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WWW . . .

NAGT

www.nagt.org

SE-NAGT

<http://facstaff.gpc.edu/~pgore/nagt/se-home.html>

Geological Society of America

www.geosociety.org

US Geological Survey

www.usgs.gov

Earth Science Week

www.agiweb.org

www.earthscienceworld.org

www.earthsciweek.org

Winter-Spring 2011

Newsletter Deadline:

February 15, 2011. Please
send news items to Bill at
witherspoonb@fc.dekalb.k12.ga.us

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Gulf Oil Crisis

by Michael A. Gibson, Dept. of Agriculture, Geosciences, and Natural Resources, UT Martin

Each summer I teach a marine geology course for the Dauphin Island Sea Lab in Alabama. Students taking the course take part in several field activities on Dauphin Island, a barrier island in just south of the mouth to Mobile Bay, including mapping activities and trenching to study sedimentary structures. This year we had to contend with the massive clean-up effort occurring on the island as a result of the Deepwater Horizon oil spill.

In some cases we were chased off of areas we had been studying for several years by various agency authorities. While the Alabama coastline suffered far less than other areas of the Gulf, especially Louisiana, the Alabama beaches did see its fair share of oil blebs and tar balls. The annual fishing rodeo was cancelled and a popular T-shirt was selling that advertised Alabama's first ever "tar ball rodeo."

One of the interesting incidental findings the class made during its field studies was that some of the oil is making its way into the sedimentary record rather quickly. We noted that there were many washover areas with large patches of oil, up to several feet in diameter, with one or more inches of sand completely covering the patch. In many of these areas, there was little surface expression indicating the buried oil.

On the very southern tip of Sand-Pelican Island, we cut a trench completely across a building sand spit and found oil and tar balls buried by laminated sands as deep as 50 centimeters (Photo), attesting to both the rapidity of some oil becoming geologically refractory for at least some time period, and the rate of sand deposition in these places. Later this winter we plan to revisit the same sites and cut new trenches to see if the oil remains buried or becomes reworked after winter storms.



State Representatives – a message from your newsletter editor

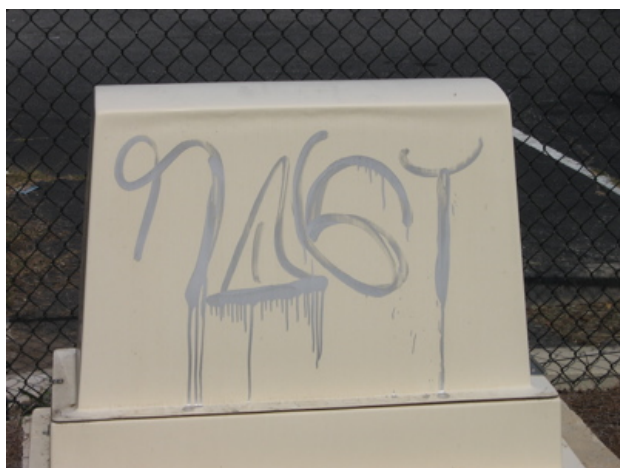
[This notice is repeated from the Winter-Spring Newsletter. Help! Do we want to support communications among geoscience educators or not? -ed.]

If you are looking in this issue for news from your own state and do not find it, you might consider becoming a state representative for SENAGT. This role is described under the term “councilor” in the organization guidelines at <http://serc.carleton.edu/nagt/organization/section-guidelines.html> .

There is no specific limit to the number of representatives from a state. (The guidelines state that “two is ideal”). Therefore, you would not need to displace anyone now on the list shown on the last page of this issue. Many of the people listed there have invested many hours in this organization over many years, and have the gratitude of all of us for doing so.

Still, we do need someone from each state who is willing and able to submit a few paragraphs about geoscience education in that state to the newsletter editor twice a year, on August 15 and February 15. In addition, there is often a need to help identify deserving state OEST candidates each year, and to encourage them to submit applications for the award.

At least one state representative from each state will, it is hoped, attend the annual SENAGT luncheon during the SEGSA meeting, which, in fact, all SENAGT members are invited to attend. (Hope to see you in Wilmington!)



One of the more desperate attempts to communicate (not mine!) along the editor's commute route.

If you are interested in becoming a state representative, please contact President Andrew Rindsberg at the address at the head of this newsletter.

