

National Association of Geoscience Teachers Southeastern Section Newsletter

Winter-Spring 2005

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WWW . . .

NAGT www.nagt.org

SE-NAGT www.gpc.peachnet/~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

Upcoming Events!

March 17-18	Southeastern GSA regional meeting in Biloxi, MS (www.geosociety.org/sectdiv/ southe/05semtg.htm)
Dec. 1-3	National Science Teachers Association meeting in Nashville, TN (www.nsta.org/index.html)

Summer-Fall 2005 Newsletter Deadline: <u>Sept. 2, 2005</u>. Please send news, items, questions, & answers to Stan at sdunagan@utm.edu.

Secretary/Treasurer's Report

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As of June 2004, we had 136 members and the account has \$3691.59 in the bank.

SENAGT President's Report

It has been a relatively quiet season as far as the SENAGT is concerned, at least so far. We are gearing up for the SEGSA Meeting in Biloxi (March 17-18, 2005). I hope that most SENAGT members can attend the meeting. Not only will you get the chance to hear some interesting talks and keynote presentations, you'll also be able to participate in our sponsored events. Our theme session (K-16 Earth Science Education: Teaching Geology in a Shifting Socio-economical Environment), has 11 presentations and is scheduled for Thursday afternoon.

The SENAGT will set up a small table at the conference to display NAGT and other materials. If anyone would like some display space (e.g., you have a flier advertising a fieldtrip in your home state), please contact Nancy Huebner (SENAGT Vice President) to let her know that you will be bringing stuff with you to the meeting. Space is limited, so please don't get too carried away with your materials.

AT the SEGSA meeting, we are also sponsoring a day-long field trip. There was a bit of a stuff-up with the scheduling of the trip. We originally proposed it as a mid-meeting trip (Thursday), but that conflicted with a large chunk of the presentations (including our own session!), so it was moved to Saturday. There might have been some conflicting information posted on the GSA registration webpage so for those of you interested in visiting a barrier island, here is the official (revised) statement about the trip:

#402 On the Beach - "Geology and Ecology of a Barrier Island System," sponsored by the SENAGT. Saturday, 19 March, 8:30 a.m. to 3:30 p.m. Led by Douglas W. Haywick, University of South Alabama, (251) 460-7569. Cost: \$40, includes transportation on the Ship Island Ferry, lunch, snacks, and handouts. The trip will originate and terminate at the parking area for the Ship Island Ferry in Gulfport, approximately 15 miles west of the Grand Casino. Participants who need transportation from the hotel to the ferry should contact the field trip leader. K-14 teachers, students, professionals, and guests are invited to participate in this informal field trip that examines the geology and ecology of a barrier island system.

The trip is intended as an introduction to beach processes and as such, would be most suitable for K-12 teachers. If you know of anyone who might be interested in this activity, ask them to contact me for further information.

*** One last thing about the SEGSA meeting. This is the time that we schedule our **annual SENAGT business meeting**. The traditional time for the meeting is 12:00 noon on the Friday during the session. For this year, that would be March 18th. The business meeting will be at The Marketplace Buffet in the conference hotel; attendees will be purchasing their own lunch. The meeting will give us an opportunity to plan our next year's activities and seek nominations for SENAGT Executive positions. An election will follow soon after the business meeting. ***

The SENAGT has been invited to participate with the Eastern Section (ENAGT) in their 2005 annual meeting. In fact, they have been kind enough to call it a joint meeting of our two sections. The ENAGT is active enough to be able to support a stand-alone meeting, but we currently hold our business meeting at the SEGSA. For those of you that can make the ENAGT/SENAGT meeting, and I am going to try and make it, it is being held May 12-15, 2005 at the Department of Geology, Radford University in Radford, VA. Here are two useful websites for additional info: ENAGT website: <u>http://westy.jtwn.k12.pa.us/users/srl/NAGT.html</u> and the conference website: <u>http://www.radford.edu/~geol-web/</u>. Abstract submissions are welcome until April, 10th if you are interested in presenting at the meeting.

