

Atlanta Geological Society Newsletter

Next meeting of the Atlanta Geological Society is
January 29, 2013

Fernbank Museum of Natural History (Clifton Road)
Social begins at 6:30 pm – Meeting begins at 7:00 pm

January 2013

ODDS AND ENDS

Ben Bentkowski, Newsletter Editor

On January 16, the geology word of the day was **dysgeogenous** (dys-ge-og'-e-nous). A geologist friend of mine sent me a link to a geoword of the day put out by the American Geosciences Institute (AGI). The definition of **dysgeogenous** is: not easily weathered; said of a rock that produces by weathering only a small amount of detritus. Ant: *eugeogenous*. The reason Ralph Howard sent me the link is because he had given me a piece of amphibolite collected in Sweden and he believed it met this definition. The AGI goes through the Glossary of Geology and puts up a new GeoWord of the Day. You can click on www.agiweb.org/word to subscribe or unsubscribe. I got a copy of the Glossary of Geology as an anniversary present 10+ years ago. Today's word is lowlands, not particularly challenging. I do find that when I consult the Glossary, I'm going to learn something interesting.

Speaking of interesting, I would like to focus on something that should interest all members of a Society; membership. At the recent annual Executive Committee meeting Nils Thompson challenged us to focus on the benefits of AGS membership. Included on **PAGE 2** is the product of our brainstorming. This list of 10...

Continued on Page 3

JANUARY MEETING

Join us Tuesday, January 29, 2013 at the Fernbank Museum of Natural History, 760 Clifton Road NE, Atlanta GA. The meeting social starts at 6:30 pm. The speaker will be Fletcher Harris from Atlanta Gas Light, and he will be giving a talk on what to do should a gas line be hit during intrusive activities (digging, drilling, etc.). He will outline who needs to be notified, and the proper order of events that should take place. Obviously, the "call before you dig" policy is emphasized, but occasionally unforeseen things happen. Please come out for an interesting talk this Tuesday, January 29th and support our sponsor; Tony Trettel of Drilling Solutions, Inc.

Additionally, on Saturday January 26th, the PG Study Class at the Fernbank Science Center will feature Dr. Jim Kennedy Topic: Geohydrology and Contaminant Transport.

BENEFITS OF AN AGS MEMBERSHIP

- Location – AGS meets at the Fernbank Museum of Natural History, which is a truly awesome facility central to most of our membership.
- Cost – AGS membership (\$25 general; \$10 student) is the most inexpensive for any geological society in the SE.
- Active – AGS holds nine lectures a year and is one of the most active geological societies in the SE.
- AEG – For one of our lectures, AGS co-sponsors with the Association of Environmental & Engineering Geologists to annually present the “Richard H. Jahns Distinguished Lecturer” while in Atlanta.
- PDH – AGS is recognized by Alabama, South Carolina, and other professional state boards to provide Professional Development Hours for our lectures, as well as field trips and workshops.
- PG Classes – AGS offers nearly monthly Professional Geologist development training classes in preparation for passing the ASBOG examinations and has been recognized by the Georgia State Geologist as enhancing PG test scores for participants.
- Free Food – AGS offers free pizza and Coke at all of our regular meetings, sandwiches and hors d’oeuvres at the Jahns lecture, and a sit-down BBQ dinner at our June social.
- IMAX – As part of the June social, AGS and Fernbank present a free IMAX movie.
- Networking – AGS meetings include professionals, academics, regulators, and others who all share the same interest in geological sciences.
- Resume – AGS membership and even involvement in one of our many committees will enhance any resume.

Annual membership dues for the Atlanta Geological Society are \$25 for professional membership, \$10 for students, and \$100 for corporate sponsorship (which includes up to 4 professional memberships). Please complete the [application form](#) and submit with your payment to the AGS Treasurer. For further details about membership, please contact the AGS Membership Chairman – Ben Bentkowski
cell -770-296-2529 BBENTKOW@gmail.com

ODDS AND ENDS continued

...tangible benefits do make a compelling case for membership. First on the list is the location, the Fernbank Museum. I confess that every time I walk into the atrium, I pause and take in the wonder of the dinosaurs. I especially like the flock of Pterodactyls and the one roosting in the rafters. One more philosophical benefit not listed is that of membership in a scientific society. While the AGS is not the most rigorous academic organization, the meetings are a place to gather and share ideas about geology.

