

## National Association of Geoscience Teachers Southeastern Section Newsletter Winter-Spring 2010

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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

## Summer-Fall 2010 Newsletter Deadline: August 15, 2010. Please send

news items to Bill at witherspoonb@fc.dekalb.k12.ga.us

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# **President's Letter**

First, congratulations to Randy Bechtel, whom you elected as Vice President of the Southeastern Section in January 2010. He won unanimously with 25 votes. Randy has a long history in geologic education and I am proud to have him as an officer.

The Northeastern and Southeastern Sections of the Geological Society of America are meeting together in Baltimore in a few days (March 13-16, 2010). The program can be found at <a href="http://www.geosociety.org/sectdiv/northe/2010mtg/">http://www.geosociety.org/sectdiv/northe/2010mtg/</a>. Meetings of adjacent sections tend to be stimulating, and Baltimore is a historic city with much to offer. The last time I was there, I saw the harbor, the Edgar Allen Poe House, and the B&O Railroad Museum, and climbed the original George Washington Monument for a great view of the historic city. This time, I won't be so footloose, but if you can spare an extra day to sightsee in Baltimore, you won't regret it.

The NAGT is organized differently than the GSA, so it will be the Eastern, New England, and Southeastern Sections that meet here. The annual Luncheon and Business Meeting will take place on Monday, March 15, from noon to 1:30 p.m. All NAGT members are invited to attend and to participate at this meeting, during which SENAGT activities at the next meeting will be planned. Please reserve your space when you register for the meeting; the fee is \$23.50.

On the program is an NAGT-sponsored Saturday workshop, "Pursuing an Academic Career," to be run by Rachel Beane and Jon Lewis. This will include advice on how to write grant proposals as well as more general strategies.

If you can staff an NAGT table for an hour or two, please contact me at arindsberg@uwa.edu.

If you are looking in this issue for news from your own state and find none, you might consider becoming a state representative for SENAGT. This role is described under the term "councilor" in the organization guidelines at <a href="http://serc.carleton.edu/nagt/organization/section-guidelines.html">http://serc.carleton.edu/nagt/organization/section-guidelines.html</a>. The role includes submitting a few paragraphs about geoscience education in your state to the newsletter editor twice a year, on August 15 and February 15 – a task that can be shared with others. State representatives are also invited to help identify deserving Outstanding Earth Science Teacher (OEST) candidates in their state each year, and to remind 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, though of course all SENAGT members are encouraged to attend.

If you want to become a state representative, there is no specific limit to the number of representatives from a state (the guidelines state that "two is ideal."). Please contact me at <u>arindsberg@uwa.edu</u>.

In 2011, SENAGT will meet with SEGSA in Wilmington, North Carolina, with Richard Laws as Chair (email <u>laws@uncw.edu</u>). Bring your ideas for field trips, workshops, or technical sessions to the upcoming SENAGT Business Meeting, or send me your suggestions!

Andrew K. Rindsberg President, SE NAGT

# 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 2010	Mar. 18–21, 2010	Philadelphia
National 2011	Mar. 10–13, 2011	San Francisco
Southern	Dec. 2-4, 2010	Nashville
Alabama	Oct. 20, 2009	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
Puerto Rico	(web site not working)	
South Carolina	Nov. 3-5, 2010	Myrtle Beach
Tennessee	Dec. 2-4, 2010	Nashville
Geological Societies		

Geological Societies			
Organization (Area)	Latest date on web site	City	
GSA (National)	Oct. 31-Nov. 3, 2010	Denver	
GSA (Southeastern 2010)	Mar. 13-16, 2010	Baltimore	
GSA (Southeastern 2011)	ТВА	Wilmington, NC	
GSA (South Central; incl. LA)	Apr. 11-13, 2010	Branson, MO	
Georgia Geological Society	Oct. 9-11, 2009	Milledgeville	
Carolina Geological Society	Sep. 17-19, 2010	Charleston	

