



National Association of Geoscience Teachers
Southeastern Section Newsletter
Winter-Spring 2017

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WWW . . .

NAGT

www.nagt.org

SE-NAGT

geogiarocks.us/nagt

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 2017

Newsletter Deadline:

August 15, 2017. Please send
news items to Bill at

bill@geogiarocks.us

or to your state rep by Aug. 1.

Southeastern Section Officers

President: Christy Visaggi
Georgia State University
Geosciences
Kell Hall 336
Atlanta, GA 30302
(404)413-5755
cvisaggi@gsu.edu

Past President: David Kopaska-Merkel
Geological Survey of Alabama
P.O. Box 869999
Tuscaloosa, AL 35486-6999
(205)247-3695
dkm@gsa.state.al.us

Vice-President: Frank Forcino
Assistant Professor of Geosciences and
Natural Resources
Western Carolina University
Cullowhee, NC 28723
(828)277-2888
FLForcino@email.wcu.edu

Secretary:

Eleanor E. Gardner
Florida Museum of Natural History
3215 Hull Road
Gainesville, FL 32611-2710
(352)273-1936
Email: egardner@flmnh.ufl.edu

Treasurer/Webmaster: Pamela Gore
Pamela Gore
Perimeter College of Georgia
State University
555 North Indian Creek Drive
Clarkston, GA 30021
(678)891-3754
pgore@gsu.edu

Newsletter Editor: Bill Witherspoon
bill@geogiarocks.us

President's message

by Christy Visaggi, SENAGT president

This is my last letter as President of SENAGT and never before has science and education been so challenged and yet so important in what we do for future generations. The voice of scientists and educators is unwelcome in many settings much to the disadvantage of our society globally. Uncertainties loom regarding funding for research, education, and action on the effects of climate change, protecting habitats and species, and more, despite overwhelming evidence and the need to study and mitigate human impacts on our planet not only for our health but that of the Earth System overall. Geoscience education in particular is increasingly relevant in our ever changing world and it is our responsibility to carry on and seek new ways to advance and promote science and education for all. So how can you maintain that passion you have by getting involved or staying informed about events in our region and beyond? Keep reading...

SEGSA 2017

This year the Southeastern Geological Society of America meeting will be held on March 30-31 in Richmond, VA (<https://www.geosociety.org/se-mtg>). Oral and poster sessions at SEGSA that may be of interest to our members on education and/or human-environmental interactions are featured in the below list. Other activities that may be especially relevant for more of our budding geoscientists include a series of career workshops offered by GSA and partnering organizations scheduled across both days of the conference. The annual SENAGT meeting and social with lunch on your own will be held at 12pm on Friday, March 31, at the Southern Railway Taphouse (100 S. 14th St, Richmond, VA, 23219). Hope you can join in the festivities!

- Digital Imaging Techniques for Enhancing Student Learning
- Transforming Geoscience Teaching and Learning at 2Y and 4Y Colleges
- Geoinformatics and Geoscience Education
- Geology and the Civil War
- Beaches, Barriers, and Marshes of the Southeast Coast: Dynamic Systems in a Changing Climate
- Stormwater Control Measures: Runoff Quantity and Pollution Science and Management in the Southeastern U.S.

NAGT Awards, Resources, and Workshops – Oh My!

As always, I encourage you to familiarize yourself with the vast array of resources, scholarships, awards, and professional development opportunities that NAGT offers by browsing their website (nagt.org). Despite being actively involved in the organization over the last few years myself, I'm still discovering new and amazing ways in which NAGT promotes and advances geoscience education. Award recognition and support for educators, scholarships and internship programs for students, resources for classrooms and departments, and webinars and workshops galore only scratch the surface in what NAGT can offer in enhancing the wonderful work that you already do. The southeastern region is recognized in particular for featuring the excellent contributions of K-12 educators, and so on that note, let me remind you to please submit your 2017 Outstanding Earth Science Teacher nominations (nagt.org/nagt/awards/oest-nom.html)!

Earth Educators' Rendezvous

Speaking of fantastic opportunities... consider attending the 3rd annual Earth Educators' Rendezvous scheduled for July 17-21, 2017 at the University of New Mexico in Albuquerque. This conference is focused exclusively on earth science education with events for all audiences including K-12 educators, university instructors, administrators, students, and beyond. Whether you're looking for new classroom approaches, career guidance, or how to start research in education, you can find it all at the EER! This is the perfect place to learn from your colleagues across NAGT divisions (e.g., Teacher Education, Geo2YCs, Geoscience Education Research), via programs such as InTeGrate that focus on

sustainability and interdisciplinary education, and much more. Visit the SERC website for more information and important upcoming deadlines:

http://serc.carleton.edu/earth_rendezvous/2017/index.html.