One corollary idea is that the more members there are, the greater the chance of exchange of interesting ideas. This is membership season; time to expand our membership rolls, time to pay our dues and make a commitment to attend those Tuesday night meetings. But beyond the personal commitment, I encourage you to talk to your fellow geologists that are now currently members. Print a copy of the newsletter to give to them or email it to them. Talk up the benefits of membership. Bring them with you on the 29th. Expanding the membership rolls of the AGS is a good thing; good of the Society and good for the members. As it is said, the more, the merrier. .

I may be a little late Tuesday as I will be coming back from a trip but I'll see you on the 29th.
Keep on Rockin'
Ben Bentkowski
Newsletter Editor

JANUARY 2013 AGS SPONSER

Drilling Solutions, Inc.

Drilling Solutions, Inc. is a geotechnical/environmental drilling company that has been serving the Atlanta area and the southeastern US since 1994.

Our drill shop is located in Canton, Ga., and our capabilities include direct push, hollow stem auger and most all areas of rotary drilling with experienced, personable crews.

You can call on us for both large and small projects. We look forward to hearing from you!

Contact us at:

Drill shop: 678-493-8411 Tony Trettel direct: 770-401-7592

E mail: drillingsolutionsinc@yahoo.com

Website: www.drillingsolutionsinc.com

Thanks, Tony!

FOLLOW US ON FACEBOOK !

<http://www.facebook.com/pages/Atlanta-Geological-Society/144629285628108>

Please welcome Carina O'Bara, AGS's new Social Media Coordinator. She has been an active member of AGS for almost 4 years. She is currently a graduate student at Georgia State working on a Master's degree in Geology, planning on graduating in December 2013.

As part of the Executive Committee emphasis on communicating with the members, Carina volunteered to be our Social Media Coordinator. The roll is not fully defined as of yet. Kind of like the AGS Facebook page. Yes, we do have a Facebook page. Our 'likes' number well into the tens. Clearly, we need to do better and Carina just the person to help us out. She is excited to be a part of the AGS executive committee. If you can help her out in this new volunteer assignment, please contact her.

Carina O'Bara email: carina_do@yahoo.com

AGS Members... Geology Enthusiasts Needed!!

If you are an AGS member and would like to contribute to the Professional Registration Committee by leading a lecture on one of the subjects listed below, then please contact me either by e-mail or at the monthly AGS meetings. The lecture should be for one hour followed by a Q&A session. We need different speakers for each workshop. Your volunteering to teach on one of these subjects is essential to the success of the Professional Registration Committee – we need more widespread participation by the AGS membership. Speakers can be compensated for expenses and will receive certificates to acknowledge their participation.

The following content domains are covered in the Georgia Professional Geologist exams:

- | | |
|---|---|
| A. General Geology | B. Mineralogy, Petrology, & Petrography |
| C. Sedimentology, Stratigraphy, & Paleontology | D. Economic Geology & Energy Resources |
| E. Structure, Tectonics, & Seismology | F. Hydrology & Environmental Geochemistry |
| G. Engineering Geology | |
| H. Quaternary Geology, Geomorphology, & Surficial Processes | |

We do not "teach the test" our aim is to review fundamental concepts of the earth sciences and acquaint candidates with industry specific information not easily obtainable from the literature. Please inform anyone who might be interested in becoming a professional geologist of our workshop. Please consider joining us even if you are not a P.G. candidate. The workshops are interesting and informative.

Ken Simonton, P.G., Chair
Professional Registration Committee

www.atlantageologicalsociety.org

Rheic suture where Gondwana and North America converged discovered in Mexico

Acatlán Complex, southern Mexico: Record spanning the assembly and breakup of Pangea
[R. Damian Nance*1](#), [Brent V. Miller2](#), [J. Duncan Keppie3](#), [J. Brendan Murphy4](#) [Jaroslav Dostal5](#)

[+Author Affiliations](#)

Abstract

New structural, geochronological, and geochemical data from the Acatlán **Complex** of southern Mexico show that it preserves a complete history of Pangea, from assembly to breakup. Previously interpreted to be a vestige of the Iapetus suture, the Acatlán **Complex** records a history that can be sequentially linked to the Rheic Ocean, the paleo-Pacific, and the Gulf of Mexico. This record is interpreted to reflect: (1) the development of a rift-passive margin on the southern flank of the Rheic Ocean in the Cambrian–Ordovician; (2) the formation of an extensional regime along the formerly active northern margin of Gondwana throughout the Ordovician; (3) closure of the Rheic Ocean documented by subduction-related eclogite facies metamorphism and exhumation during the Late Devonian–Mississippian; (4) Permian–Triassic convergent tectonics on the paleo-Pacific margin of Pangea; and (5) interaction with a Jurassic mantle plume coeval with the opening of the Gulf of Mexico.