# Congratulations 2009 OEST Award Winners!

This is the first year that OEST winners have not appeared in the NAGT publication, the *Journal of Geoscience Education*. Instead, winners appear on the NAGT web site at <a href="http://serc.carleton.edu/nagt/programs/oest09.html">http://serc.carleton.edu/nagt/programs/oest09.html</a>. This newsletter will continue to honor all of our award winners. Congratulations to Cliff Hudson who is the 2009 Southeastern Section OEST. State winners are:

Georgia	Janet Rebel
North Carolina	Cliff Hudson
South Carolina	Derenda Marshall
Tennessee	Frances Hamilton

## Cliff Hudson (Southeastern Section and North Carolina)

Cliff Hudson has taught high school earth science in the Martin County Public Schools for four years. He graduated with a BA degree in Biology from Barton College and is pursuing a Master's degree in Geoscience Education while also working toward his N.C. Environmental Education certification. Cliff employs an educational philosophy which revolves around hands-on activities, real data and outside experiences to help his students understand the world around them. He has formed many partnerships and been awarded several grants to supplement his educational efforts.

A recent project, called TechMath, integrated his previous job experience in the Geotechnical Division of the N.C. DOT. The project, funded by the National Science Foundation and East Carolina University, in partnership with Wake Stone Corporation, used science, math and technology to solve real life problems in a teaching module which utilizes inquiry-based, science activities to show the relationship of geological science to the business of a local rock quarry. Students also visited the quarry.

Another activity which exemplifies Cliff's inventiveness was the use of rock thin sections and a Candy Bar-Rock-matching game to teach rock textures, which is a challenging fundamental facet of geology. He has also developed and teaches an Astronomy/Geology class and is working to develop an AP Geology class.



Currently, Cliff and his students are working to build an outdoor classroom in the deciduous hardwood forest behind their school. They have message boards along a trail describing the ecosystem and a rock trail describing common rocks found both locally and among the various geographic regions of North Carolina. Ultimately, their goal is to have a covered shelter with benches and tables. This space will not only be used for class but also for the school science club and environmental science team which Cliff sponsors.

## Janet Rebel (Georgia)

Janet Rebel teaches gifted sixth graders at Gwinnett County's Duluth Middle School. She is in her 12th year of teaching. Jan writes, "I have a passion for challenging gifted students while sharing my love of science. I see my role in their lives to excite and entice them to regain their curiosity about the natural world, so that they maintain their motivation for learning not only during their school years but throughout life. As they acquire the tools and habits of inquiry, they develop knowledge of the Earth; understand scientific ideas, as well as an understanding of how scientists study the natural world."

"[For example,] my students are working on a project: 'How do weathering, erosion and deposition processes impact our lives?' The students are taking digital photographs around outside our school that best illustrate the weathering processes we are studying. They are presenting their photos in a booklet using laptop computers. On our 'weathering walk' the students recorded their observations of as many different types of mechanical and chemical weathering. Each photo in the booklet is required to have a written description. The description includes the location of the photo, what process is being shown, and why it is occurring."

## Derenda Marshall (South Carolina)

Derenda Marshall has taught science for 24 years. Currently she is the science specialist at McDonald Elementary School in Georgetown where she works with students from kindergarten through fifth grade. For earth science lessons, Derenda concentrates on environmental topics and is a strong proponent of field experiences for all children. Even while teaching other subjects, science is always the vehicle that drives all instruction in her classroom.

Derenda believes that teaching is her life's calling, beginning at the age of four when she began teaching science to her stuffed animals. She describes her love and passion as "teaching science to the budding young scientists of tomorrow." Derenda is heavily involved with the state science teachers association, serving this year as Vice-President. She has achieved National Board Certification as well as numerous teaching awards, including 'Georgetown County District Teacher of the Year' and 'South Carolina Project Learning Tree Teacher of the Year'.





## Frances Hamilton (Tennessee)

"Sometimes I am amazed that I'm a teacher," states Frances Hamilton, of Taft, Tennessee. "Every time I tried to do something else, however, I was led back to teaching. I really feel that I did not choose to be a teacher, instead I was destined to be one."