MEETING CALENDAR

Most recently reported dates of past or future meetings

National Science Teachers Association and Affiliates		
Area	Latest date on web site	City
National	Mar. 10–13, 2011	San Francisco
Southern	Dec. 2-4, 2010	Nashville
Alabama	Oct. 26, 2010	Birmingham
Florida	Oct. 21-23, 2010	St. Augustine
Georgia	Feb. 17–19, 2011	Atlanta
Louisiana	Nov. 4-6, 2010	Monroe
Mississippi	Oct. 24-26, 2010	Jackson
North Carolina	Nov. 11-12, 2010	Greensboro
South Carolina	Nov. 3-5, 2010	Myrtle Beach
Tennessee	Dec. 2-4, 2010	Nashville

Geological Societies		
Organization (Area)	Latest date on web site	City
GSA (National)	Oct. 31-Nov. 3, 2010	Denver
GSA (Southeastern 2011)	Mar. 23-25, 2011	Wilmington, NC
GSA (South Central; incl. LA)	Mar. 27-29, 2011	New Orleans
Georgia Geological Society	[Oct. 8-10, 2010?]	Cartersville
Carolina Geological Society	Sep. 17-19, 2010	Charleston

Regional News in Geoscience Education

Alabama (submitted by David C. Kopaska-Merkel, Geological Survey of Alabama)

The big news this year is the Gulf oil spill. Probably the most important effect on K-12 Earth science education is funding. In Alabama, public education is funded by sales taxes and coastal tourism is a substantial part of the state's economy. Last year saw major cutbacks in public education because the recession caused people to reduce purchases of nonessentials. This year, the disastrous reduction in coastal tourism will cause deeper cuts. We don't yet know what will happen, but because earth science is not a required course in high school, it is possible that some of the few high schools that teach it will decide it has to go. Elementary school and middle school science teachers are supposed to teach earth science as a part of their curriculum. To the extent that science teachers are laid off or not replaced when they quit or retire other science teachers will find it more difficult to cover all the bases vis-à-vis science content. I emphasize that I don't know how much of this will happen, but I do know for certain that sales tax revenues are way down.

Aside from the economy, the news is mostly good. The state Legislature still fails to foist sectarian religion on science classrooms.

University geology departments seem to be doing okay. For instance, the Department of Geological Sciences at the University of Alabama has had a good year. A negative was the loss of our sedimentologist, Amy Weislogel, due to her move to West Virginia. However, two new faculty members are starting this year - both in new positions. Samantha Hansen is our new seismologist (coming from Penn State) and Yuehan Lu is our new molecular geochemist (joining us from the College of William and Mary - VIMS). Our chair is in negotiation with our dean to replace Amy, and perhaps even add one additional position (to be decided). Despite the current economic climate, we have continued to grow our faculty numbers - once Amy is replaced we will have 15 faculty members. The department ranked high in research \$\$ within the college. We are teaching more intro students than ever - this fall we should have 1100 students enrolled in intro classes. Our undergrad and grad major enrollments are also at recent highs (~100 undergrad, 33 MS students, and 17 PhD students). Our new chair (Ibrahim Cemen) is settling in well. On the Gulf spill front, Rona Donahoe was well positioned to get involved with this because she had a student working on the coast already (water quality issues).

The Department of Earth Sciences at the University of South Alabama passed a milestone earlier this year when the 100th geology major joined the program. This is the largest number of geology undergraduates at USA in several decades and has resulted in congested classrooms and some changes in course instruction. Some senior-level classes now have double labs and others are being taught in hybrid or blended fashion (partially on line). The department is also on the receiving end of several donations of minerals and related mineral testing equipment. Donations of radioactive minerals (the Arthur Dix Radioactive Minerals Collection) followed on the heels of a donation made by Mrs. Phylis Henderson, the widow of deceased mining geologist Ed Lawrence. This collection consists of a large assortment of economic minerals from the western US as well as historically significant geochemical testing instruments, including a c. 1910 analytical balance. In mid-August, the Department is scheduled to receive the largest mineral donation in its history. It is from a private collection and contains a wide variety of economic and fluorescent minerals.

The state Geological Survey also is doing well. Staff members are reduced because of retirements and a few people leaving for other reasons. The survey has escaped from the statewide hiring freeze, but permission is needed for each individual position, and staff members are not being replaced as fast as they are leaving. The positive side of this situation is that a pool of competent geologists is available whenever the agency gets approval to fill an opening.

The Geological Survey of Alabama and partners continue to hold an annual teacher field workshop in the vicinity of the University of West Alabama. Because of the weak economy registration for the workshop is slow. However, we have the same problem last year and we eventually filled the workshop. A student is working on developing a groundwater workshop in a different part of the state and we hope that within a year we will be ready to announce that workshop to teachers.