<http://geology.gsapubs.org/content/34/10/857.abstract?sid=8d51cf4c-0099-48ed-b97d-5a9926300016>

Also recommended is the similar story reported in Science Daily. Ohio University (2006, November 17). Geologists Find New Origins Of Appalachian Mountains. *ScienceDaily*. Retrieved January 21, 2013, from <http://www.sciencedaily.com/releases/2006/11/061117123212.htm> There you will find this figure:



In this graphic, "Laurentia" represents Laurussia in one stage of the continent shift. (Art by: Christina Ullman) (Sorry it was not scalable)

Many of us tend to be well aware of the eastern US geology. This is an extension of the knowledge of our central geologic event, the forming of the Appalachian Mountains.

AGS PG Candidate Workshop

The Atlanta Geological Society PG Candidate Workshop is normally held the last Saturday of each month from 10:00 am to 12:00 pm at the Fernbank Science Center. The Science Center is located at 156 Heaton Park Drive, N.E. Atlanta, GA 30307, and is about a mile north of the Fernbank Science Museum. For more information about the Science Center, go to <http://fsc.fernbank.edu/> or call 678-874-7102.

Please Note: check the calendar as the class dates and time may vary due the availability of classrooms, instructors, holidays, etc. We also meet at the Tellus Science Museum in Kennesaw, GA once a year.

Next Class: **Date:** **January 26, 2013** **Time:** **10:00 am to 12:00 pm**
Venue: **Fernbank Science Center Annex**
Speaker: **Jim Kennedy, PhD, PG**
Subject: **Geohydrology and Contaminant Transport**

The subject of the workshop will be groundwater hydrology and contaminant transport. The presenter will be Dr. James Kennedy, Ph.D., P.G. Dr. Kennedy is the State Geologist of Georgia and holds B.S. and M.S. degrees in physics and geophysical sciences from Ga Tech. His Ph.D. in geology is from Texas A&M University where he did research on reclaimed lignite mines. As State Geologist, Dr. Kennedy has worked on the Coastal Sound Science Initiative to manage salt-water intrusion into the Upper Floridan aquifer, permitting of coastal groundwater supply wells, and the State Water Plan. He also has provided expert testimony for the Office of State Administrative Hearings in support of landfill, quarry, and water withdrawal permits issued by the Georgia Environmental Protection Division. Prior to joining the EPD, Dr. Kennedy worked as a consultant and conducted engineering geology, groundwater supply, and environmental remediation projects in various areas of the United States and Europe.

Please join us, two Professional Development Hours are available for attendees of the class. The classes are open to all, membership in the AGS is not required, but for \$25 per year (\$10 for students) it is quite a bargain! Please consider joining. The AGS is one of the most active geological organizations in the Southeast.

Atlanta Geological Society

Professional Registration/Career Development Committee

Coordinated by: Ken Simonton & John Salvino

NEGATIVE DEGREES KELVIN?

As part of an infrequent series of amazing non-geologic stories comes the news of the physicists who say they have observed temperatures beyond absolute zero. From the website <http://news.discovery.com/earth/record-temperature-set-colder-than-absolute-zero-130104.htm> comes this:

Bizarro Negative Temperatures To comprehend the negative temperatures scientists have now devised, one might think of temperature as existing on a scale that is actually a loop, not linear. Positive temperatures make up one part of the loop, while negative temperatures make up the other part. When temperatures go either below zero or above infinity on the positive region of this scale, they end up in negative territory. With positive temperatures, atoms more likely occupy low-energy states than high-energy states, a pattern known as Boltzmann distribution in physics. When an object is heated, its atoms can reach higher energy levels. At absolute zero, atoms would occupy the lowest energy state. At an infinite temperature, atoms would occupy all energy states. Negative temperatures then are the opposite of positive temperatures — atoms more likely occupy high-energy states than low-energy states. "The inverted Boltzmann distribution is the hallmark of negative absolute temperature, and this is what we have achieved," said researcher Ulrich Schneider, a physicist at the University of Munich in Germany. "Yet the gas is not colder than zero Kelvin, but hotter. It is even hotter than at any positive temperature — the temperature scale simply does not end at infinity, but jumps to negative values instead."