National Geographic

Because of my role as Director of Education and Outreach for the Georgia Geographic Alliance, I'd like to share with you a few updates that may be of interest to our SENAGT membership regarding initiatives and resources available for geoscience education. This year all 50 states have a Giant Traveling Map of their state that you can borrow through your state geographic alliance to enrich learning opportunities in your classroom. For example, our 16' x 20' map of Georgia is a fun way to engage students through active inquiry and place-based learning by designing lesson plans that utilize specimens of rocks, minerals, and fossils from the state in combination with walking around and placing samples on the map in discussing where and why such resources are found where they are, how to reconstruct the geologic history of Georgia, etc. Here's a link to a video to give you an inside peek of what I mean

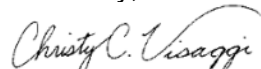
(<https://www.facebook.com/georgiageography/videos/10155024085838119/>) in case you're interested in getting your state's map into your classroom! National Geographic is also in the midst of advertising their newly released educator certification program as well as planning for a nationwide focus on geospatial initiatives in education next year, so if either are of interest to you, feel free to email me for further information and I can send you in the right direction or go ahead and contact your state alliance for more details to be revealed soon!

Earth Day

April 22 is a worldwide celebration of the Earth and protecting our environment as no doubt you are all aware. This year, however, enthusiasts of our planet will bring a broader meaning to Earth Day through the March for Science planned for Washington, D.C., and sister marches across our country and around the world. You can find a march near you if you are interested in joining in unity for science on this very special day at <https://www.marchforscience.com/satellite-marches/>. NAGT has a long history of educational advocacy and is in support of marchers promoting science at this event. Part of our council discussions regarding the march have focused on how to have effective communication as science educators and so I encourage all of us to remember that our message is pro-science and pro-science education, not against any particular political party, person, or legislative action. I am proud to say that I will be marching in Atlanta on this very important Earth Day to speak up as a representative of the scientific community with concern for citizens globally and as a mom and an educator in support of our simply amazing planet that we are fortunate to call home. Science cannot be silenced and our voice and strength as a community of educators is even more critical moving forward than ever before. Be safe, stay strong, and inspire as you do! Should you be interested in serving NAGT more in this capacity overall or specifically as related to the March for Science, please join in our efforts by volunteering to serve on the NAGT Advocacy Committee by emailing Don Duggan-Haas at dad55@cornell.edu.

This is a bittersweet ending for me as I'm about to step down in having finished my role as President of SENAGT as I pass the baton to your next eager incoming leader Dr. Frank Forcino of Western Carolina University. Thank you to my fellow officers, state representatives, and all of our members for the amazing work that you do in making our region shine in geoscience education. As before, I encourage you to join our community online through the SENAGT Facebook group as we work to improve communicating with you, sharing resources, etc. (<https://www.facebook.com/National-Association-of-Geoscience-Teachers-Southeastern-Section-400556276800591/>). I have to admit that I'll miss writing these letters to y'all, but I am hopeful and excited to see what the future will bring as we continue to discover more every day about our planet and beyond as well as fight the good fight for science and education overall.

Sincerely,



Rising sea level on the Georgia Coast: The Georgia Geological Society (GGS) 50th annual field conference

by Robert Jarrett, GGS President-Elect

[Ed. Note: We asked Bob Jarrett to recount this remarkable trip to the Georgia coast, as an example of one of the opportunities open to geoscience educators to experience Earth in action. One additional point is that the rescheduled event coincided with a spring tide, allowing us to experience "new normal" flooding similar to that familiar to residents of such locations as Norfolk and Miami Beach. In this case our access from the beach to Clam Creek was barred by water a foot or so deep covering the trail, a first in the recollection of trip leader Tim Chowns, and a validation of the title printed on the guidebook cover.]

Most conferences strive to be timely. Hurricane Matthew dramatically rescheduled the 50th GGS field conference from October 7-9 (THE hurricane) to November 11-13 and, in the process, illustrated Nature's power and the complexity of coastal dynamics. How timely was that?

Jekyll Island, GA, the primary conference site for 2016, had sustained relatively little property damage, but significant changes occurred to beaches, dunes, spits, and coastal flora and fauna. As a result, 51 attendees from Georgia and nearby states saw many changes new to the Holocene Epoch (last 10,000 yrs.), including fresh exposure of Pleistocene (over 10,000 yrs.) sedimentary and vegetation deposits, not to mention examples of the futility of artificially fighting off a rising ocean.



Newly exposed Pleistocene stumps and sediment deposits, Jekyll Island northeast coast, 12 Nov 16



New stream at high tide draining Clam Creek over Atlantic coast dunes, 12 Nov 16

Conferees found an extreme situation in the north end with Clam Creek and its associated wetlands gaining two or more new drainage outlets over/through the dunes on the eastern coast.

Also, Southern Ionics Mission Mines hosted a Sunday visit to their very modern Charlton, GA mine, where they extract "heavy minerals" zircon (zirconium silicate), rutile (titanium dioxide), ilmenite (iron titanium oxide), and leucoxene (indeterminate combo of altered titanium minerals) from ancient beach sands deposited when sea level was higher than present. Company staff conducted walking lectures of mining and complex processing methods, as conferees trod the grounds and climbed the massive floating separation factory.

Enthusiastic attendees included university students, teachers, university instructors, professional geologists, and geology hobbyists. University of West Georgia Department of Geosciences faculty, staff, and students provided the bulk of the organizing work for the conference, as usual. Participants are particularly grateful to the following individuals who contributed greatly to the guidebook and conference execution: Tim Chowns (University of West Georgia), Chester Jackson (Georgia Southern University), Burt Carter (Georgia Southwestern College), Don Thieme (Valdosta State University), and Clark Alexander (Skidaway Institute of Oceanography), the Jekyll docents and guides; and to Jim Renner and David Settles (Southern Ionics Mission Mine), leaders of the industrial visit. Brian Meyer (Georgia State University) and Fred Rich (Georgia Southern University) contributed to the guidebook. Behind the scenes, Karen Tefend, Randy Kath and Deana Sneyd provided logistical support and encouragement.