The Outstanding Earth Science Teacher for Alabama this year is Kim Ouderkirk of Tuscaloosa Academy. Kim has been the chair of the science department at her school for many years. Throughout her tenure there she has taught a geology class and done it well – she has a bachelor's degree in geology in addition to her teaching credentials. Kim has always tried to teach outside the box. One of her current projects is a website about Alabama paleontology, which is almost ready for prime time.

With contributions by Andy Goodliffe (University of Alabama).

Florida (no information submitted)

Georgia (submitted by Bill Witherspoon)

Georgia Geological Society

The Georgia Geological Society has a novel idea for this year's field excursion on Oct. 8-10: the [one-stop field trip](#). That one stop is the grounds of the Tellus Science Museum in Cartersville, Georgia, Georgia's new pride and joy among geologists, especially mineral and fossil enthusiasts. The meeting headquarters will be the Holiday Inn adjacent to the Tellus facility, where the annual meeting and social gathering will be held on the evening of Friday, October 8.

The idea is not as crazy as it sounds at first. Drill rigs and other equipment will be set up on the Tellus grounds, so in addition to having up to three hours to tour the museum's jaw-dropping exhibits, students, K-12 teachers, and professionals alike will have the opportunity to study practical techniques of subsurface exploration, while actual data is being gathered about the Tellus site.

Truth be told, there will likely be additional stops on a Sunday, Oct. 9 continuation of the field trip in the Cartersville area, but this segment is still in the planning stages.

We hope that more information will be provided soon on the GGS web site at <http://www.westga.edu/~ggsweb/>.

Louisiana (no information submitted)

Mississippi (no information submitted)

North Carolina (submitted by Randy Bechtel)

General News

North Carolina Geological Survey

As part of the weeklong workshop 'Earth & Environmental Science for Elementary School Educators' I had the opportunity to present 'geology for a day'. In the morning we discussed the geologic history of North Carolina and the teachers participated in several hands-on activities that they can use in their classroom. In the afternoon we went on a field trip to Caesar's Head State Park in South Carolina and DuPont State Forest in North Carolina. This workshop was one of several offered by the **Pisgah Forest Institute at Brevard College** <http://www.pisgahforestinstitute.org/> (pictures from the event coming soon) – “The workshop seeks to integrate many of the components that make up the natural environment and subsequently fall under the heading of earth and environmental science. The specific topics chosen for this workshop are directly in line with the North Carolina Earth and Environmental Science Standard Course of Study and the National Science Education Standards.”

This trip led to another educational prospect, a teacher field trip oriented on landslide hazards in western N.C. I went with Rick Wooten, head of the landslide mapping program at the NC Geological Survey, and other members of Team Slide (informal name) to monitor two active landslide investigations in the mountains of N.C. This multifaceted geohazard not only includes the physical effects of landslides but the added complication of socioeconomic issues that are involved in the hazard avoidance decision making processes. Hopefully, in the near future, we will have some willing teacher/educator participants to be involved in a landslide field trip and development of curriculum correlated lessons on this topic. If you are interested please contact me, Randy Bechtel at Randy.Bechteln@ncdenr.gov – please put 'Slide' in the subject line.

If you are going to be near Boone, N.C., I would suggest stopping by the campus of **Appalachian State University (ASU)** to visit the **F. Kenneth & Marjorie J. McKinney Geology Teaching Museum** and the **Fred Webb Jr. Outdoor Geology Laboratory** <http://www.geology.appstate.edu/rockgarden.htm> (photos taken by A. Heckert).

Dr. Andy Heckert, Paleontologist and Museum Director, has been working toward developing and expanding the indoor and outdoor education areas.

One of the more unusual features of the rock garden is the use of polished “windows” on each rock sample. Each sample has a 6-inch round polished area that allows you to see more detail through the rough and weathered surfaces. The difference between the polished surface and the rough/weathered surface can be dramatic.

The indoor and outdoor areas are open to the general public, including school and scout groups, and are used as part of ASU geology courses.



Education

Curriculum

National and State Science Curriculum Revisions

Below is information on the revision of both the National and North Carolina science curriculum standards.