Frances taught at Blanche School in Lincoln County for ten years, teaching a variety of grade levels and subjects. She now teaches seventh and eighth grades at the Highland Rim School. She is known throughout the district for her collaborative work to incorporate more hands-on experiences, guest speakers, and field trips into earth science classrooms. Frances participated in UT-Martin's Earth and Planetary Science Institute and later became a master teacher for that program. Her stated ultimate goal is to "do whatever it takes to reach each child. I will venture into caves, dig for fossils, or go out to sea to bring the love of science into my classroom."



## **Regional News in Geoscience Education**

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

I don't think the weather is the cause, but for whatever reason my usual informants have given no response whatsoever to my calls for updates. I suspect the economy, having led to shrinking budgets at educational institutions, has made everyone a lot busier. Nevertheless, despite all sorts of problems caused by lack of money, this has been a pretty good year for earth-science education in Alabama.

#### And speaking of the economy

The geology department at the University of Alabama is hiring, so they seem to be doing okay. They have a lot of new faculty, and I think if those people can be retained (one is already leaving after having only been in town a few years) this will be very good for University-level geological education in the state. The annual Alabama Science Teachers Association meeting was last fall and attendance was much below normal. One possible reason is suggested by this fact: Tuscaloosa city schools did not provide any paid professional leave this year. If that is an indication of how things are around the state, and I think it is, it may help explain why teachers have cut back on their attendance at meetings.

The Geological Survey, along with most state agencies, was under a hiring freeze until quite recently. The freeze was lifted because we were losing people to retirement and other causes, yet we have a lot of funded research projects. We need staff to do the work. So we have hired several new employees recently and we will be hiring a couple more this year. Of course, one of those people was available because he had been laid off by a consulting company. So to some extent we are taking from one plate to put something on another. Much of the money to hire people comes directly or indirectly from the President's stimulus package, which won't last forever.

#### K-12 education

The powers that be continue to obsess about mass quantities of high-stakes testing (which forces teachers to teach to the test rather than to the subject), rewarding teachers based on student performance (which punishes the best teachers because they are given the most challenging students), and charter schools (proven no more effective on the average than other schools), and I see no significant change in the quality of science education in the state this year, beyond that caused by reduced funds.

#### **Educational workshops**

I do not know if the fossil workshop will be held this year in the black belt. Funding issues not directly related to the economy are the cause in this case. I have no information about field trips or workshops (some for students and some for teachers) that are usually led by the Alabama Museum of Natural History, the McWane Center, and Legacy (our state environmental organization). I have the sense that there will be some workshops, but I don't know whether there will be as many as in recent years.

#### **New Museum**

Yes, even in today's economy there is a Santa Claus. The University of West Alabama (in Livingston) is hosting the new Museum of the Black Belt. Only part of this museum will be devoted to natural history, but the two people I know who are putting it together are a paleontologist and a biologist. The museum is not yet open, and financial hurdles may yet cause problems, but they already have a building, staff, and some collections.

#### Evolution

The long-running series of evolution of lectures in Tuscaloosa (ALLELE series) has come to an end, at least temporarily. This past year we had six enthralling lectures and attendance remained high right up to the end. Now, an interdisciplinary group of faculty members at the University of Alabama is working on a minor in evolution. This program would include a revived series of guest lectures. At the time of writing a proposal is being written, but I don't know its chances of being funded.

#### New earth-science books

Roger Reid, a writer with the Discovering Alabama educational television series, started writing a related series of books a few years ago. These are mysteries with teenage protagonists; the books are aimed at preteens and teens. The stories are set in places that have been featured in the television series. For example, the first book is set in the longleaf pine forest of south Alabama. I enjoyed the book and I'm going to test it on my precocious eight-year-old nephew. I have a pretty strong feeling that he's going to like it. Book 3 is in preparation now. The action will be at the Steve Minkin Paleozoic Trackway site in Walker County. Judging from the quality of the first book, the new book will contribute to public understanding of geology, paleontology, and evolution in the state. I think the book will be published late in 2010. Another book (tentatively scheduled for 2011) is being written about the same site by me and Ron Buta. This is a nonfiction book for the general public about both the history of the site and its geology. We can only hope to make the book as enjoyable as Roger's probably will be. That is our goal.