Editorial: Herr Doktor Boltzman does not look like the kind of man who would entertain the concept of negative degrees Kelvin. He looks like he is straight out of central casting for a 19th Century scientist. Perhaps these German researchers have gone through the looking glass and found the back side of the Mobius strip. Or maybe it is another discovery in the realm of cold fusion. Perhaps physics is really philosophy, a construct of the human mind.

LUDWIG BOLTZMAN



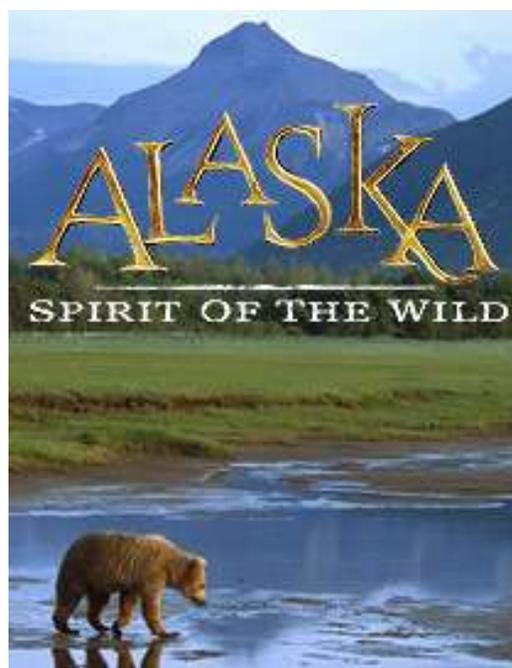
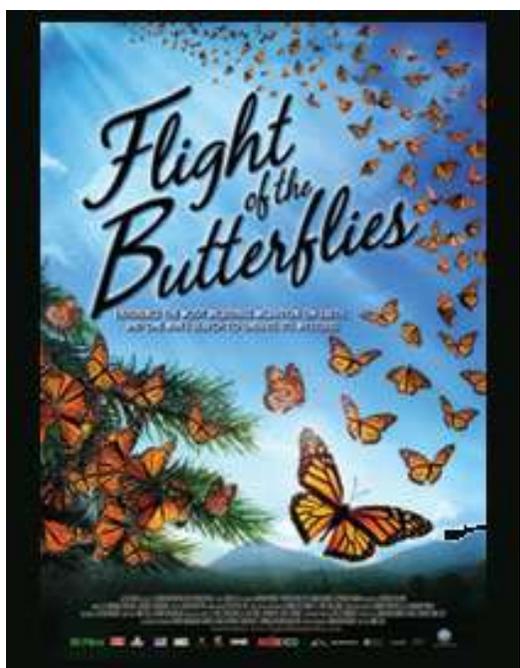


Fernbank Museum of Natural History

Upcoming Public Programs and Events

(All programs require reservations, including free programs)

Now Showing in the Fernbank IMAX movie theater:



[Flight of the Butterflies](#) Now showing through May 9, 2013

Enter the enchanting world of monarch butterflies, interweaving the story of their annual migration with the moving human story of the decades-long search for their winter home. Soar a mile high alongside one of the greatest spectacles of the natural world, as half a billion Monarch butterflies head south on an epic three thousand mile journey.

[Alaska: Spirit of the Wild](#) Now showing through March 14, 2013

Experience the ultimate story of survival, where life triumphs season after season against fierce conditions and challenges. Witness the spirit of the wild in the thundering stampede of the caribou, the beauty of the polar bear, and the deadly hunt of the wolf pack. This film is about the majesty and uniqueness of wild Alaska, and about the resiliency of life itself.

Fernbank Museum of Natural History

767 Clifton Rd, NE, Atlanta, GA 404-929-6400

Special Exhibits On View: <http://www.fernbankmuseum.org/explore-exhibits/special-exhibitions>



Extreme Mammals Opens March 2, 2013

Examine some of the oddest and most intriguing animals of all time in ***Extreme Mammals: The Biggest, Smallest, and Most Amazing Mammals of All Time.***

From the speedy to the slothful, the towering to the tiny, and the furry to the armor-clad, come nose-to-snout with an amazing array of extraordinary critters. Stand beneath the largest land mammal that ever lived, and peek at a creature so small that it weighed no more than a dollar bill!

Tickets for ***Extreme Mammals*** are included with Museum admission and are [free for members](#). ***Extreme Mammals*** is sponsored locally in part by The Isdell Family.

For tickets and details on exhibits, films, and events, please visit the website at www.fernbankmuseum.org Follow us on Facebook or Twitter for the latest news and updates! Please see the website for details about Martinis and IMAX on Friday nights.