Information about past and future conferences and access to highly informative, conference-specific guidebooks can be found at: <http://www.westga.edu/~qgsweb>. Your newsletter editor Bill Witherspoon is the Oct 2017 - Oct. 2018 President of GGS, bill@georgiarocks.us.

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. 30–Apr. 2, 2017	Los Angeles
Eastern	Oct. 5–7, 2017	Baltimore
Southern	Nov. 30 – Dec. 2, 2017	New Orleans
Alabama	Mar. 7-8, 2017	Birmingham
Florida	Oct. 19-21, 2017	Orlando
Georgia / NSTA Nat'l	Mar. 15-18, 2018	Atlanta
Louisiana/ NSTA S	Nov. 30 – Dec. 2, 2017	Baton Rouge
Mississippi	Oct. 29-31, 2017	Biloxi
North Carolina	Oct. 19-20, 2017	Greensboro
South Carolina	Nov. 8-10, 2017	Columbia
Tennessee	Nov. 9-11, 2017	Murfreesboro

Geological Societies		
Organization (Area)	Latest date on web site	City
GSA (National)	Oct. 22-25, 2017	Seattle
GSA (Southeastern)	Mar. 30–31 2017	Richmond
GSA (South Central; incl. LA)	Mar. 13–14, 2017	San Antonio
Alabama Geological Society	Nov. 17-19, 2016	Oxford-Anniston
Carolina Geological Society	Oct. 28-30, 2016	Boone, NC
Georgia Geological Society	Nov. 11-13, 2016	Jekyll Island

FOSSIL Project Announcements

by Eleanor Gardner, FOSSIL Project Coordinator and SENAGT Secretary

Several exciting opportunities of interest to K-12 educators are available from the National Science Foundation funded project called FOSSIL (Eostering Opportunities for Synergistic STEM with Informal Learners):

(1) Throughout the Spring 2017 semester, the FOSSIL Project, headquartered at the Florida Museum of Natural History, will be hosting monthly webinars promoting Women in Paleontology. The purpose of the webinar series is to highlight the contributions of women to the field of paleontology and to feature diverse career paths available to those interested in pursuing paleontology. About 25 minutes at the end of each webinar is dedicated to audience Q&A, so these webinars provide a unique opportunity for teachers and students to connect with real paleontologists.

The first two webinars were successful. On January 25, K-12 educator and museum researcher Ms. Tara Lepore, of the Webb Schools and the Raymond M. Alf Museum in Claremont, CA, spoke about women as mentors. On February 22, Dr. Brenda Hunda, curator of invertebrate paleontology at the Cincinnati Museum Center in OH, discussed her research on Ordovician trilobites. You can watch the recordings of their webinars at <http://www.myfossil.org/video-tutorials/#tara>.

Join us live for the rest of the webinars in the series! On each of dates listed below, connect at <https://bit.ly/WiPWebinar> and enter as a "guest" (make sure FlashPlayer is up-to-date). Each webinar runs from 7-8pm Eastern.

- Mar 29 – Ms. Cindy Lockner, award-winning amateur paleontologist and officer of the Florida Fossil Hunters club in Orlando, FL, will discuss her path to working on important field projects across the United States - from Florida to Montana.
- Apr 26 – Dr. Lisa White, director of education and outreach at the University of California Museum of Paleontology in Berkeley, CA, will discuss her career path from geologist/micropaleontologist to UCMP director of education and she will also discuss best practices for attracting underrepresented students to the earth sciences.

Note: All webinars will be recorded and made available for viewing at <http://www.myfossil.org/video-tutorials/>.

(2) From 10am-4pm on May 6th, join the FOSSIL Project and the Florida Fossil Hunters club at the Orlando Science Center in downtown Orlando, FL, for Women in Paleontology Day. Interact with female paleontologists from around the United States, learn about the fossil history of Florida, and participate in fun hands-on activities. Financial aid available for underprivileged students. Contact Eleanor Gardner at egardner@flmnh.ufl.edu for more information.

(3) Are you a K-12 educator looking for ways to incorporate evolution and paleontology into your lesson plans? Contact Jeanette Pirlo, staff member on the FOSSIL Project, for details on how to qualify for your own classroom fossil kit + accompanying lesson plans. Email Jeanette at jpirlo@flmnh.ufl.edu.

Spring 2017
FOSSIL's free Women in Paleo
webinar series

January 25	Tara Lepore, researcher & educator
February 22	Brenda Hunda, museum curator
March 29	Cindy Lockner, amateur paleontologist
April 26	Lisa White, museum director of education

All webinars run from 7-8pm Eastern Time

To attend a webinar,
(1) Navigate to <http://bit.ly/WiPWebinar>
(2) Click "Enter as guest" and enter your FULL NAME
(3) Then click "Enter room." You're in!

Sponsored by: myFOSSIL Paleontological Society

State News in Geoscience Education

If you would like to contribute state news to the next newsletter, please send your geoscience education information and pictures to your state representative, before August 1, using the e-mail address at the end of this newsletter.