- Florida (no information submitted)
- Georgia (no information submitted)
- Louisiana (no information submitted)
- Mississippi (no information submitted)

## North Carolina (submitted by Randy Bechtel)

# Changes in the Earth/Environmental Science curriculum by the North Carolina Department of Public Instruction (NCDPI)

The Science curriculum currently taught in public schools is being revised by the N.C. Department of Public Instruction as part of the Accountability and Curriculum Reform Effort (ACRE). Version 4.0 of the Science Essential Standards was approved at the February 2010 meeting of the State Board of Education. Members of the earth science community have voiced concerns about the revised standards to the Department of Public Instruction. Material and background support documents for the new Science Essential Standards will be developed during the next couple years. Hopefully, the earth science community will be able to help develop this material. The Science Essential Standards will be fully implemented in the 2012-13 school year.

You can find a copy of the current science curriculum on the Department of Public Instruction's Web site, <u>http://www.ncpublicschools.org/curriculum/science/scos/2004/</u>.

Draft 4.0 of the new Science Essential Standards can be viewed on the ACRE Web site, <u>http://www.dpi.state.nc.us/acre/standards/</u>.

N.C. Department of Public Instruction's Interim Science contact, Beverly Vance, can be reached at <u>bvance@dpi.state.nc.us</u>.

#### NC Science Teachers Association Professional Development Institute (NCSTA-PDI) in 2009





Left picture: A former OESE winner comes back to chat and pick up free materials, including a poster about earthquakes in North Carolina and a publication about the state's geohazards. Right picture: Volunteers resupply the rock kits, earth science toolkits and rock cores.

Last year, the N.C. Science Teachers Association Professional Development Institute was back at its usual venue in Greensboro. The Institute was held Nov. 19-20. The uncertain economic times caused concern about attendance, but 1,200 K-12 science teachers were able to attend (average attendance is between 1,500 and 2,000 teachers). The Outstanding Earth Science Teacher (OEST) and Outstanding Earth Science Educator (OESE) awards were presented at the Institute. Also, a team effort combined the N.C. Geological Survey (NCGS) and our sister section Land Quality, both part of the state Division of Land Resources, the N.C. Aggregates Association (NCAA) and AEG Carolinas Section to distribute tons of earth science education materials. The N.C. Geological Survey and Land Quality sections gave away more than 3,500 educational posters, pamphlets and other materials. The NCAA distributed 710 rock kits, AEG Carolinas Section provided 450 AGI Earth Science Week Toolkits and the N.C. Department of Transportation gave away pallets of rock cores. For more information on the rock kit and earth science week kit distribution, please see the excerpts from their respective newsletters below.

Many teachers voiced their great appreciation for all of the materials.

# The 2009 Outstanding Earth Science Teacher (OEST) and Outstanding Earth Science Educator (OESE) Award Winners



From left to right: Henry Fansler, N.C. Mining Commission; Randy Bechtel, N.C. Geological Survey/NAGT Representative; Sarah Yelton, 2009 OESE N.C. Winner, Office of Environmental Education; Cliff Hudson, 2009 OEST N.C. and Southeast Section Winner, Martin County Schools; Tom Carroll, N.C. Aggregates Association.

The OEST N.C. State and Southeast Sectional Winner is Cliff Hudson from Martin County Schools in Williamston. The OESE N.C. State Winner is Sarah Yelton from the state Office of Environmental Education, part of the N.C. Department of Environment and Natural Resources. The N.C. Geological Survey coordinates and co-sponsors the awards and would like to thank the other sponsors: National Association of Geoscience Teachers, North Carolina Mining Commission, North Carolina Aggregates Association, Southeast Section of the Society for Mining, Metallurgy, and Exploration (SME).

Nominations for the 2010 awards are due **April 16.** If you know of an Outstanding Earth Science Teacher (OEST) or Educator (OESE), please fill out the nomination form or nominate yourself. Nomination form, prizes and general information about the awards can be found at: <u>http://www.geology.enr.state.nc.us/proj\_earth/proj\_earth.html</u>.

