



From your Newsletter Editor

I hope your summers, thus far, have been productive and/or relaxing – whichever goal(s) you intended! I have just taken on my first (and last, I swear) summer overload, teaching and advising for two different departments. While being “indispensable” to two departments sounds good on the surface for someone in a non-tenure earning position, it has been a strain on my sanity during these compressed summer terms. I will be happy to return to the normal pace of fall semester.

The challenge of educating larger numbers of students with fewer resources continues here in Florida. The need for more innovative techniques, more web-based courses, and more productive use of time to handle increasing class sizes shows no sign of abating. I am in the process of converting one of my large-enrollment, general education courses to an entirely on-line format. Will students learn from it? I’m not sure. Incoming freshmen especially seem to have the technical skills to handle such a course, but lack the study skills and academic discipline to succeed. With as many as 800 students potentially enrolled, I certainly will not have the resources to follow up with each student who falls behind. No matter how many safeguards I put in place, there will be high attrition. The numbers make our department look good, but the quality of education received is dubious, and seems to rest far too much on the students themselves. Nevertheless, after handling distance learning courses for a while, I keep trying new techniques to make it possible for every student to succeed.

If you have any learning experiences you would like to share in this regard, either with me or with the GED as a whole, please e-mail me. I think many of us at large institutions would be interested in hearing about how you have handled large enrollment and distance learning or web-based classes.

As always, if you have any other news items for the next GED newsletter (Winter 2005), send them to me at mhafen@cas.usf.edu.

Mark R. Hafen
Department of Geography, University of South Florida

Toward the Unification of Disciplines

How frequently have we heard arguments between geologists and physical geographers as to the differences in their disciplines? As scientists we should be addressing similarities, and forgo the folly of academic pre-eminence of disciplines. Recurrently, physical geographers encounter geologists who acknowledge certain areas of physical geography as being “geology related,” but vigorously refuse to recognize those physical geographers as colleagues in the same disciplinary field. Moreover, we frequently hear that physical geography is “this” while geology is “that.” For all intents and purposes, many geologists are past due in recognizing the fact that geography is not necessarily memorizing the states and their capitals nor is it a watered-down version of geology, somehow lacking any analytically systematized approach to research and scholarship. Likewise, physical geographers need to recognize that geology is not necessarily memorizing rocks and minerals and geologists, too, use a spatial (geographic) approach for understanding our planet.

The disciplines of physical geography and of geology are, unquestionably, multifaceted earth sciences. Accordingly, it is factually correct to say each discipline constantly paraphrases the other. It is true that geology has several specialty areas that are removed from physical geography and vice versa. However, numerous topics not only overlap, they are, by literal definition, exactly the same subject. That subject, from both a physical

(continued on p. 2)

Unification *(continued from p.1)*

geography perspective and a geology perspective, is the “study of the earth” --- geology. To suggest that physical geography and geology are not comparable is to limit both disciplines and their disciples to a select set of preprogrammed information, which creates academic tunnel vision, as well as hindering our understanding of planet Earth.

This professor has endured several arguments by many geologists (and physical geographers to a lesser extent) in their unbending endeavors to keep these disciplines separate. Those geologists or physical geographers, who disagree, typically argue some insubstantial point in an effort to keep the disciplines divided, unequal, and splintered. That bias splintering only serves to create shards of renunciation and impairment to the geoscience field and to many of its partisans. At this juncture, I feel confident that a number of those hardcore, old-school, proverbial geologists (or geographers as the case warrants) are now spouting platitudes of dissension at this philosophy, however, their platitudes will neither change these facts nor change the definitions. Those geologists who continue to oppose these disciplinary definitions remind me of the spiritual aficionado who churns out the notion that if you “don’t do what I do, think what I think, and know what I know, then you are not worthy”, in this case, to be called a geologist. Personally, I am comfortable with welcoming geologists into the world of physical geography. It is my most sincere hope that the reverse will develop into reality rather than remain idealism. For a geologist or geological organization to deny this right to physical geographers seems noticeably prejudicial.