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

ALLELE lectures

The University of Alabama's long-running series of lectures on evolution continues this year with presentations on race, education, space science, and many other subjects that have evolutionary components. Information about the entire 2016-2017 series of six lectures, three in the past and three in the future (at the time of writing), can be accessed here. Past lectures can be listened to on iTunes-U.

<http://evolution.ua.edu/2016-17-series.html/>

Fossils of the Black Belt teacher workshop

The Geological Survey of Alabama, Discovering Alabama, the Birmingham Paleontological Society, the Alabama Geological Society, the University of West Alabama, and the Museum of the Black Belt, are collaborating once again to put on a one-day paleontology field workshop for teachers. Last year, we focused on biostratigraphy and lithostratigraphy. This year (October 17, 2017), we return to the same large Cretaceous outcrop to study taphonomy and fossil preservation. Anyone interested can email me, or visit the workshop's Facebook page: <https://www.facebook.com/Fossils-of-the-Black-Belt-690641810945830/>.



Doing biostratigraphy in Cretaceous chalk. Photo by Vicki Lais.

Legacy: Alabama's publicly funded environmental education organization.

Legacy (<http://legacyenvved.org>) sponsors a number of workshops for educators. The most significant is the annual **Mountains to the Gulf Excursion**, an 8-day fieldtrip for educators. Mountains to the Gulf involves various geological educational experiences; from learning about the diverse geology of Alabama to searching for fossils in southern Alabama streams. It is co-led by professional scientists and science educators, focusing on geology, biology, and environmental science.

Legacy gets its money from the environmental car license tags, and last year, fewer tags were sold than in previous years. This forced Legacy to cancel the 2017 Envirobowl, which is an annual environmental trivia contest for students. The Envirobowl is fun, but not a particularly useful learning experience in my opinion. I think the annual field excursion and other workshops are probably more useful to teachers than the competition is to students.

Legacy publishes educational posters and other such publications, which are made available free to Alabama residents. Legacy also provides small grants to teachers and others who use the money for environmental education projects.

SEEPS

The second meeting of the Southeastern Evolutionary Perspectives Society took place in Tuscaloosa, Darwin Day weekend (February 9-11, 2017). Several members of the SE NAGT made presentations there. In fact, there were four talks in a row about trace fossils and evolution. This meeting is mainly an exercise in consilience, in which members of completely different disciplines come together to cross-train on a subject of common interest, in this case, evolution. However, there is also substantial involvement by students, and some on the part of K-12 teachers. I think 40 or 50 people attended the meeting this year. Next year, SEEPS will meet in Savannah, Georgia.

University of South Alabama (report by Doug Haywick)

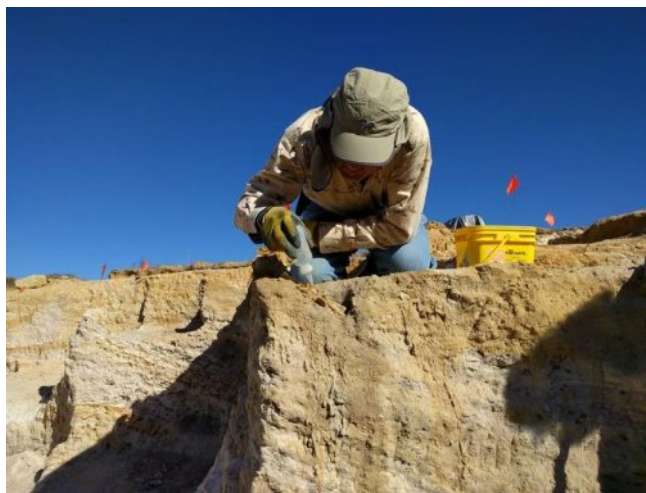
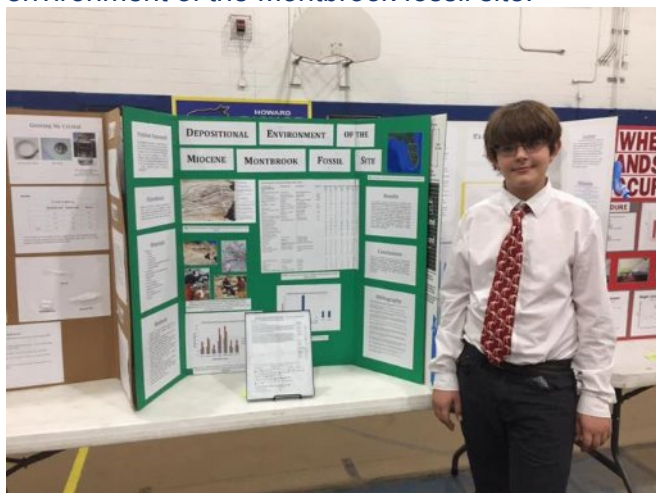
We are looking for two new faculty to replace me and Diana Sturm. Also, the USA chapter of SGE is about to send out mineral collections to every public middle and high school in the 7 county service area of USA.

Florida (submitted by Eleanor Gardner, SENAGT Secretary)

The GABI-RET Project (Great American Biotic Interchange | Research Experiences for Teachers), headquartered at the Florida Museum of Natural History, held its project wrap-up meeting and final field experience for teachers in December 2016 at the Montbrook dig site near Williston, FL. Teachers, among them Megan Higbee Hendrickson from the Academy of the Holy Names in Tampa, found lots of gomphothere material.



