiences along the way. The course instructors are Dale Lightfoot and Thomas Wikle, both in the Department of Geography at OSU. Dr. Wikle has more than a decade of experience directing summer travel courses, and Dr. Lightfoot has more than 15 years experience with research and outreach projects in Morocco and the wider Middle East and North Africa region.

Highlights include:

- Roman city of Volubilis and Chellah Necropolis of Rabat
- historic mellah, ville nouvelle, and artisan works of Fes
- exploring the high dunes of Erg Chebbi, Sahara Desert
- Sijilmasa archaeological site and Tafilalt Oasis
- Todra Gorge and Kasbah of Ait ben Haddou (World Heritage Site)
- exotic Jamaa el Fna square and historic architecture of Marrakech
- Toubkal National Park in the High Atlas Mountains
- commercial fisheries at Safi and Oualidia beach

The cost of the trip will be \$4,042 for undergraduate students and \$4,112 for graduate students and non-credit participants.

For more information, including a day-by-day itinerary, please contact:

Dr. Dale Lightfoot: d.lightfoot@okstate.edu
Dr. Thomas Wikle: t.wikle@okstate.edu
Oklahoma State University

Workshops, On the Cutting Edge

On the Cutting Edge is offering the following workshops in 2009. The workshop schedule gives links to the individual workshop web pages (including the online application forms). The earliest deadline is coming up fast: February 6, 2009. <http://serc.carleton.edu/Nagtworkshops/workshops.html>

Teaching Paleontology in the 21st Century

Conveners: Barbara Tewksbury, Warren Allmon, Rowan Lockwood, Bruce McFadden, and Margaret Yacobucci

July 30 - August 3, 2009, Cornell University and the Paleontological Research Institute, Ithaca, NY

<http://serc.carleton.edu/NAGTWorkshops/paleo/workshop09/index.html>

Application Deadline: February 6, 2009

Teaching About Energy in Geoscience Courses: Current Research and Pedagogy

Conveners: Cathy Manduca and Jimm Myers

May 17-19, 2009, University of Wyoming

<http://serc.carleton.edu/NAGTWorkshops/energy09/index.html>

Application Deadline: March 9, 2009

Workshop for Early Career Geoscience Faculty: Teaching, Research, and Managing Your Career

Conveners: Heather Macdonald and Richelle Allen-King

June 14-18, 2009, College of William and Mary, Williamsburg, VA

Optional trip to NSF on June 19

<http://serc.carleton.edu/NAGTWorkshops/earlycareer09/index.html>

Application deadline: March 11, 2009

Preparing for an Academic Career in the Geosciences: A Workshop for Graduate Students and Post-Doctoral Fellows

Conveners: Heather Macdonald and Robyn Wright Dunbar

July 16-19, 2009, University of Nevada, Las Vegas

<http://serc.carleton.edu/NAGTWorkshops/careerprep09/index.html>

Application deadline: March 18, 2009

On the Cutting Edge, a professional development program for current and future geoscience faculty, is sponsored by the National Association for Geoscience Teachers and supported by grants from the CCLI program of the Division of Undergraduate Education of the National Science Foundation.

We encourage you to visit the Cutting Edge website and check out the many online resources.

<http://serc.carleton.edu/NAGTWorkshops/index.html>

Heather Macdonald, College of William and Mary

Cathy Manduca, Carleton College

David Mogk, Montana State University

Barbara Tewksbury, Hamilton College