During fifteen years of ongoing college/university level teachings of both physical geology and physical geography, I continue to encounter copious opportunities to read and review a profusion of geology and geography textbooks along with their numerous definitions. For instance, geomorphology, a geography specialty area, is defined as the science of geology dealing with the earth’s surface. Physiography is defined as physical geography. Physiography is also defined as geomorphology. Therefore, physical geography is geomorphology, and geomorphology is geology. If you are a physical geographer, who specialized in geomorphology, it is not only a specialty of geology, it is geology, and you, then, are a geologist. The generally accepted definition of physical geography is the study of the physical systems of the earth with emphasis on humans. Amusingly, environmental geology is accurately defined as the study of the interactions of the physical systems of the earth with emphasis on humans. Sounds like we should redefine environmental geology as physical geography.

As a matter of definition, physical geography offers a more complete understanding of the study of the earth (geology) because it includes more of the earth systems such as the atmospheric sciences and phytogeography along with all those “other” subjects geologists like to claim as their own; subjects like glaciology, volcanism, tectonics, fluvial processes, hydrology, coastal processes and so on. Only a few geology texts cover the atmospheric sciences; most do not. The inclusion of the atmospheric sciences in geology is a developing trend in many college/university geology departments. I would direct the reader to Virginia Polytechnic Institute and State University or Penn State University, or James Madison University for verification (just to name a few). Meteorology and climatology (originally geography) are now being offered for dual geology/geography credit, as are Geographic Information Systems (GIS) and remote sensing (also geography).

To have completed much coursework in physical geography does not make one a lesser geologist. Rather, he/she is a specialized geologist and should be recognized accordingly. The simple unadulterated facts show physical geography is, unmistakably, geology. I invite the reader to ponder this quote from the June 1990 issue of the Times (London):

“Geography is queen of the sciences, parent to chemistry, geology, physics and biology, parent also to history and economics.”

The Geological Society of America’s (GSA) well-developed, perceptive new vision and matching logo accurately embrace more areas of geology by including physical geographies such as the atmospheric sciences and phytogeography. This is a superior move with regard to changing times, and obviously demonstrates exceptional judgment, which is incontrovertibly a step in the right direction for unifying these disciplines. GSA’s judgment is visibly above and beyond the geoscience norm.

Dr. Craig M. Ashbrook, FRGS, RPG, CES
Professor and Program Head of Environmental Management, Southwest Virginia Community College

Nicholas Rast Honored in Memorial Journal Volume

The Memorial Volume, TECTONICS OF THE APPALACHIAN BELT, edited by Frank R. Ettensokn and Alexander Gates, honors the late Nicholas Rast, Hudnall Professor of the University of Kentucky. Volume 37(3-5) was published in 2004, in Elsevier's JOURNAL OF GEODYNAMICS.

Jim Skehan (Weston Observatory, Boston College) authored the lead chapter of the volume, "Nicholas Rast: A Geologist who Straddled the Atlantic but never an Issue" as a retrospective on the colorful life as well as a commentary on his important scientific contributions in each of his publications. These were mainly focused on the geology of western Europe, the former USSR, and the Appalachians. A second chapter in this volume, "Tectonostratigraphic Relationships of the Narragansett and Norfolk Basins, New England," was coauthored by Jim with Daniel P. Murray of University of Rhode Island, and John Raben, Raben Associates.

Jim Skehan was also inducted into the Massachusetts Hall of Fame for Science Educators on the occasion of the Annual Meeting & Banquet 2004 of the Massachusetts Association of Science Supervisors.

Jim Skehan
Boston College

Special Session on Geoscience Teaching at GSA

We would like to draw your attention to a special opportunity at the 2004 GSA Annual Meeting in Denver. The NAGT On the Cutting Edge project will be hosting an illustrated community discussion on Using Field Observations and Field Experiences to Teach Geoscience (Theme Session #124). The one-abstract rule has been waived for this poster session to allow the maximum number of participants, and we have room for a large number of posters.