In January, seventh grader Aidan Bloch won third place at the Alachua County Regional Science and Engineering Fair in the Earth & Environmental Sciences division for his project on the depositional environment of the Montbrook fossil site.



Over Spring Break, the Florida Museum is bringing K-12 educators from around the United States to gain paleontological field experience at the Montbrook dig site. Although all slots for this particular trip are full, if you are a Florida resident, you can volunteer for a variety of other weekend dates from now through May at the site – contact Rachel Narducci at rnarducci@flmnh.ufl.edu for more details.

Georgia (submitted by Christy Visaggi, SENAGT President)

Paleontology group inaugurated in January

On Saturday, January 28, 2017, over sixty Georgians met for two hours at the Macon Museum of Arts and Sciences with the intention of establishing a new Paleontological Association of Georgia. Ages from 8 to 80 attended and the crowd included: a healthy dose of college students, faculty and staff from at least six universities, highly seasoned professional researchers, editor of The Georgia Journal of Science, staff from four science or natural history museums, public school educators, some of the most respected and experienced amateurs in the state, and folks who had a general interest in paleontology.

The Paleontological Association of Georgia (or PAG, although it does not have an official title yet) is a scientific, non-profit, community-based organization devoted to the study of Georgia's natural history. PAG's mission is to preserve Georgia's paleontological resources for education, future research, and generations to come. We are in the process of establishing PAG's next meeting and association structure. For anyone interested in PAG please contact Ashley Quinn at ashley.quinn@gcsu.edu. To stay informed of updates regarding the group, you can also join or learn more at the Facebook group for [Georgia's Fossils Group](#) on Facebook.

- Ashley Quinn, Natural History Collections Manager, Georgia College, Milledgeville

Atlanta Science Festival

The 2017 Atlanta Science Festival will be held from March 14-25, and at the launch you'll find astronaut Captain Mark Kelly who will be sharing his story about working with NASA and experiments in space! Last year over 100 events attracted 35,000 people to Atlanta to celebrate science. This year events of interest in geosciences include geology hikes at Stone Mountain, a walking tour of building stones downtown, a starry evening at Hard Labor Creek Observatory, comparative planetology in studying the science behind Star Wars, and a NASA workshop exploring rocks and soils of the Earth, Moon, and Mars and details on the upcoming Solar Eclipse.

Georgia Science Teachers Association

The Georgia Science Teachers Association (GSTA) hosted nearly 1700 K-12 science educators for its annual professional learning conference last month in Stone Mountain. Attendees took advantage of

250 sessions that focused on Georgia's new science standards, STEM, literacy, and other important topics. Participants could also attend socials that included a geology and fossils night and field trips that included geology hikes around Stone Mountain. Learn more about GSTA and its upcoming events here: www.georgiascienceteacher.org.

Next year, GSTA will not be held separately as the national conference for NSTA will be in Atlanta! Conference dates are March 15-18, 2018, and be sure to get in your proposed session early as the deadline is this April 17, 2017.

National conferences may have over 10,000 attendees, 1200 sessions, and 400 exhibits! If you're new to attending the annual NSTA meeting, you can visit this link for more information on how best to prepare for the conference and maximize your experience

(<http://www.nsta.org/conferences/newcomers.aspx>). To submit a session proposal, see here: <http://www.nsta.org/conferences/sessions.aspx>. Hope to see you next March in Atlanta!

Louisiana (Submitted by Wendy Demers, state representative)

20th Louisiana Environmental Education Symposium

Participants learned details about 28 species of endangered animals in Louisiana at the 20th Environmental Education Symposium on February 3rd and 4th at the Embassy Suites in Baton Rouge. The symposium's theme was "Protecting Louisiana's Endangered Species" and is sponsored by three state organizations: Louisiana Department of Wildlife & Fisheries (LDWF), Louisiana Environmental Education Commission (LEEC), and Louisiana Environmental Education Association (LEEA). Shell Oil Company also sponsored the symposium.



Right: *Whooping Crane has been hatched in Louisiana after a 75 year absence.*

Exploring the Deep Ocean with NOAA

"Exploring the Deep Ocean with NOAA" will be held at Audubon Aquarium of the Americas in New Orleans on Saturday, April 1, from 8 AM – 4PM. Educators of 6th - 12th grades are invited to join NOAA and Audubon Staff at to learn more about the importance of ocean exploration and the current technologies used to explore the deep ocean. The workshop will introduce standards-based, hands-on activities and other online resources that guide classroom teaching and learning. Lessons can be scaled down to suit educator needs. Ocean health, unique underwater habitats, underwater mapping and remotely operated vehicles are just a few of the topics to be addressed.

Registration is required and space is limited. Educators will receive the NOAA Ship Okeanos Explorer Education Materials Collection Volumes 1 & 2, additional resources, a certificate of participation, continental breakfast and lunch, and a **\$75 stipend** for full participation in the workshop.

For more information and to register, please contact Stephanie Smith at educationprograms@auduboninstitute.org or 504-378-2639.

ArcGIS ONLINE US School Competition: "Let's stand our ground by marking it down."

