

Atlanta Geological Society Newsletter

Next meeting of the Atlanta Geological Society is
March 29, 2011
Fernbank Museum of Natural History (Clifton Road)
Social begins at 6:30 pm – Meeting begins at 7:00 pm

March 2011

ODDS AND ENDS

Ben Bentkowski, Newsletter Editor

This month has been full of geologic news. Our hearts go out to the people of Japan but the events such as this seem to generate more information with each passing year. I believe as reporters become more attuned to the geologic reasons behind such disasters, the level of scientific reporting gets elevated. I won't repeat much of great graphics and dramatic images that have filled the media. I will have a bit about water levels. As with the quake in Santiago, Chile, the Japanese land shifted (east this time) some 8 to 10 feet with the released stress.

Each month I snag various interesting bits of geologic flotsam that drift past my computer screen. This month, there are some great photos from within glacial caves, the story of a geologic con man from the late 1800's, a crowdsourced geologic research network, several announcements about an up-coming event by the AIPG, GGWA luncheon, the AGS P.G. Study group and an EPA summer internship.

Read on, fellow geologists. In the mean time, I'm still mending.

Ben Bentkowski
Newsletter Editor.

The March Meeting

Join us Tuesday, March 29, 2011 at the Fernbank Museum of Natural History, 760 Clifton Road NE, Atlanta GA. A light dinner is provided by the AEG/AGS and **Ashtead Technology Rentals** at 6:30 pm and the meeting will start at 7 p.m. This meeting is another in the serried of combined AEG/AGS meetings. The speaker for the evening will be **William C. Haneberg, Ph.D.** His topic of the evening will be "**The Landslide that Ate Laprak**". This story of slope stability in Nepal will no doubt be enhanced with examples of Dr. Haneberg's fine photography.



Please look for details about this lecturer and this lecture elsewhere in the newsletter as well as one of the beautiful photos from his photography website.

The AEG's Jahn's Lecture announcement:
http://www.aegweb.org/files/public/SE_Meeting_032911.pdf

The Landslide That Ate Laprak

Speaker: William C. Haneberg, PhD

Abstract: The Landslide That Ate Laprak

Located in a remote region of western Nepal and 2- to 3-days' walk from the nearest road, the Himalayan village of Laprak is built atop a large landslide that began moving during an exceptionally heavy rainstorm in 1999 and continues to move today. Part travelogue and part technical presentation, this lecture introduces the geologic setting of Laprak and its influence on slope stability, the use of modern technology like digital terrain modeling and finite element simulations to better understand the landslide, the challenges of dealing with geologic hazards in a isolated part of a developing country. It'll also explain why things are more interesting when one shows up in the middle of the local festival.

About the Speaker:

I'm an independent consulting geologist whose clients have included engineering firms, state and federal environmental and natural resources agencies, mining and logging companies, law firms, and private landowners. Most of my work involves earth movements of one kind or another—landslides, rockslides, debris flows, land subsidence, earth fissures, and other geologic hazards—that occur either naturally or as the result of human activities. I also rely on modern tools such as GIS, airborne laser scanning (LiDAR), computer simulations, image processing, and digital photogrammetry to solve practical geologic problems. My field experience includes projects throughout the United States, Papua New Guinea, Nepal, and the Indian Himalaya. If you'd like to see some of the places I've worked and traveled, you're welcome to visit my photography web pages at www.billhaneberg.com. I began my consulting practice in the Seattle area but in mid-2009 moved to Cincinnati, which is one of the most landslide prone cities the United States. I am also an Adjunct Professor of Geology at the University of Cincinnati and a member of the Board of Trustees for The Hillside Trust. Before leaving to establish my consulting practice in 1999, I was Assistant Director and Senior Engineering Geologist with the New Mexico Bureau of Mines & Mineral Resources. I've also worked as a petroleum geologist, and taught as an adjunct professor at New Mexico Tech and Portland State University.