A National Framework for Science Education - Preliminary Public Draft

A draft of the National Research Council's (NRC) conceptual framework was open for public comment and can be viewed here:

http://www7.nationalacademies.org/bose/Standards_Framework_Public_Draft_Cover_Letter.html

According to the National Conceptual Framework document "there is a state-led national movement towards common standards across states. The growing national consensus around the need for "fewer, higher, clearer" is central to this effort. There is widespread recognition that too often standards are long lists of detailed and disconnected facts, reinforcing the criticism that the U.S. science curriculum tends to be "a mile wide and an inch deep."

The framework will guide the development of next generation standards for science education and presents the committee's vision of the scope and nature of the education in science and engineering that is needed in the 21st century. The framework describes in broad terms the core ideas in science and engineering that students should understand and be able to apply, and the progression of ideas students need to experience in order to comprehend them. The NRC is seeking comments on the draft from the science and education communities and the public. The first comment period has passed but I am sure there will be future opportunities.

North Carolina Department of Public Instruction (NCDPI)

Beverly Vance, Science Contact at N.C. Department of Public Instruction: bvance@dpi.state.nc.us.

NC DPI Science Essential Standards: Consultants are in the process of developing instructional support resources to assist with the transition to teaching the 2009 Essential Standards. The first document will be a crosswalk document to compare the old and the new. Stakeholders may view released support materials on the NC Public Schools Accountability and Reform Effort (ACRE) website <http://www.ncpublicschools.org/acre/>. Stakeholders will be notified when opportunities arise to develop instructional resources.

Next Generation of Science Standards (National Science Standards): NC DPI participated in the call-in meeting sponsored by Achieve on Thursday, July 15. During the call-in meeting, representatives from Achieve <http://www.achieve.org/> shared information pertaining to the timeline for development of the Conceptual Framework document and the actual standards that will follow. Please note that the new standards are currently named the "**Next Generation of Science Standards**". The final draft of the framework is scheduled to be released in the first quarter of 2011. Achieve will begin work on the development of the standards once the framework document has been finalized. For a pdf copy of the unrevised July 12, 2010 draft please email your request to bose@nas.edu.

Testing Update: Testing aligned to the 2004 SCS will continue for the 5th and 8th grade EOGs and Biology and Physical Science EOCs through the 2011- 2012 school year. The new standards will not be tested until 2012-2013.

Educational Happenings

Environmental Education Certification

The certification, through the N.C. Office of Environmental Education and Public Affairs, is a program for informal educators to learn new teaching skills, hone old skills, and get a first hand idea of the education that occurs outside the formal education arena. The certification will give you a background in environmental education (not environmentalism or activism) and teach effective communication techniques for multiple learning styles, age levels and audiences. This program is flexible so the 40-hour work week person can complete the certification program in the allotted time. For more information go to <http://www.eenorthcarolina.org/>

N.C. Science Festival

The Festival <http://www.ncsciencefestival.org> is a multi-day celebration running September 11-26, 2010 that will showcase science throughout the state, featuring hands-on activities, lab tours, science talks, exhibits, performances and more. Just when you thought it was safe to assume that science happens only in a laboratory, now is your chance to discover otherwise! Experience it during the first North Carolina Science Festival.

The event will include a program by the MythBusters on September 19, 2010.

N.C. Science Teachers Association (NCSTA)

The theme of NCSTA's 41st Annual Professional Development Institute is 'One Word, STEM. One REALLY Big Integrated Topic'. It will be November 11-12, 2010 at the Koury Convention Center, Greensboro, N.C. <http://www.ncsta.org/>

The NC Geological Survey will again be staffing an exhibit booth possibly combining with the Division of Land Quality and the Geodetic Survey.

Outstanding Earth Science Teacher (OEST) and Educator (OESE) Awards

The nomination deadline for the 2010 OEST and OESE awards has passed but if you know a deserving teacher or educator you can nominate them for the 2011 awards. For more information go to http://www.geology.enr.state.nc.us/proj_earth/proj_earth.html

Colburn Earth Science Museum - Asheville N.C.

The museum offers eighteen science programs and is currently accepting registration for K-12 students. Each program meets the N.C. Standard Curriculum requirements. Registration for two after-school programs is also in progress: Junior Rockhounds Club and Science Sisters Club. For more information can visit their website <http://www.colburnmuseum.org/> or call the museum at (828) 254-7162.

N.C. Fossil Fair

The tentative date is November 6, 2010 at the Museum of Natural Sciences in downtown Raleigh, N.C.

Professional

Carolina Geological Society (CGS)

The 2010 Annual Meeting and Field Trip will be September 17-19, 2010 in Charleston, S.C. "Stratigraphy and Geomorphology of Transgressive/Regressive Barrier Islands: Kiawah, Seabrook, and Edisto Islands, South Carolina." Led by Miles O. Hayes, Jacqueline Michel, and Tim Kana.