WHO: ESRI is the world's leader in the field of Geographic Information Systems (GIS). They meld maps with data to visualize the world in smarter ways, revealing patterns and relationships that may otherwise go unnoticed.

WHAT: Across the U.S., high school and middle school students are exploring their world and creating interesting map products with ESRI's professional level software, ArcGIS Online. ESRI now challenges students to create and share maps about something in their home states.

The ArcGIS Online US School Competition 2017 is open to high school (gr.9-12) and middle school (gr.4-8) students in the U.S who can analyze, interpret, and present data via an ArcGIS Online presentation, web app, or story map.

WHEN: January 2017: Contest opens. May 2017: Contest closes.

AWARDS: ESRI offers grants to states supporting ten equal prizes of \$100 for the five best high school and five best middle school projects in the state. Schools can submit up to five projects to the state, and participating states submit to ESRI the ten awardees (5-HS and 5-MS), with one project each at high school and middle school tagged for a final level of competition.

One high school project and one middle school project will earn a trip to the 2017 ESRI Education Conference in San Diego, CA.

Want to know more? Contact Louisiana Science Teachers Association for the application and additional information. <http://www.lsta.info>

New Science Standards in the Works for Louisiana

Louisiana is in the process of updating our state science standards, with particular attention to the issues facing our coastal communities and those communities affected by natural disasters.

Nathan Cotten, Louisiana Science Teacher Association president, states: "Revising Louisiana's science standards will allow teachers to prepare students for 21st century issues. New standards will not only allow teachers to inform students of our local issues such as land loss, hurricanes, and flooding, but develop students thinking to design solutions or systems to adapt to these problems."

Mississippi (Submitted by Adam Skarke and Renee Clary, Mississippi State University, state representatives)

Mississippi State University

- **Earth Day:** The Dunn-Seiler Museum, in partnership with Gaining Ground Sustainability Institute of Mississippi, is sponsoring a competition to promote awareness of the volume of cardboard that the US produces and discards. Mississippi's K-12 students are invited to design and submit an original, unique item constructed from cardboard that will otherwise be recycled or discarded. **Entries are due April 15th, 2017.** The contest description can be found on the Dunn-Seiler Museum website at <http://www.geosciences.msstate.edu/dunn-seiler-museum/>.

The 2016 Earth Day event focused on promoting awareness of waste generated by plastic water bottles. Four first place winners were selected in 2016: **Aiden Alford** (elementary), **Artavia Watts** (upper elementary), **Jada Smith** (7th grade), and **Breanna King** (8th grade).

Right: Amy Moe-Hoffman, Dunn-Seiler Collections Manager, and Moe Testa, graduate student, display some of the winning entries of the 2016 Earth Day competition at the Mississippi State University Earth Day celebration.



- **Darwin Week:** February 12-18. Daily events recognized the life and work of Charles Darwin. Scheduled events offered programming relevant to diverse audiences, highlighting some exciting new advances in science that have built upon Darwin's ideas and addressing such topics as the evolution of diseases and the importance of preserving biodiversity. Darwin Week was cosponsored by the Department of Biological Sciences and the Department of Geosciences at Mississippi State University. A full list of Darwin Week 2017 events can be found at this link: <http://www.geosciences.msstate.edu/sites/www.geosciences.msstate.edu/files/Darwin2017.jpg>

- **National Fossil Day:**



The Dunn-Seiler Museum celebrated National Fossil Day by moving our *Triceratops* and hosting Fossil Extravaganza. Winning entries of the Fossil Art and Story contest are currently on display.

Left: *Tammie Bright, Yazoo County Middle School teacher, brings National Fossil Day entries to the Dunn-Seiler Museum.*

Mississippi Museum of Natural Science Teacher Workshops

Museum staff provide training in internationally recognized environmental education programs for teachers. These programs can be conducted for teachers of all subjects and grade levels either in your school or at the Museum. More information can be found here: <http://www.mdwfp.com/10478>

North Carolina (submitted by Randy Bechtel, N.C. Geological Survey, State Representative)

March 31 OEST/ ESE deadline

The N.C. deadline to nominate for Outstanding Earth Science Teacher (OEST) and Educator (OESE) Awards is March 31, 2017!

The Nomination Form and any supporting material need to be received by Randy Bechtel by March 31, 2017. The Nomination Form can be found at the bottom of this link (or google NC Geoscience Education): <http://deq.nc.gov/about/divisions/energy-mineral-land-resources/north-carolina-geological-survey/geoscience-education/outstanding-educators-awards>

To see previous winners and find out more about the awards (or google NC Geoscience Education): <http://deq.nc.gov/about/divisions/energy-mineral-land-resources/north-carolina-geological-survey/geoscience-education/previous-nc-outstanding-earth-science-teacher-outstanding-earth-science-educator-award-winners>

Professional Development Institute October 19-20 in Greensboro

The North Carolina Science Teachers Association Professional Development Institute (NCSTA-PDI) – www.ncsta.org – will be held October 19-20, 2017 at the Koury Convention Center in Greensboro, NC

The theme this year is "Modeling STEM: Ingenuity at Work!" – Improving Science knowledge with three strands:

Strand 1: "Mastering science material through technology and innovation" will consist of promoting the best science classroom practices through technology.