PG Candidate Workshop - March 26, 2011

Benjamin Black, P.G. giving a presentation on engineering geology

The March 26, 2011 Atlanta Geological Society PG Candidate Workshop will feature Benjamin Black, P.G. giving a presentation on engineering geology. The class will cover: Soil Mechanics and Soil Strength Testing (Laboratory and Field Methods), Geologic Hazards (Slope Stability, Earthquakes, etc.), Engineering Geological Mapping, Site Investigation, and time permitting, some discussion on rock mechanics.

The class will be held this Saturday, March 26th, from 10:00 am to 12:00 pm at the Fernbank Science Center, located at 156 Heaton Park Drive, N.E. Atlanta, GA 30307, phone: 678-874-7102. The Science Center is about a mile north of the Fernbank Science Museum off Ponce De Leon. The meeting will be held in the Human Development classroom in the Annex building behind the Science Center. For more information about the Science Center go to <http://fsc.fernbank.edu/>

Mr. Black works as geological engineer for ARCADIS US, Inc. and has fourteen years of experience in hydrogeological analysis and geotechnical assessment and analysis. He has a B.S. in Geology from Eastern Michigan University, an M.S. in Geological Engineering from the University of Idaho, and a Certificate in Applied Geotechnics from the University of Idaho. Mr. Black is a registered Professional Geologist in Georgia, South Carolina, North Carolina, and Mississippi (via ASBOG and reciprocity). He is experienced in a wide variety of geotechnical subsurface investigation methods, including geophysical surveys, geotechnical soil borings, and coring of various types of soft and hard rock. In particular, Mr. Black is experienced with the assessment and analysis of rock mass strength with application to slope stability and engineered structures.

Ben is experienced in shallow and deep foundation design including piles and drilled shafts, slope stability analysis and stabilization techniques, seepage analysis, excavation design and materials handling, tunnel design and construction, surveying, and ground reinforcing techniques. He has conducted slope stability analysis for open pit mines and transportation corridors. He was responsible for processing and interpretation of rock mass properties, joint frequencies, selection of design sections, and other pertinent data. He developed a stability model and performed all calculations necessary to determine factor of safety and recommendations for slope stabilization for both planar and wedge failure modes.

Most recently, Ben has been working on U.S. Army Corps of Engineers projects in New Orleans, Louisiana and Miami, Florida. These projects include levee and deep foundation assessment and design in soft sediments and statistical analysis based on load and resistance factor design.

Please forward this announcement to anyone that might be interested. Two Professional Development Hours will be offered and everyone is invited to attend.

Ken Simonton, P.G.
Atlanta Geological Society
Professional Registration Committee

AGS Members...The Professional Registration Committee Needs YOU...

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

Out thanks goes to **ASHTEAD TECHNOLOGY RENTALS** for their generous support for this month's meeting. Please support our sponsors!



Ashtead Technology Rentals is the premier supplier of technical equipment that the world's most advanced industries have come to rely on for all of their important rental needs. Our instruments are utilized in a wide range of diverse markets, from construction and utilities through to refineries and manufacturing. Our portfolio is comprised of instrumentation and products for:

- Environmental Monitoring
- Non-destructive Testing (NDT)
- Remote Visual Inspection (RVI)
- Offshore Survey and Positioning
- Subsea Construction
- Specialty Gases

<http://www.ashtead-technology.com/us/index.asp>

Earthquakes and Hydrographs

There have been so many fantastic images of the earthquake and the tsunami. I'm still amazed by the image of the tsunami washing over the Japanese countryside carrying boats, debris and something on fire. All that chaos enveloping the orderly landscape. I won't go on and repeat the same images you may have seen numerous times. There were three data points that did come past my virtual window. We know that the earthquake is the release of energy and that energy travels through out the world, or so we've been told. Now, we can see evidence of that energy migrating through our region. First, it helps to know the exact timing of the earthquake.