What we imagine is a broad conversation across the geosciences among faculty and researchers about both traditional and emerging roles of field experiences in teaching geosciences. Because of the importance of field experiences to geoscience education, this session calls for discipline-wide reflection on the role of field experiences in the geoscience curriculum and in the preparation of future geoscientists. We invite contributions from throughout the geoscience community (e.g., academic faculty, employers, agencies) to provide examples of current practices, training of future geoscientists, emerging opportunities and future needs related to teaching geoscience in a field setting.

The contributions to this session will be preserved in an on-line searchable collection designed to foster continued sharing and interaction. To optimize the impacts of the session and the resulting collection, we ask that each contributor:

1. Submit an abstract through the normal GSA process that introduces or summarizes the example you wish to present (Deadline July 13): <http://gsa.confex.com/gsa/2004AM/index.epl>.
2. Complete the submission form which includes uploading a pdf file of your poster (Deadline Oct 31): http://serc.carleton.edu/NAGTWorkshops/field_experiences/submit.html.

You can find more information about the session, full instructions, the submission form and examples of contributions at http://serc.carleton.edu/NAGTWorkshops/field_experiences/index.html.

We hope you will join us for this unique opportunity. Please don't hesitate to contact us with questions (try any of the conveners because we are in and out of the office for the summer). More information about the On the Cutting Edge Program, funded by a grant from the NSF Division of Undergraduate Education, is at the following website: <http://serc.carleton.edu/NAGTWorkshops>.

Dave Mogk mogk@montana.edu
Cathy Manduca cmanduca@carleton.edu
Barb Tewksbury btewksbu@hamilton.edu
Heather Macdonald rhmacd@wm.edu

Professional Development Courses and Workshops at GSA

There will be a variety of professional development courses available at the GSA annual meeting in Denver this November. Visit the meeting web site at <http://www.geosociety.org/meetings/2004/> for more details. *Early registration deadline is July 13*, so hurry! Here is a sampling of what is being offered:

GSA Courses

1. Evaporites: A Practical Approach (Fee: \$365. CEU: 1.6)
Fri. and Sat., Nov. 5–6. Cosponsored by GSA Sedimentary Geology Division.
John Warren, University of Brunei Darussalam.
2. Intro. to Geographic Information Systems (GIS), Using ArcGIS9 for Geological Applications (Fee: \$240. CEU: 0.8)
Fri. and Sat., Nov. 5–6. Cosponsored by GSA Geoscience Education Div. and Environmental Systems Research Institute.
Ann B. Johnson and Dave Fosdek, ESRI, Denver.
3. Multi-Temporal Stereo Aerial Photography (Fee: \$420. CEU: 1.6)
Fri. and Sat., Nov. 5–6. Cosponsored by GSA Engineering Geology Division and U.S. Army Corps of Engineers.
John C. Jens, U.S. Army Corps of Engineers, Alexandria, Va.
4. Calibrated Peer Review Training for Faculty and Teaching Assistants: Writing Exercises for Large and Small Classes without the Pile of Papers to Grade (Fee: \$340. CEU: 0.8)
Sat., Nov. 6. Cosponsored by GSA Geoscience Education Div. and National Association of Geoscience Teachers.
Elizabeth Heise, University of Texas at Brownsville, Brownsville, Texas; Cinzia Cervato, Iowa State University, Ames, Iowa; Amanda Palmer-Julson, Blinn College, Bryan, Texas.
5. Characterization and Toxicity Assessment of Mine-Waste Sites (Fee: \$300. CEU: 0.8)
Sat., Nov. 6. Cosponsored by Geochemical Society of America.
Sharon Diehl, LaDonna Choate, David Fey, Phil Hageman, Bruce Smith, Kathy Smith, USGS, Denver, Colo.; Jim Ranville, Tom Wildeman, Colorado School of Mines, Golden, Colo.; Jim Herron, Abandoned Mined Land Program.
6. Estimating Rates of Groundwater Recharge (Fee: \$270. CEU: 0.8)
Sat., Nov. 6. Cosponsored by GSA Hydrogeology Division.
Rick Healy, U.S. Geological Survey, Denver, Colo.; Bridget Scanlon, University of Texas at Austin.
7. Hydrogeologic Field Methods (Fee: \$245. CEU: 0.8)
Sat., Nov. 6. Cosponsored by GSA Hydrogeology Division.
John E. Moore, Consultant, Denver, Colo.
8. Management and Leadership Skills for Academic Administrators in the Geosciences (Fee: \$265. CEU: 0.8)
Sat., Nov. 6. Cosponsored by GSA Geoscience Education Div. and National Association of Geoscience Teachers.
Lee J. Suttner, Indiana University, Bloomington, Ind.; Sheila M. Moore, Training Concepts, Chattanooga, Tenn.
9. Practical Geoscience Ethics: Elements and Examples (Fee: \$250. CEU: 0.8)
Sat., Nov. 6. Cosponsored by GSA Engineering Geology Division and American Institute of Professional Geologists.
David M. Abbott Jr., Consulting Geologist, Denver, Colo.