There has been a change in SENAGT state representation. Late last year, Stan Dunagan, one of the Tennessee reps AND our excellent Newsletter Editor, asked to be relieved of his state rep duties. Stan will continue as our Newsletter Editor, but Anne Holmes (University of Tennessee-Chattanooga), will replace him as one of the TN reps. Michael Gibson will remain the other state rep for Tennessee and together, I am sure that they will continue to provide excellent representation for that state.

Here is a message to all state reps: start getting ready for the 2005 OEST competition. If you have not already done so, please start soliciting applicants for the award. This year our goal is to get one winner **per** state. I will start my harassing phone calls to state reps anytime now. That's all for now. I hope that many of you will be able to attend the SEGSA meeting in March.

Submitted February 11, 2005

Doug Haywick, Mobile, AL

Southeastern GSA regional meeting in Biloxi, MS

Theme Session. K-16 Earth Science Education: Teaching Geology in a Shifting Socio-economical Environment. Sponsored by the Southeastern Section, National Association of Geoscience Teachers. Convener/Advocate(s): Douglas W. Haywick, and John R. Wagner, Thursday, March 17, 2005: 1:00 PM-5:00 PM, Bayview Hotel at the Grand Casino Resort 1

1:00 PM: GORE, Pamela J.W., UPDATE ON GEOSCIENCE EDUCATION IN GEORGIA 1:20 PM: STAPLETON, Colleen P., ADJUSTMENTS TO TEACHING GEOSCIENCE IN A CLASSROOM OF ADULT STUDENTS 1:40 PM: THOMAS, Christopher W. BEST PRACTICES IN DESIGNING ONLINE GEOSCIENCE COURSES TO MEET GROWING DEMAND FOR ONLINE LEARNING 2:00 PM: HAYWICK, Douglas W., CONNORS, James J. Jr, and SEBASTIAN, Glenn R., WHERE HAVE ALL THE GOOD STUDENTS GONE? TEACHING GEOLOGY IN A SHIFTING SOCIOECONOMIC ENVIRONMENT 2:20 PM: WAGNER, John R., TEACHING GEOSCIENCE WITHIN A CULTURAL CONTEXT USING LOCAL CASE STUDIES 2:40 PM: MAYGARDEN, Dinah F. and GORDON, Heather L. STUDENTS UNDERSTANDING THEIR IMPERILED COASTLINE 3:00 PM: CONNORS, James J. Jr, DESIGN, INSTALLATION, AND UTILIZATION OF AN ON-CAMPUS WELL FIELD FOR MULTIDISCIPLINARY GEOLOGICAL INSTRUCTION 3:20 PM: BOUKER, Polly A., STUDENT LEARNING DURING EXAMS - IT'S NEVER TOO LATE! 3:40 PM: BRANDE, Scott, USE OF MOVIE ANIMATION OF STILL IMAGES IN THE GEOSCIENCE LECTURE: IMAGEMATICS STILLMOTION CREATOR AND POWERPOINT PRESENTATIONS 4:00 PM: BRANDE, Scott, and IJAZ, Qasim, PROOF-OF-CONCEPT EXPLORATION AND PRODUCTION SIMULATION FOR THE INTRODUCTORY GEOSCIENCE LABORATORY DELIVERED VIA THE WEB TO A CLUSTER OF WIRELESS PDAS 4:20 PM: BRANDE, Scott, and WOLFORD, David WIRELESS DELIVERY OF WEB CONTENT TO THE GEOSCIENCE LABORATORY: CONSIDERATIONS OF CLIENTS AND NETWORKS

Additional SEGSA Information (Provided by Gail Russell, SE Section Meeting Chair)

REGISTER NOW!! GSA SOUTHEASTERN SECTION MEETING Bayview Hotel at the Grand Casino Resort	Avoid higher on-site prices and ensure your spot on field trips, short courses, and special events by registering now.
Biloxi, Mississippi 17-18 March 2005.	Meeting information, registration forms, and online
Standard Registration Deadline: February 14	registration are available at: http://www.geosociety.org/sectdiv/southe/05semtg.htm#acc

Standard Registration Deadline: February 14

MEETING HIGHLIGHTS:

Keynote Address: "Tsunamis and Data Buoy Warning Systems," Paul Moersdorf, Director, NOAA National Data Buoy Center, Stennis Space Center. Thursday, 17 March, 6:30 to 7:30 p.m. in Ballroom B.