Friday, March 11, 2011 at 05:46:23 (UTC) - Coordinated Universal Time

Friday, March 11, 2011 at 02:46:23 PM - Local Time at Epicenter

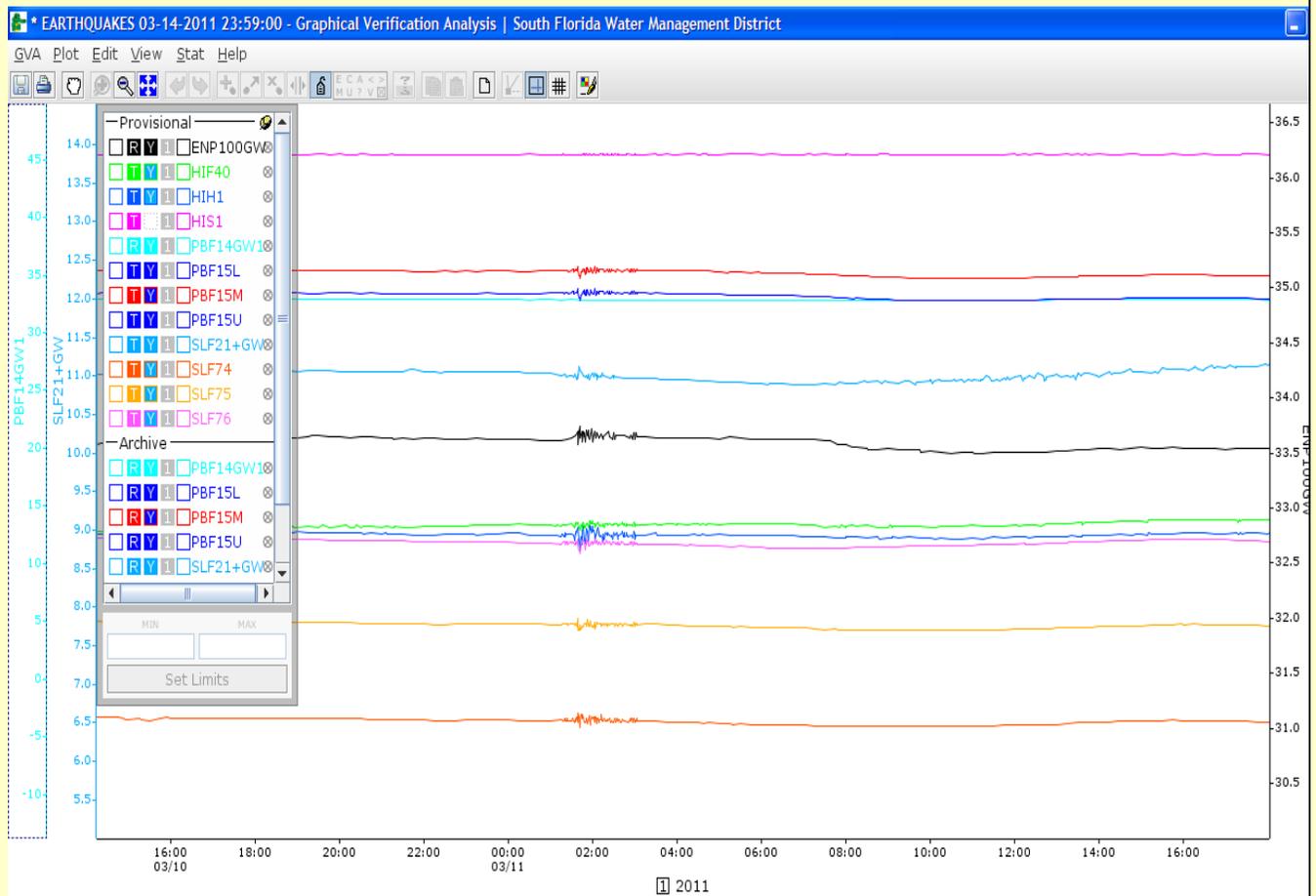
North America:

Friday, March 11, 2011 at 12:46:23 AM - New York, Toronto, Jamaica

Thursday, March 10, 2011 at 11:46:23 PM - Chicago, Mexico City, Costa Rica

Thursday, March 10, 2011 at 10:46:23 PM - Calgary, Denver, Phoenix

Now take a look at these hydrographs:



These are from wells associated with the South Florida Water Management District. Given a bit of lag time as the seismic shock propagates through the Earth, they arrive in South Florida a bit after 1 A.M., March 11, with a deflection of a couple of inches.