Also, the CGS website has a new look <http://www.carolinageologicalsociety.org/CGS/Home.html>

Association of Environmental and Engineering Geologist (AEG)

The 53rd annual meeting will be held right after the CGS meeting September 20-25, 2010 also in Charleston. <http://www.aegweb.org/i4a/pages/index.cfm?pageid=1>

The **Carolinas Section of AEG** will again be sponsoring the Earth Science Week (ESW) kit giveaway at the NCSTA. For the past several years the Carolinas Section has purchased several hundred ESW kits to giveaway at the state's science teachers' professional development meeting. For more information on NCSTA see the above remarks.

Southeastern Section Geological Society of America (SEGSA)

The 2011 Southeastern GSA meeting will be March 23-25, 2011 in Wilmington, North Carolina. For more information go to <http://www.geosociety.org/meetings/>.

If you know of other North Carolina geoscience education news that you would like to add for the next newsletter please send a summary and any pictures to Randy.Bechteln@ncden.gov with 'NAGT newsletter' in the subject line.

Puerto Rico (no information submitted)

South Carolina (no information submitted)

Tennessee (submitted by Michael Gibson)

2010 NSTA Workshop Planned. The 2010 National Science Teachers Association annual meeting will be held at the Opryland Hotel in Nashville, December 2-4. Information on the meeting can be found at: <http://www.nsta.org/conferences/2010nas/?lid=tnav>. The Tennessee Earth Science Teachers (TEST) has teamed up with the Paleontological Society and Paleontological Research Institute to offer a workshop on PRI's **Teacher Friendly Guide - Southeast**. The workshop is a full day field event highlighted by a field trip to the Vulcan Materials quarry in Parsons, TN. Additionally the University of Tennessee at Martin Parsons Center will be used for instruction. Participants receive field collection materials and a copy of the workbook. For information contact Dr. Michael Gibson, Dept. of Agriculture, Geosciences, and Natural Resources, University of Tennessee at Martin, Martin, TN 38238 (731.881.7435; mgibson@utm.edu).

2010 OEST Winner. The winner of the 2010 Outstanding Earth Science Teacher for Tennessee, as well as the southeast region, is Mr. Bryan Freeman, who teaches at Clinton High School in Anderson County. Bryan will be presented his state-level & regional award at the National Science Teacher Association annual meeting in Nashville in December.

New Science Teacher Licensure Standards Coming. The State of Tennessee is reviewing recommendation for new licensure standards in all disciplines. This is the first revision since 1990 and will affect science teacher training programs at the university level. Dr. Michael Gibson (UT Martin) and Camden Middle School teacher Pat Royle served on the committee reviewing earth science and geology licensure requirements. The new requirements are targeted to take effect 2011-12 academic year. The new standards are available online: <http://www.state.tn.us/education/ci/curriculum.shtml>.

Department News:

Ann Holmes reports that **UT Chattanooga's** Geology department is in the process of moving from its home of 30+ years in Bretske Hall back to Grote Hall, finally combining the disciplines of chemistry, physics, astronomy, geology in one building. UTC has hired a new professor, Dr Amy Brock-Hon, a soil geomorphologist, bringing faculty numbers to four.

UT Martin's geology program was moved last year as part of a campus reorganization. The old Department of Geology, Geography, and Physics became the Dept. of Agriculture, Geosciences, and Natural Resources when geosciences shifted colleges. Physics went to the Chemistry Department. No changes occurred in terms of building locations, however geosciences now has access to much more space, including an on-campus field area. Additionally enrollments risen dramatically, on-campus, off-campus, and online. Several new faculty have been hired as a result. Geography hired Dr. Todd Albert to spearhead a new meteorology concentration in the department. Dr. Ben Hooks has been hired in geology to serve as the "hard rock" geologist in an otherwise soft sediment area of Tennessee. Additionally Ms. Mary Grace Jubb replaced Dr. Lan DePriest as the laboratory coordinator when Lan moved into teaching full time and spearheading off-campus and online efforts.

You can join NAGT using the online form at <https://www.webassociationmgmt.org/nagt/>, or by downloading a membership application at https://www.webassociationmgmt.org/nagt/memform.v2_small.pdf.

An online Outstanding Earth Science Teacher (OEST) nomination form is now available at <http://serc.carleton.edu/nagt/programs/oest-nom.html>.

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