New Town Meetings:

* GSA's Geology and Public Policy Committee is sponsoring a panel discussion on "Professional Licensure and National Academic Accreditation," moderated by Darrel Schmitz, Mississippi State University. Thursday, 17 March, 5:00 to 6:00 p.m. in meeting room 8.

* "Earthscope," moderated by Krishna Sinha, Virginia Tech. Thursday, 17 March, 5:00 to 6:00 p.m. in meeting room 5.

Metadata Workshop #501: The NOAA National Coastal Data Development Center is providing an instructor and all materials at no charge for a pre-meeting workshop. A fee of \$25 will be charged to cover transportation from the hotel to the Gulf Coast Research Lab, lunch, and breaks. This is a great opportunity, especially for graduate students! Wednesday, 16 March, 9:00 a.m. to 5:00 p.m.

National Association of Geoscience Teachers – Joint Meeting of the Eastern and Southeastern Sections

Spring Meeting – May 12-15, 2005	Conference Coordinator: Dr. Parvinder S. Sethi			
Department of Geology		psethi@radford.edu; Tel: (540) 831-5619		
Radford University, Radford, VA 24142-6939				
CONFERENCE WEBSITE http://www.radford.edu/~geol-web		Please consult these websites for the latest		
ONLINE CONFERENCE REGISTRATION		information for this meeting.		
https://www.123signup.com/event?id=ftmtr				
		1		

IMPORTANT DATES:			
* JANUARY 15 - APRIL 10, 2005:	Time-period for acceptance of Abstracts of presentations.		
* FEBRUARY 01, 2005:	Registration begins. April 1 is the deadline for discounted early-bird registration.		
* MARCH 15, 2005:	Deadline for submission of manuscripts for publication in the Field Trip Guidebook.		
* APRIL 10, 2005:	Deadline for submission of 1) Abstracts of presentations, and for 2) Full papers (NAGT		
	format) for publication in the Conference Proceedings CD-ROM.		
* APRIL 15, 2005:	Abstract Notification of acceptance.		
* MAY 12-15, 2005:	Conference at Radford University.		

Our theme this year is **"TEACHING GEOSCIENCES IN THE 21st CENTURY"**. We at the Department of Geology at Radford University pride ourselves in our ability to combine the classical methods of teaching geosciences with the latest technology-intensive strategies. Today's emerging technologies such as GPS/GIS, computer modeling, 3-D visualization, digital imaging, and geophysical exploration are increasingly utilized in the applications of geosciences to everyday issues and problem-solving. It is therefore imperative that all geoscience teachers be both aware and knowledgeable in ways with which such technologies can be taught to our students both in and outside the classroom.

This conference will highlight both the challenges and opportunities involved with teaching geosciences in the 21st century. Many of the presentations and field trips will focus on creative techniques that merge the more traditional (for example - compass and topographic-map type) techniques with the continually-evolving, more modern technologies (such as GPS and GIS). The keynote address at Saturday's banquet and awards ceremony will further emphasize the opportunities in teaching and learning afforded by such novel approaches to teaching.

Here, at Radford University, located in the mountains of southwestern Virginia, we are uniquely positioned to highlight such a broad-based theme for next year's annual section meeting. In addition to a charming campus, we boast of natural surroundings many other cities can only wish for – from the close proximity to the New River with a plethora of spring-time outdoor opportunities to interesting shops and restaurants in downtown Radford which will offer you a glimpse of an easy-paced life in the technologically fast-lane. From a geologic perspective, Radford University, is at the center of one of the most geologic provinces (the Piedmont, the Blue Ridge, the Valley and Ridge, and the Appalachian Plateau). Some of the oldest rocks in eastern North America can be found in the nearby Blue Ridge. The history of rifting to form the ancient Iapetus Ocean, and the closing of this ocean to form the Appalachian Mountains and the supercontinent of Pangaea are preserved in the stratigraphy and structure of nearby rocks. The campus sits on the banks of the New River, which flowing north and west into the North American interior, perhaps had its origins flowing off the western slope of the ancient Appalachians.