Strand 2: "Science review & test-taking strategies: break through to excellence" will focus on improving learning content material

Strand 3: "The science of design: Modeling past, present and future" will provide teachers with ways to incorporate different representations of science through hands-on learning.

We will also be offering our annual Literacy Workshop. More details coming soon.

First Grade Science Day!

This event was part of an elementary science event for all grades in a school. I was asked to present to four first-grade classes. This was just such a fun day that I decided to include a brief description of the activity and a couple of pictures. The main activity was a Rock Sort. I have an assortment of samples to exhibit a variety of textures, colors, lusters, and, yes, sample sizes for the students to experience. The students made their own rules to separate the group of rocks (and minerals) into two groups. They had the opportunity to do the activity two times and then ask questions about the rocks. I had a few other samples to extend the conversation (i.e. pumice to float, mica in toothpaste, etc.). They asked great questions and were enthusiastic.



First graders, working in groups of four, sorting rock samples

Captain James Lovell to speak at North Carolina Science Festival, April 7-23

The North Carolina Science Festival (www.ncsciencefestival.org) is an initiative of Morehead Planetarium and Science Center at the University of North Carolina at Chapel Hill. The Festival is a multi-day celebration showcasing science and technology. It highlights the educational, cultural and financial impact of science in our state. Through hands-on activities, science talks, lab tours, nature experiences, exhibits and performances, the Festival engages a wide range of public audiences while inspiring future generations. This event offers an opportunity to celebrate science in fun and welcoming settings. It provides the opportunity to cultivate a positive environment which encourages children to pursue science-related careers and encourages businesses to invest in North Carolina.

Between 1959 and 1975, Morehead was called to serve not only the people of North Carolina but also the nation's burgeoning space program. During this time, nearly every astronaut who participated in the Mercury, Gemini, Apollo, Skylab and Apollo-Soyuz programs trained at Morehead in star navigation. Now, the time-honored hero who actually put that knowledge to work in his calm and careful command of Apollo 13 in 1970 is coming back to UNC-Chapel Hill to share his wisdom and stories at a one-time event at Memorial Hall.

Capt. James Lovell stoically articulated the five-word message, "Houston, we have a problem," which quickly became part of the American lexicon. Through teamwork and decisive leadership, Lovell and his crew modified the lunar module into an effective lifeboat to safely return to Earth. As captain, he was

thus transformed into a national hero who has since attracted generations of followers. During his career, Lovell accumulated over 7,000 flight hours, including 4,500 in jet aircraft, 713 in space and 107 carrier landings. He received numerous medals and awards, including the Congressional Space Medal of Honor, Presidential Medal of Freedom, Navy Distinguished Service Medal, two Navy Distinguished Flying Crosses, NASA Distinguished and Exceptional Service Medals and the French Legion of Honor.

Puerto Rico (State Representative position open)

South Carolina (submitted by Christy Visaggi, SENAGT President, and Bill Witherspoon, editor)

South Carolina Geographic Alliance

The South Carolina Geographic Alliance has created online modules to supplement the *Atlas of South Carolina*, including a focus on landforms, hurricanes, earthquakes, and tornadoes. Visit the following website to see a preview and place an order for student access: <http://www.scgeo.org/atlas-sc-modules/>. In addition, educators might be interested to know about the Geographers in the Field Institute offered by SCGA in June. See here for more information on the geography and geospatial content to be featured at the summer institute and to register <http://www.scgeo.org/wp-content/uploads/2016/10/ASGI2017Application.pdf>.

“Lunch and Learn at Congaree” April 5, and beyond

Congaree National Park is hosting monthly lunch and learn programs. The goal is to build community and understanding of this special place by inviting park staff, VIPs, partners, and visitors to a series of monthly, semi-formal, 1-hour presentations on a wide range of topics. Topics may include cultural and natural “CongaReeSource” overviews; “CongaReeSearch” results; Congaree history, art, and culture; park operations; connections with partner sites across the NPS; partner programs; and more. These programs are free and open to the general public.

Please note that these are “Bring Your Own Lunch” (BYOL) events. The programs are held from 12:30-1:30 in the Harry Hampton Visitor Center Auditorium at Congaree National Park. Following are the events already on the 2017 calendar.

April 5: Contaminants of Emerging Concern in Cedar Creek!

Dr. Paul Bradley, with the USGS South Atlantic Water Science Center in Columbia, will return with an update on a multi-year project to study contaminants of emerging concern--pharmaceuticals and industrial chemicals--at Congaree National Park. The final publication is almost ready for release.

May 3: Congaree Maroon Communities!

Congaree NP interpretive superstar Jon Manchester will share his research into the history of maroon communities. The Congaree floodplain has served many purposes over many centuries, but one of the most important was a place of refuge for slaves seeking freedom from bondage. Come learn about these fascinating stories of courage and resilience.

June 7: South Carolina's Freshwater Mussels - a Hidden Treasure!

Morgan Wolf, with the US Fish and Wildlife Service, will come discuss freshwater mussels, which are considered by many scientists to be the most imperiled faunal group in the country. Many species have already gone extinct, and many others are experiencing sharp declines. South Carolina is home to 32 species of native freshwater mussels, including one federally endangered species. This presentation will cover basic mussel biology and ecology before discussing efforts underway to protect and restore populations, including recent work at Congaree National Park.

August 2: Congaree Eclipse!