(continued on p. 5)

GSA Workshops & Courses (continued from p. 4)

Other Courses and Panels

1. Sequence Stratigraphy for Graduate Students

Fri. and Sat., Nov. 5–6. Free short course for graduate students. Cosponsored by British Petroleum (BP) and ExxonMobil. Instructors, information and registration: Art Donovan (BP) and Kirt Campion (ExxonMobil).

2. Biological Revolutions in the Neoproterozoic and Cambrian

Sat., Nov. 6. Sponsored by Paleontological Society. Organizers: Ben Waggoner, Dept. of Biology, University of Central Arkansas, Conway, AR 72035-5003, (501) 450-5037, fax 501-450-5914; Jere Lipps, Museum of Paleontology, University of California, Berkeley, CA 94720-4780, (510) 642-9006, fax 510-642-1822.

Workshops

1. Give Effective Presentations

Saturday, November 6, 2:00 – 5:00 p.m.

Registration Required – Cost: \$40.00 professionals [651A]; \$15.00 students [651B]

2. Media Relations Workshop: Sharpen Your Skills for Communicating with Media, Colleagues, Funding Agencies, and the General Public.

Sponsored by GSA Headquarters, with Sarah Simpson, Scientific American

Saturday, November 6, 8:00 a.m. - noon

Registration Required – Cost: \$40.00 professionals [650A]; \$15.00 students [650B]

3. GSA's first research proposal writing workshop!

The workshop will be free; however, the number of participants will be limited by the size of the room. Please check the GSA meeting web page in August or see the October issue of GSA Today for more details.

4. Fund Your Science

With Barbara Ransom, Program Director, National Science Foundation

Wednesday, November 10, 8:00 a.m.-12:00 p.m.

Registration Required – Cost: \$ 40.00 Professionals, \$15.00 Students

K-16 Workshops

1. Earthquakes — A One-Day Workshop for College and University Faculty [601]

Sat., Nov. 6, 8 a.m.–5 p.m. Cosponsored by the IRIS Consortium, USGS, NSF, and Purdue University.

2. Earth Science Inquiry-Based Student-Centered Curriculum Developed by the American Geological Institute with support from the NSF: EarthComm, IES, CUES, and HSES [602]

Sat., Nov. 6, 9 a.m.–5 p.m. Cosponsored by American Geological Institute and National Science Foundation.

3. Using the Internet in the Earth Science Classroom to Develop Data Driven Lessons, Activities, and Lab [603]

Sat., Nov. 6, 8 a.m.–noon. Cosponsored by National Association of Geology Teachers and GSA Geoscience Education Div.

Intended audience: Middle and high school teachers, college and univ. faculty, graduate students in education.

Fee: \$60.

4. Geoscience Classroom to Workforce: Skills and Partnerships for the Real World [604]

Sat., Nov. 6, 8 a.m.–noon. Cosponsored by the Council on Undergraduate Research.

Intended audience: College and university faculty. Fee: \$60.

5. How to Establish and Sustain an Undergraduate Research Program [605]

Sat., Nov. 6, 1–5 p.m. Cosponsored by the Council on Undergraduate Research.

Intended audience: College and university faculty, graduate students. Fee: \$30.