Earthquakes and Hydrographs continued

There was a news story in the Fort Worth Starr about fluctuations in wells associated with the Edwards Aquifer. No real scientific data but interesting never the less.

"Within 15 minutes of the magnitude-9.0 earthquake, the Edward Aquifer Authority's J-17 monitoring well in Bexar County started to vibrate, with the water level fluctuating about a foot.

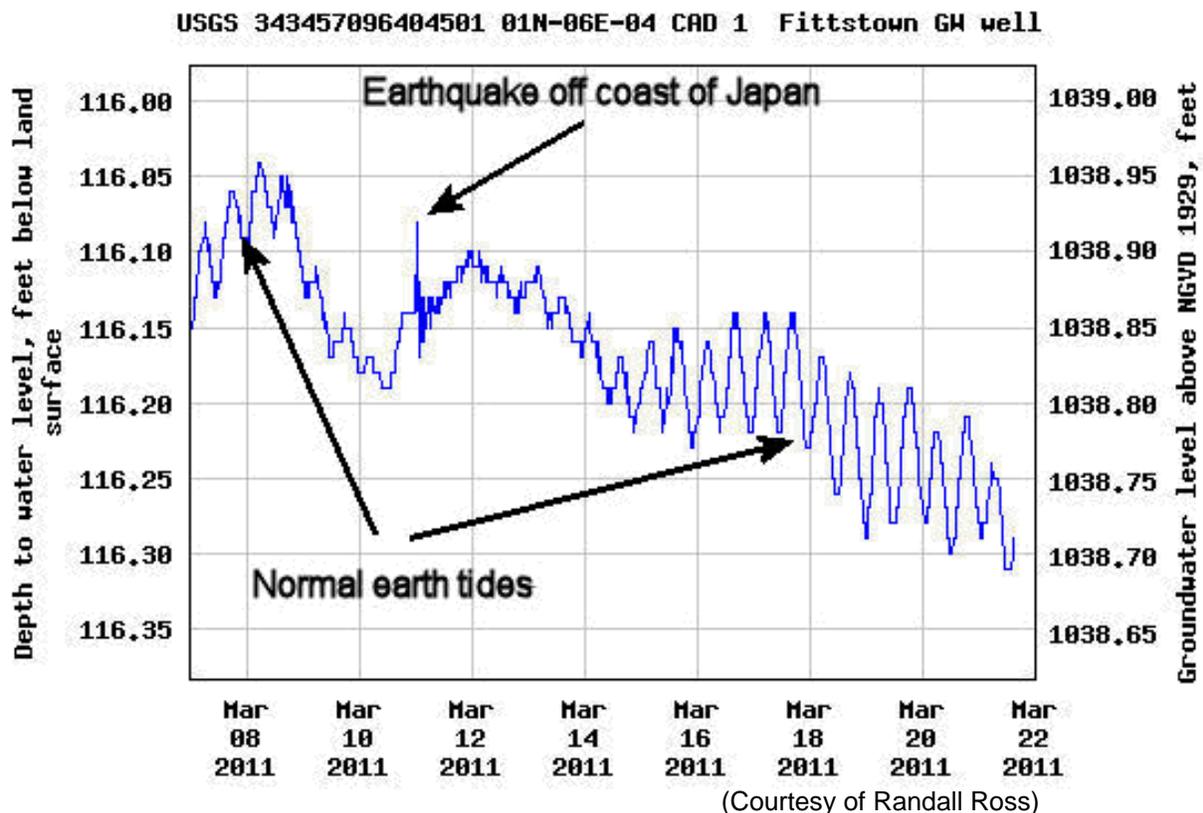
"It moved up and down for almost two hours," said Roland Ruiz, a spokesman for the water authority. "We thought it was certainly interesting that a quake that far away would register in the aquifer."