#### Teacher workshop presented by the N.C. Geological Survey

The N.C. Geological Survey presented a workshop with activities showing teachers how to use the rock kits in their classrooms. The workshop was overflowing with 41 teachers squeezed into a 24-person room. They were sitting on the floor and, for part of the activity half of the participants had to move into the hallway! At the workshop, the teachers received a packet of material from the state Geological Survey, including a compact disc with the activities and a rock kit from the NCAA.



At the workshop presentation, teachers are working with the rock kit and activities on the floor and at tables at the NCSTA-PDI.

#### Excerpt from N.C. Aggregates Association newsletter about the rock kits\_

The N.C. Aggregates Association gave away 710 kits of rocks and minerals and as always the rock kits were a huge hit with the teachers. Each kit contained 13 different rocks and minerals from North Carolina. The organizers of the conference were obliging and allowed for some behind-the-scenes room to assemble the rock kits so the teachers just had to come by and pick up their kit of rocks. Thanks to all the volunteers, companies and other associations that donated material and time for this very worthwhile cause. We would like to take this time to acknowledge the companies that donated material necessary to make the rock kits. Sponsors for the rock giveaway include: Carolina Sunrock Corporation, Hedrick Industries, Martin Marietta Aggregates, Nantahala Talc and Limestone Company, N.C. Granite Corporation, PotashCorp-Aurora, Standard Mineral Company, Unimin Corporation, Vulcan Materials Company and Wake Stone Corporation.

#### Excerpt from http://www.aegcarolinas.org/GeoNews-2009-Winter.pdf

The Association of Environmental and Engineering Geologists - AEG, Carolinas Section sponsors have received thank you cards from North Carolina teachers and students for the 450 Earth Science Tool Kits. The tool kits are a teaching aid designed and produced by the American Geological Institute (AGI), and their distribution at NCSTA was one of the educational projects of AEG Carolinas in 2009. The tool kits are geared toward giving science teachers resources to teach earth science to school children from kindergarten through high school, and to encourage students to think about the world around them. Although Earth Science Week was in October, the NCSTA meeting was an outstanding venue to distribute these tool kits to science teachers from North Carolina, so this was our Earth Science Week project for 2009. The funding for this project comes from the following generous sponsors: Ground Water Professionals of North Carolina (GWPNC), AEG Southeastern Section, Geology Executive Online (GEO), AEG Carolinas Section, Dr. Charles W. Welby, Enviro-Equipment Inc., Jennifer Bauer, EGIS Inc., Paul Weaver, Tim Leatherman, Mark Denil, Dick and Jane Shaler and Tami Idol.

Thank you to Sarah Yelton, with the state Office of Environmental Education, Diane Weems, of NCAA, and Jane Gill-Shayler, of AEG Carolinas Section, for their contributions to this submission.

#### Puerto Rico (no information submitted)

### South Carolina (submitted by Gwen Marie Daley)

Greetings from the Palmetto State, where I hope you all enjoyed the recent Darwin Day celebrations in Charleston, Columbia and other localities around the state. We are also looking forward to Earth Day celebrations coming up in a couple of months. The South Carolina Department of Health and Environmental Control has ideas about Earth Day activities at their website

(http://www.scdhec.gov/environment/earthday/), as well as applications for their annual Earth Day Awards. Congratulations to Riverside High School and Oakville Elementary School in Greenville for winning awards in last year's competition. The SCDHEC also maintains a calendar that includes public hearings on environmental legislation.

#### **EEASC Meeting June 11-13**

The Environmental Education Association of South Carolina (EEASC - http://eeinsc.org/) will hold its annual meeting from June 11th - June 13th at Columbia College. The theme will be "Awareness to Action" and will include talks, workshops, outdoor activities and other activities. The South Carolina Green Steps Schools (http://www.greenstepschools.com/) environmental education initiative will hold a workshop on June 11th at the meeting.