6. Using Conceptests to Improve Teaching and Learning in Large Classes [606]

Sat., Nov. 6, 1–5 p.m. Cosponsored by GSA Geoscience Education Div., National Assoc. of Geology Teachers, and NSF.

Intended audience: College and university faculty. Fee: \$10.

(continued on p. 6)

GSA Workshops & Courses *(continued from p. 5)*

7. Toward a Sustainable Future: Connecting the Dots [607]

Sat., Nov. 6, 1–5 p.m.

Intended audience: Middle and high school educators. Fee: \$25.

8. Using the “Our Dynamic Planet” and “Global Ocean Data Viewer” to Implement Effective Science Writing Activities [608]

Sat., Nov. 6, 1–5 p.m.

Intended audience: Middle and high school teachers, college and university faculty, and informal educators. Fee: \$25.

9. Online Geoscience Education: How to Create Meaningful Distance Learning Opportunities [609]

Sat., Nov. 6, 1–5 p.m., Front Range Community College.

Intended audience: College and univ. faculty, undergraduate students, graduate students, and informal educators. Fee: \$40.

10. Inquiry-Based Digital Laboratory Materials for Introductory Geology Courses [610]

Sun., Nov. 7, 9 a.m.–5 p.m. Cosponsored by NSF, GSA Geoscience Ed. Div., and Nat'l. Assoc. of Geology Teachers.

Intended audience: College and university faculty, graduate students. Fee: \$25.

11. Creating an Online Learning Environment with Visionlearning [611]

Sun., Nov. 7, 9 a.m.–1 p.m.

Intended audience: Middle and high school teachers, college and univ. faculty, grad. students, informal educators. Fee: \$25.

Brice Honored

Dr. William R. Brice, Professor of Geology & Planetary Science at the University of Pittsburgh at Johnstown, has received the UPJ "President's Award for Excellence in Teaching" for 2004. Bill is the first person in the Natural Science Division at UPJ to receive this honor. In 2003 Bill received the "Dr. Edward A. Vizzini Teacher of the Year Award" presented by the UPJ Division of Natural Sciences.

Help Beta-Test Plume Busters

The prototype Plume Busters is being developed with NSF support as a proof-of-principle project by a team of scientists and educators at the University of Kansas. This innovative software capitalizes on the value of games and role-play to enhance student understanding of ground-water principles, and remediation technology. Students take on the role of an environmental consultant and apply these principles to solve a simulated contamination problem, in this case a pipeline spill that has seeped into a shallow alluvial aquifer. Currently only advective transport is simulated in the prototype. For the student, the activity objectives are to locate the plume using monitoring wells and complete the aquifer remediation spending minimal time and money.

Field-testing of the beta version of the software is planned for the 2004-2005 academic year using student populations in undergraduate introductory geology, environmental geology, hydrogeology, and environmental science classes at community and four-year colleges and universities. We are putting out a call for instructors who would be interested in participating in the field-testing we have planned. If interested, please contact Dr. P. Allen Macfarlane, Kansas Geological Survey at (785) 864-2068 or by email at <dowser@kgs.ukans.edu>.

New York State Earth Science Teachers to Meet

A statewide meeting for New York State Earth Science teachers will be held at Lamont-Doherty Earth Observatory on August 10 – 12, 2004. Information is available at <http://www.earth2class.org>.

Michael Passow

Michael@Earth2Class.org

NY Earth Science Teachers Paddle CT

Earth science teachers in lower New York shared a wonderful day of kayaking and geology on the Housatonic River in western Connecticut on June 12, 2004. The event was organized by Steve Kluge and Drew Patrick, both science teachers at Fox Lane High School in Bedford, NY.

Participation in the event included about a dozen teachers from school districts throughout southern New York. The event was advertised through the NYS Earth Science OMNI Listserve. We had beautiful weather and wonderful camaraderie, paddling along and learning about the local geology. Steve was able to organize this trip through the cooperation of Greg Walsh, a USGS scientist who has recently completed mapping in the area, and the Trading Post in New Milford, CT, from where we rented boats. Quality professional development experiences are hard to come by and this geo-kayaking day was a wonderful way in which to learn and share.