Dr. Steve Rodney, Assistant Professor in the Department of Astronomy and Physics at USC, will come help us get ready for the Eclipse on August 21.

September 6: Perspectives in Wilderness!

Dr. Tom Lekan, Associate Professor of History at USC, will come share some insights from his work—in coordination with the Old-Growth Bottomland Forest Research and Education Center—to understand how Southern environmental history shapes our diverse perceptions and experiences of Wilderness.

Contact David Shelley (david_shelley@nps.gov, 803-647-3966) or the front desk at the Harry Hampton Visitor Center (803-776-4396) with any questions.

Tennessee (submitted by Michael A. Gibson, University of Tennessee at Martin, and Ann E. Holmes, University of Tennessee at Chattanooga, State Representatives)

Tennessee Earth Science Teachers (TEST)

The TEST convened a reorganization meeting in conjunction with the Tennessee Science Teachers Association annual meeting in Murfreesboro this past November. During that meeting, two new higher education advisors were elected to the Board: Dr. Wayne Leimer from Tennessee Tech and Dr. Lan DePriest from UT Martin. Congratulations! At this same meeting, Jackson Tennessee South Side High School teacher, and current TEST president John Griffin was awarded the Tennessee Outstanding Earth Science Educator for 2016. TEST officers will be scheduling a “gathering” for this June to set plans for the Fall TSTA meeting sessions. For more information regarding the Fall meeting visit the TSTA website: <http://www.tsta.wildapricot.org/>. For more information about TEST visit them on Facebook: <https://www.facebook.com/tennesseearthscienceteachers/>.

Science Saturday at the Discovery Park of America

The Discovery Park of America in Union City has instituted a new program aimed at introducing science to middle school age kids. One Saturday each month a different science is highlighted with demonstrations and activities designed by professors and student groups from UT Martin. Two geology programs are slated with the March 18th program focusing on volcanoes. Dr. Stan Dungan (UT Martin) will be demonstrating volcanic eruptions on the DPA grounds using a 55 gallon container that erupts several meters into the air...always a crowd pleaser. The second geology program will coincide with Earth Science Week in October. For more about the geology exhibits and programs at the Discovery Park of America visit: <http://www.discoveryparkofamerica.com/>.

Coon Creek Science Center 2017 Season Begins

The Coon Creek Science Center, located in McNairy County begins its 2017 season in March. The site is the home of the Late Cretaceous Coon Creek Formation, which contains hundreds of fossil species, including the State Fossil of Tennessee (*Pterotrionia thoracica* –[a bivalve – ed.]), mosasaurs, sharks, bivalves, gastropods, turtles, and much more (<http://www.memphismuseums.org/coon-creek-science-center/>). Groups are encouraged to attend and can receive programs through the Pink Palace Museum, located in Memphis. For more information on day programs or to schedule a visit contact: <http://www.memphismuseums.org/>. Though a long-standing agreement with UT Martin, university groups can arrange overnight visits. For information on an overnight university visit, contact Michael Gibson at UT Martin (mgibson@utm.edu; 731.881.7435).

Your SE NAGT State Representatives

Alabama

David Kopaska-Merkel
Geological Survey of Alabama
P.O. Box 869999
Tuscaloosa, AL 35486-6999
dkm@gsa.state.al.us
(205)247-3695

Florida

Eleanor E. Gardner
Florida Museum of Natural
History
3215 Hull Road
Gainesville, FL 32611-2710
egardner@flmnh.ufl.edu
(352)273-1936

Kim A. Cheek
Department of Childhood
Education, Literacy, and
TESOL
University of North Florida
1 UNF Drive
Jacksonville, FL 32224
k.cheek@unf.edu
(904)620-2794

Georgia

Kathlyn M. Smith
Curator of Paleontology
Department of Geology and
Geography
Georgia Southern University
ksmith@georgiasouthern.edu

Pamela Gore
Perimeter College of Georgia
State University
555 North Indian Creek Drive
Clarkston, GA 30021
pgore@gsu.edu
(678)891-3754

Louisiana

Wendy DeMers
6072 Louisville St.
New Orleans, La. 70124
2ydnew2@gmail.com
(504)218-4787

Mississippi

Renee M. Clary
Department of Geosciences
Mississippi State University
RClary@geosci.msstate.edu
(662)268-1032, x 215

Adam D. Skarke
Department of Geosciences
Mississippi State University
adam.skarke@msstate.edu
(662)268-1032, x 258

North Carolina

Randy Bechtel
NC Geological Survey
Division of Land Resources,
1612MSC
Raleigh, NC 27699-1612
Randy.Bechteln@ncdenr.gov
(919)707-9402

Puerto Rico

open

South Carolina

Gwen M. Daley
Dept. of Chemistry, Physics and
Geology
Winthrop University
Rock Hill, South Carolina 29731
daleyg@winthrop.edu
(803)323-4973

Tennessee

Michael A. Gibson
Dept. of Agriculture,
Geosciences, and Natural
Resources
University of Tennessee at
Martin
Martin, TN 38238
mjgibson@utm.edu
(731)881-7435

Ann Holmes
Dept of Physics, Geology and
Astronomy
Univ. of Tennessee at
Chattanooga
Chattanooga, TN 37403
Ann-Holmes@utc.edu
(423)425-1704