#### South Carolina Envirothon May 7

The South Carolina Envirothon will be held on May 7th at the Sandhill Institute for Economic & Community Development. For more information, please see: http://www.dnr.sc.gov/education/Envirothon/index.html

#### Climate Change workshop March 27

The South Carolina State Museum will hold a teacher workshop entitled "Climate Change!" on March 27th. For more information, please see: http://www.museum.state.sc.us/educational\_programs/tworkshops.aspx

#### Carolina Geological Society Sept. 17-19

The Carolina Geological Society will hold its annual meeting from September 17th-19th in Charleston. The theme will be "Stratigraphy and geomorphology of the transgressive/regressive barrier islands: Kiawah, Seabrook and Edisto Islands, South Carolina." For more information, please see: http://www.carolinageologicalsociety.org/.

#### Clemson: Rock sets, field courses, camps

Clemson Geology has teamed up with the South Carolina Geological Survey to produce a set of largesample rocks from all over South Carolina. The Survey sells these for \$50 each, or teachers may get a set from Clemson for free by agreeing to pilot test some grant-generated geoscience lessons using remotely sensed images and topographic maps. Any teacher wishing to pilot test some of the lessons in return for getting a rock box from Clemson should contact John R. Wagner (Professor of Geology, Department of Environmental Engineering & Earth Sciences, Clemson University, jrwgnr@clemson.edu).

There are several natural history field courses being offered this summer through Clemson University. Information can be accessed by going to the SC LIFE website and clicking on "SC LIFE graduate courses for in-service teachers"

#### (http://www.clemson.edu/SCLife/)

There will also be several Earth-science themed camps offered this summer through Clemson University. Teaching KATE (Kids About the Environment) is a 3-day camp for elementary and middle school children (http://www.clemson.edu/yli/pages/kate.php). Expedition Sewee

(http://www.clemson.edu/yli/pages/expeditionsewee.php) offers one and three day programs for 2nd-8th graders focusing on coastal ecosystems. For other programs, please see:

http://www.clemson.edu/yli/pages/academicother.php.

### Tennessee (submitted by Michael A. Gibson)

#### 2009 Tennessee Science Teachers Association Meeting.

Nashville hosted the 2009 NSTA Area meeting December. TEST ran a day-long workshop entitled "Oceans of Tennessee" sediments with presentations by Dr. Ann Holmes (UT Chattanooga), Dr. Michael Gibson (UT Martin), Dr. Don Byerly (UT Knoxville) and several TEST teacher participants. Several additional breakout sessions were provided the following day for more focused topics and for teacher input and questions. Over 50 teachers participated in the day-long workshop. A follow-up field trip to the State Capitol building was held in which Dr. Wayne Leimer, Dr. Don Byerly and Dr. Michael Gibson led a tour of the building stones of the capitol building and Bicentennial Mall.

#### 2010 TEST Workshop Planned

Planning is underway for the 2010 Area National Science Teacher Association meeting to be held at the Opryland Conference Center in Nashville.

The 2010 Tennessee Earth Science Teachers workshop topic will contain on a wide range of presentations related to the new Tennessee Science Standards. Additionally, the Paleontological Society and Paleontological Research Society with co-sponsor a field trip workshop with the newly formed Institute for Geoscience Education (IGE) at UT Martin entitled "*A Teacher Friendly Guide to the Southeast*". The workshop will feature a trip to the Vulcan Materials Limestone Quarry in Parsons Tennessee to collect fossils from the famous Birdsong Shale. For information contact Dr. Michael Gibson, Dept. of Agriculture, Geosciences, & Natural Resources, University of Tennessee at Martin, Martin, TN 38238 (731.881.7435; mgibson@utm.edu).

#### 2009 OEST Winner.

The winner of the 2008 Outstanding Earth Science Teacher is Mrs. Francis Hamilton from Highland Rim School. Fran was presented her award at the 2009 Tennessee Science Teacher Association annual meeting held in Nashville.

#### National Marine Educators Association.

The NMEA will hold its annual meeting in Gatlinburg July 18-23, 2010, hosted by the Tennessee Educators of Aquatic and Marine Science (TEAMS). The theme of the meeting is "From the Mountains to the Sea" and will feature field trips and lectures related to Tennessee's past oceanic history, including a keynote address by Michael A. Gibson from UT Martin entitled "A Tale of Two Oceans". For more information and registration visit TEAMS at <u>www.teamsoftn.org</u> or contact Courtney Thompson at Thompson@ripleys.com.