Susan Mitchell
Science Educator
Cornwall Central High School
10 Dragon Drive
New Windsor, New York 12553
(845) 534-8009 x5000

Geoscience Education Workshop in Puerto Rico

I am organizing for the third straight summer a geoscience education workshop for high school students in Puerto Rico. The first one covered the topics of coastal geology, coastal biological environments, and included some chemistry and math activities. The second one covered geology, geochemistry, math concepts and the use of the graphic calculator with sensors to study field data. This coming workshop is focused on similar topics, but with the addition of a field trip designed to understand the fluctuations in the relative sea level in the Tertiary rocks of northwestern Puerto Rico.

All the workshops have included field trips and have been sponsored by the Puerto Rico – Louis Stokes Alliance for Minority Participation. If you have any questions or need more information, please do not hesitate to contact me.

Pablo A. Llerandi Román
Graduate Research Assistant
Department of Curriculum and Instruction
Doctoral Program in Earth Science Education
Beering Hall, Room 4159
Purdue University
West Lafayette, IN 47907-2098
(765) 496-3025 (Office)
(765) 496-9172 (Department)
(765) 496-1622 (Fax)

Julia Johnson Arrives at ASU

Arizona State University is pleased to announce that that Julia Johnson, formerly of Glendale Community College, has been hired as a faculty instructor. In addition to teaching introductory geology courses, Julia will collaborate with Doug Clark, Steve Reynolds, and Steve Semken on doing science-education research in these courses.

Dr. Stephen J. Reynolds
Department of Geological Sciences
Arizona State University
sreynolds@asu.edu

Ron Schott Begins New Position

Ron Schott is leaving Lake Superior State University to start a tenure-track position at Fort Hays State University in August 2004. Ron's new contact information is:

Dr. Ron Schott	Office: 237 Tomanek Hall
Department of Geosciences	Phone: (785) 628-5348
Fort Hays State University	Fax: (785) 628-4096
600 Park Street	E-mail: rschott@fhsu.edu
Hays, KS 67601-4099	Web: http://ron.outcrop.org/

SIU-C Begins Student IAMG Chapter

Southern Illinois University at Carbondale, Illinois has begun the First Student Chapter of the International Association for Mathematical Geology (IAMG). Being the first student chapter of the international organization, members will focus on research and academic activities related to "mathematical geology". Abani Samal will be the campus representative for a year starting Fall 2004.

Abani Samal also will present a paper at the Seventh International Geostatistics Congress at Banff, Alberta, Canada. Details of the congress can be found on the website: <http://www.geostats2004.com>.

Abani R. Samal
Southern Illinois University, Carbondale

Quake Provides Opportunity for Public Education

At 1:11 am on June 28, an earthquake occurred in rural LaSalle Co., Illinois. The quake was small (Mm 4.1), but widely felt. It provided an excellent opportunity to educate the community. I used the internet to collect information about the event and to review information about the seismicity of northern Illinois. I then searched the web for media contacts, wrote a concise release and included my name and contact information.

I was subsequently interviewed by five radio stations and six newspapers (mostly local). I was able to explain possible causes and present some basic information on plate tectonics, isostasy, and glacial geology. I was also able to prevent incorrect information from being repeated in the press. The key component was my contact of the media; most of the reporters were grateful to have someone who could discuss the event in a knowledgeable manner. I was also able to get the name of my college into the press and reinforce our status in the community. The experience was very positive, and I encourage faculty to collect information and contact the media when the opportunity presents itself.

Mike Phillips
Geology Instructor
Illinois Valley Community College
815 N. Orlando Smith Ave.
Oglesby, IL 61348
<http://www.ivcc.edu/phillips>
(815) 224-0394
Southern Illinois University, Carbondale

Send us your News!

Share *your* news in the next GED newsletter. Submit your news items to GED Editor Mark Hafen asap at mhafen@cas.usf.edu. Thanks to everyone who contributed to this issue of the GED Newsletter.