The Radford University Geology Department takes advantage of its location to use the outdoors as a teaching laboratory, stressing fieldwork and hands-on experiential learning. There are opportunities to study many aspects of geology and environmental science including: igneous, sedimentary, and metamorphic rocks, faults, folds, paleontology, geomorphology, karst, mining history, and landslides. One of the several attractions of the meeting will be a field trip to our exclusive outdoor learning facility – the SELU Nature Conservancy where several examples of technology-meets-tradition can be seen.

REGIONAL NEWS IN GEOSCIENCE ED

Alabama (submitted by David C. Kopaska-Merkel)

The big (mostly bad) news for 2004 concerned the new revision of the science course of study for the K-12 public schools. We had been operating under a document that was not in conformity with the national science standards, included a lot of problems like subjects being taught piecemeal or to the wrong age group or not at all or only once early in the students education, and especially very poor treatment of a number of topics, not just evolution. And of course, we have the infamous textbook disclaimer. A new draft course of study was put out for review in the fall of 2004 and it really was about the same as the existing document. A lot of Alabama scientists and concerned citizens with some knowledge of science wrote comments during the rather brief comment period. The revised science course of study, the one that goes to the Board of Education for approval in February, was released in mid-January. It seems that a couple of very minor objections have been taking care of, but in general the comments have been ignored. The new course of study, if approved by the Board, will continue to almost entirely ignore education, teach science as a bunch of disconnected facts, and ignore a number of important subjects. Geoscience education is omitted from high school. Earth and space science is to be taught in sixth grade, and that will be the last most Alabamians learned about geohazards, soils, groundwater, evolution, or any other geoscience topic important to people's lives. The textbook disclaimer is still with us although to brief phrases were removed. Evolution is no longer "a controversy of theory." This is obviously an attempt to avoid losing a lawsuit like the one Cobb County Georgia recently lost. At the time of writing, citizens are able to write or call their Board members to complain about the course of study, and the governor is also a member of the Board so they can contact him. However, it doesn't seem likely that sanity will prevail at the Board meeting in February unless a large number of people show up at the meeting with cogent arguments and many votes behind them. (More details? See the SENAGT newsletter website.)

The Union Chapel mine site, which is considered to be the best of its age for vertebrate trace fossils, is now protected from harm. The site was purchased by the Alabama Dept of Conservation and Natural Resources. Plans are, as time and money permit, to develop the site for educational and scientific purposes. For the time being, it is still possible to visit the site and collect specimens without supervision. However, it is not legal to take anything away without consulting authorities. Further, several Alabama museums (Anniston Museum of Natural History, McWane Center in Birmingham, Alabama Museum of Natural History in Tuscaloosa, and Geological Survey of Alabama museum in Tuscaloosa) collectively hold several hundred specimens of the more than 2000 that have been collected. More specimens are expected to be donated to these museums in the near future. A planned professional/amateur collaborative volume about the Union Chapel mine deposit is overdue for publication but will probably appear within the next year.

The Geological Survey of Alabama and the University of West Alabama continued to jointly hold an annual field workshop for K-12 teachers. The workshop takes place in the vicinity of Livingston Alabama, in the heart of the marine Cretaceous succession, and allows teachers to collect fossils and then create their own fossil kits to use in the classroom.

The Alabama state level OEST award went to Hurd Finnegan in 2004. This was the first time in many years that Alabama was able to give out an OEST award, and we are on track to present another award this year.