The mysterious announcement set for November 16 was the launch of the new Fernbank Meridian app. Based upon the Apple OS, this app works in conjunction with the free in the building wi-fi to provide more detailed information about the permanent exhibits, the new exhibits and IMAX schedules. Also it utilizes an indoor-location awareness technology to provide turn-by-turn directions to visitors. A quick and easy way to find an exhibit, restroom or vending machine. All aimed at making your visit to the Fernbank more informative and enjoyable.

AGS Officers

President: Nils Thompson

nils.thompson@erm.com

Phone (678) 486-2766

Vice-President: Cassidy Evans

Phone (770) 492-8230

ceevans@golder.com

Secretary: Rob White

Phone (404) 321-5399

robeth@bellsouth.net

Treasurer: Stacey Durden-Phillips

stacy.durden@gmail.com

AGS 2013 Meeting Dates

Listed below are the planned meeting dates for 2013. Please mark your calendar and make plans to attend.

PG Study Class January 26 Dr. Jim Kennedy
Topic: Geohydrology and Contaminant
Transport

January 29 Fletcher Harris, Atlanta Gas Light.

February 26 TBD

March 26 The combined AGS/AEG meeting with the Jahns Lecturer, James McCalpin, president of GEOHAZ Consulting in applied geological consulting for geologic hazards, primarily seismic and landslide hazards. The topic of the lecture has not yet been selected.

April 30 TBD

May 28 TBD

AGS Committees

AGS Publications: Allison Keefer

Phone (404) 657-8642

allison_keefer@dnr.state.ga.us

Career Networking/Advertising: Todd Roach

Phone (770) 242-9040, Fax (770) 242-8388

tdr@piedmontdrilling.com

Continuing Education: Currently Open

Fernbank Liaison: Chris Bean

Phone (404) 929-6313

Chris.bean@fernbankmuseum.org

Field Trips: Josh Jenkins

Phone (770) 421-3412

jljenkins@mactec.com

Georgia PG Registration: Ken Simonton

Phone: 404-825-3439

kws876@gmail.com

Teacher Grants: Bill Waggener

Phone (404)354-8752

waggener80@yahoo.com

Hospitality: Tom Watson

Phone (678) 358-6943

twatson@mindspring.com

Social Media Coordinator: Carina O'Bara

carina_do@yahoo.com

Newsletter Editor and Membership

Ben Bentkowski

Phone (404) 562-8507

bentkowski.ben@epa.gov

Web Master: Kathaleen Bentkowski

kathaleen770@gmail.com

www.atlantageologicalsociety.org

ATLANTA GEOLOGICAL SOCIETY

www.atlantageologicalsociety.org

ANNUAL MEMBERSHIP FORM

Please print the required details and check the appropriate membership box.

DATE: _____

NAME: _____

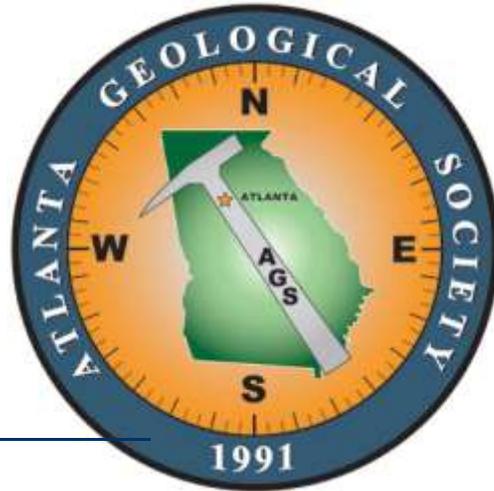
ORGANIZATION: _____

TELEPHONE (1): _____

TELEPHONE (2): _____

EMAIL (1): _____

EMAIL (2): _____



STUDENT \$10

PROFESSIONAL MEMBERSHIP \$25

CORPORATE MEMBERSHIP \$100

(Includes 4 professional members, please list names and emails below)

NAME: _____

EMAIL: _____

NAME: _____

EMAIL: _____

NAME: _____

EMAIL: _____

NAME: _____

EMAIL: _____

For further details, contact the AGS Treasurer: stacy.durden@gmail.com.

Please make checks payable to the "Atlanta Geological Society" and remit with the completed form to:

Atlanta Geological Society, Stacy Durden-Phillips, Treasurer,
2534 Centennial Commons View
Acworth GA 30102.

CASH

CHECK (CHECK NUMBER: _____.)