#### New Tennessee Science Licensure Requirements forthcoming

The State of Tennessee's newly approved science graduation requirements and new science standards has prompted the state to take a look at its requirements for teacher licensure, which were last updated in the mid-1990's. Licensure for all of the sciences are being revised at the same time. Dr. Michael Gibson (UT Martin) and TEST past-president Mrs. Pat Royle were selected by the Tennessee State Department of Education to serve on the revision committee and focus on Earth Science, Geology, and Environmental Science licensure revision.

#### Master of Education: Geoscience Education

The University of Tennessee at Martin's on-line courses leading toward a Master of Education; Interdisciplinary - Geoscience Education Concentration is now one-year old. Fifteen teachers have matriculated into the program. Offerings for summer 2010 include GEDU 700: Earth Systems Science and several field experiences, including Fossils and Stars to be run at the Coon Creek Science Center. Anyone interested can learn more about the program or register at:

<u>http://www.utm.edu/utonline/msed\_geosci.php</u>. For information contact Dr. Michael Gibson, Dept. of Agriculture, Geosciences, and Natural Resources, University of Tennessee at Martin, Martin, TN 38238 (731.881.7435; <u>mgibson@utm.edu</u>).

#### Free Geomorphic Regions Textbook

Middle Tennessee State University Professor Jim Henry and undergraduate Miller Wylie have published an entire free textbook describing the geomorphic regions of the United States at <a href="http://www.mtsu.edu/~mabolins/geomorph.htm">http://www.mtsu.edu/~mabolins/geomorph.htm</a>. Mr. Wylie illustrated the text with numerous maps and satellite images. The text is an outgrowth of "Natural Landscapes of the United States" by Henry, Joann Mossa, and E.C. Pirkle, and has been completely revised and updated. The book is a great supplement for any geosciences course. This curriculum development project was funded by a small grant from the NASA Earth Observing System Higher Education Alliance based at George Mason University.

#### **IGE: Institute for Geoscience Education**

The Department of Agriculture, Geosciences, and Natural Resources at UT Martin announces the formation of the **Institute for Geoscience Education (IGE)**, the first center of its kind in Tennessee devoted to earth science education. Offices of IGE will be physically housed at The University of Tennessee at Martin under the directorship of Dr. Thomas (Lan) DePriest (address below). The geographic area of coverage is the entire state of Tennessee...and anywhere else we need to take teachers to learn earth science first-hand. Our breadth of coverage...you name what earth science you need to know of....we make it happen. All courses are Standards-based and follow Tennessee Teacher Licensure standards.

**IGE** was formed with its mission to provide "hands on", content-based, current, Standard-centric learning opportunities for earth science educators and those interested in the earth sciences. The week long workshops will enable one to focus entirely on the earth science topics covered in a fun and intense learning environment.

IGE is in the planning stages of two 2010 summer workshops for the first and third week of June, 2010 (see description of courses under the Online MS Ed article):

#### "Fossils and Stars" "Geologic and Celestial Mapping"

All teachers will receive certificate of completion for professional development purposes and may opt to receive graduate credit for the experience if they desire. Teachers enrolled in the UTM Online MS Ed: Geoscience Education program may count these courses toward their field experience requirement. If you are interested in either of these workshops, want to suggest future workshops, or if you know of any teachers who might be interested in any of the summer workshops please contact:

Dr. Lan DePriest, Coordinator for the Institute of Geoscience Education (IGE) University of Tennessee at Martin Department of Agriculture, Geosciences, and Natural Resources 256 Brehm Hall Martin, TN 38238 Office: 731-881-7441 e-mail: tdepriest@utm.edu You can join NAGT using the online form at <u>https://www.webassociationmgmt.org/nagt/</u>, or by downloading a membership application at <u>https://www.webassociationmgmt.org/nagt/memform.v2\_small.pdf</u>.

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

#### Your SE NAGT State Representatives

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