Florida (submitted by Jon Bryan)

Hurricanes. The 2004 hurricane season was a record year in Florida. To refresh your memory, here is a summary:

Category-4 Charley , southwest coast of Florida, August 13 th	For information on the geologic effects of these storms, see		
Category-2 Frances , east central coast, September 5 th .	the USGS Coastal and Marine Geology Program webpage		
Category-3 Ivan , near Pensacola, September 16 th .	(www.coastal.er.usgs.gov). Check out the recent USGS		
Category-3 Jeanne , landfall on east central coast, Sept 25 th .	Open File Report 03-337, An Overview of Coastal Land		
	Loss: With Emphasis on the Southeastern United States, by		
	Robert A. Morton.		

FCAT. Since 1998, Florida's public school students in grades 3 through 10 have been required to take the Florida Comprehensive Assessment Test (FCAT), with subject matter in Mathematics, Language Arts, and Science. The science portion of the FCAT was first given to Florida students in 2003, and the results to-date are only used to gather data. But starting in the 2006-2007 academic year, test results will be used in the annual determination of state grades given to individual public schools. The science FCAT concerns four content clusters that comprise eight major scientific concepts from the Sunshine State Standard benchmarks. For grades 9-12, Earth Science content includes the **Processes that Shape the Earth** and **Earth and Space**. For details about the standards, see the SE NAGT newsletter website.

Florida Geological Survey. Of interest to many will be the long awaited revision of the popular FGS publication, *Springs of Florida*, first published in 1947, revised in 1977, and now in 2004. Tom Scott and his Florida Springs Initiative team have done a fabulous job. Get a copy of this beautiful, color-illustrated volume and accompanying CD. Scott, T, *et al.*, 2004, *Springs of Florida*. Florida Geological Survey Bulletin 66.

Florida Paleontological Society. The FPS continues to crank out issues in the series, *Florida Fossil Invertebrates*. Volumes to-date include: Eocene Echinoids; Oligocene and Miocene Echinoids; Pliocene and Pleistocene Echinoids; Eocene, Oligocene, and Miocene Decapod Crustaceans; Eocene, Oligocene, and Miocene Decapod Crustaceans; and Larger Foraminifera. Forthcoming will be a second volume on larger foraminifera, corals, brachiopods, etc. The intent is to cover all major groups, and then compile these into a text. These volumes are very informative and useful for collectors, educators, and professionals. Many taxa described and illustrated are also found in Alabama and Georgia.

Florida Educators Meetings: April 15-17, *National Marine Educators Association*, St. Augustine (<u>www.marine-ed.org</u>); and on November 3-5, 2005, *Florida Association of Science Teachers* (F.A.S.T.) Annual Meeting in Orlando (<u>www.fastscience.org</u>).

Other Links for Earth Science Educators in Florida

Florida Association of Science Teachers (FAST) Florida Center for Ocean Science Education Excellence Florida Geological Survey Florida Museum of Natural History Florida Sea Grant www.fastscience.org). www.floridacosee.net www.dep.state.fl.us/geology/ www.flmnh.ufl.edu www.flseagrant.org

Georgia (submitted by Greg Bailey, Pamela Gore, and Nancy Hueber)

In 2004, Georgia revised its state science curriculum, replacing the Quality Core Curriculum (QCC) with the Georgia Performance Standards (GPS). As a part of the revision, Earth Science instruction has moved to the sixth grade from the eighth grade. Some of the initially proposed changes, such as removing the word "evolution" from the standards, made national headlines in early 2004. As a result of the ensuing controversy, evolution was returned to the curriculum. The high school science curriculum will consist of only Physical Science, Biology, Chemistry and Physics, but there are plans are to add an Earth Systems course.

The new GPS will be implemented during the 2005-2006 school year. During a two year transition period, Earth Science will be taught in both 6th and 8th grades. As part of the transition, many sixth grade teachers will need to be trained in Earth Science. Nearly thirty school systems in Georgia have been awarded Math and Science Partnership grants by the GA State Department of Education to increase content knowledge of middle grades teachers. Several of these grants are earmarked primarily for earth science education. Whitfield County, GA, for example, is implementing a program to target sixth grade educators in earth science. A number of colleges in GA offer Earth Science content courses for teachers, including Georgia Perimeter College, which offers an online Earth & Space Science for Middle School Teachers course.

Geoscience education made national news again in Georgia in November 2004, when a lawsuit sought to remove a disclaimer sticker from science books in Cobb County schools. The disclaimer sticker states, in part, that "Evolution is a theory, not a fact, regarding the origin of living things. This material should be approached

with an open mind, studied carefully, and critically considered." On January 13, 2005, U.S. District Judge Clarence Cooper ordered the removal of the disclaimers because they convey an unconstitutional endorsement of religion. The Cobb County School Boarded voted January 17, 5-2 to appeal the ruling, and has asked that the order to remove the stickers be put on hold, pending the appeal. On February 4, it was revealed that The Alliance Defense Fund, a powerful Christian legal group, has offered to fund the school board's appeal, which has spent over \$200,000 on legal fees. Now that the 2005 Georgia state legislature is in session, they have become involved in the evolution controversy. A bill filed January 27, 2005 by State Rep. Ben Bridges (R-Cleveland) would require Georgia's teachers to introduce scientific evidence challenging evolution.

In 2005, a new organization is forming for earth science teachers in Georgia, the Georgia Earth Science Teachers Association (GESTA). The GESTA will have its first meeting in Columbus, GA in February 2005.

North Carolina (submitted by Randy Bechtel)

On January 12th, 2005 the Revolution in Earth/Environmental and Space Science Education reconvened for Revolution II as part of a national movement to improve education in this subject area. In 2001, this diverse group advocated for Earth/Environmental and Space Science (EESS) graduation requirement in North Carolina and succeeded. The Revolution II effort is designed to keep the ball rolling and try to improve EESS education in our state. Our next meeting will be March. Participants at the meeting included the North Carolina Department of Public Instruction, Office of Environmental Education, Geological Survey, EPA, North Carolina Aggregates Association, and the nonprofit Environmental Education Fund among others.

The North Carolina Geological Survey (NCGS) has been working with the state Department of Public Instruction (DPI) to revive the state OEST award. We are redesigning the criteria and timetable so our state's teachers can be involved in the regional SENAGT OEST award. We will have information out in the near future. Also, the team of DPI and NCGS will be working together this summer on several teacher institutes for K-12. On Saturday, February 12th, 2005 two summer institutes will be having a weekend long reunion and workshop at the Agape Center for Environmental Education (ACE). Outdoor, hands-on sessions in geology, astronomy, and biology will be conducted as well as breakout sessions to determine what else teachers can do to improve their science background. We are searching for a second state representative from North Carolina to be involved in SENAGT. Anyone interested??

Our state legislature has just reconvened and our Governor is starting his second term. The state is facing a 1 billion dollar shortfall this year but education still seems to be a top priority.

NC State Museum of Natural Sciences has a great temporary exhibit on North Carolina rock and minerals called Treasure Unearthed that runs through July 2005. If you cannot visit, they have a great interactive section at <u>www.naturalsciences.org</u> in the Treasures Unearthed section. If you can visit, you will see some incredible rocks and minerals from North Carolina that are on loan from an anonymous collector. Also, in the exhibit, is a re-creation of the historic Reed Gold Mine that you can walk through and an all-ages, hands-on lab area and classroom called "The Outcrop". Discounts are available for schools and students with proper ID.

Tennessee (submitted by Michael A. Gibson)

Reminder about new TEST website. The Tennessee Earth Science Teachers (TEST) has revamped its website and plans on additional expansions soon. The new URL: <u>http://www.tnearthscience.org/test9-04.htm</u>.

2005 Area National Science Teachers Association Meeting. Nashville will host the 2005 NSTA Area meeting December 1-3, 2005. Among may other development opportunities, NSTA has planned a day-long workshop with limestone as the central theme, followed by a day-long field trip the next day led by Drs. Michael A. Gibson (UT Martin) and Don Byerly (Emeritus, UT Knoxville). Workshop participants will explore the many facets of limestone (chemistry, biological content, economic uses, paleoclimate implications, environmental issues, etc.) as a central focus to reach No Child Left Behind content area training requirements. Limestone will serve as a common thread that crosses science disciplines with content tied to nearby state science frameworks and the National Standards.

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