It isn't the first time vibrations from earthquakes have shown up in the aquifer. Last year's 8.8 quake in Chile and 7.0 temblor in Haiti were also detected"

<http://www.star-telegram.com/2011/03/21/2939174/japan-quake-set-texas-aquifer.html#>

billhanna@star-telegram.com

This hydrograph is from a well near the EPA's Ada, OK laboratory. Notice the timing scale has less definition but it comes in just about the beginning of March 11. The vertical scale is more precise showing a deflection of 0.07 feet, or so.



I find this all so interesting! B. B.



FERNBANK MUSEUM

of NATURAL HISTORY

Fernbank Museum of Natural History

Upcoming Public Programs and Events

(All programs require reservations, including free programs)

LOCATION:

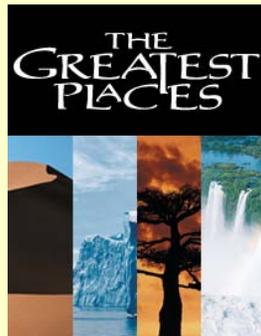
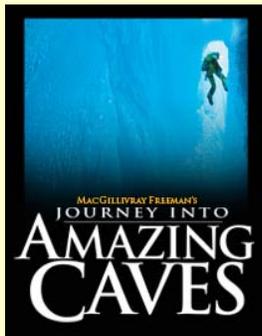
767 Clifton Rd, NE Atlanta, GA

404-929-6400 For tickets and details on exhibits, films, and events, please visit our website at www.fernbankmuseum.org

Follow us on Facebook or Twitter for the latest news and updates!

On Exhibit:

- *Entrance Plaza, featuring a family of Lophorhothon dinosaurs*
- *Martinis and IMAX:* Friday evenings, 5:30 p.m. – 10 p.m. **Amazing Caves (@7 & 9) and The Greatest Places (@ 10pm)**

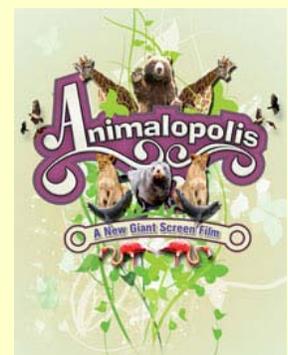


Now Showing in the Fernbank IMAX movie theater:

(Check our website for special screenings)

Current Daytime Schedule:

- **Greece Secrets of the Past**
- **Animalopolis**



Coming Soon: Tornado Alley April 1

Martinis & IMAX® is presented at the Fernbank Museum of Natural History every Friday evening, January through November; from 5:30 p.m. to 10 p.m. Enjoy no cover charge when you visit us between 5:30 p.m. to 6:30 p.m. This event includes a wine bar, where featured wines can be purchased by the glass and by the bottle. Dinner is also served in the Dining Room, where smaller parties can order chef-prepared dishes-from gourmet pizzas to prime entrées-and dine together in a more intimate and sophisticated setting. Desserts and coffee are available as well.

As always, a full cash bar is offered in the Great Hall where patrons can enjoy a lively atmosphere and musical performances by some of Atlanta's best jazz artists. Bands perform live from 6:30 p.m. to 10 p.m. IMAX® film tickets are \$10. For those who wish to enjoy the atmosphere of Martinis & IMAX® without attending a film presentation, there is a \$5 cover charge after 6:30 p.m. The cover charge is waived for members and patrons who purchase an IMAX® ticket. To purchase tickets in advance, call 404.929.6400.

Fernbank Museum of Natural History

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

Special Exhibits On View:

- *DeSoto's Footsteps: New Archaeological Evidence in Georgia* (through March 2011) **Last Days!**
- [*Mythic Creatures: Dragons, Unicorns and Mermaids*](#)
Opened February 19, 2011
- **Fernbank NatureQuest**
- **Seascapes: Photography of Sandra Gottlieb** (Through August 7, 2011)

Storytelling with Rob Cleveland

Select Saturdays, March 12, April 9 and May 14 at noon. Join us in the Naturalist Center for exciting tales about the natural world with Rob Cleveland, Fernbank's storyteller-in-residence. This program is suitable for children ages 3 and up.

Cost: Included with Museum admission. Free for members.

Dinosaur Egg Hunt

Saturday, April 23

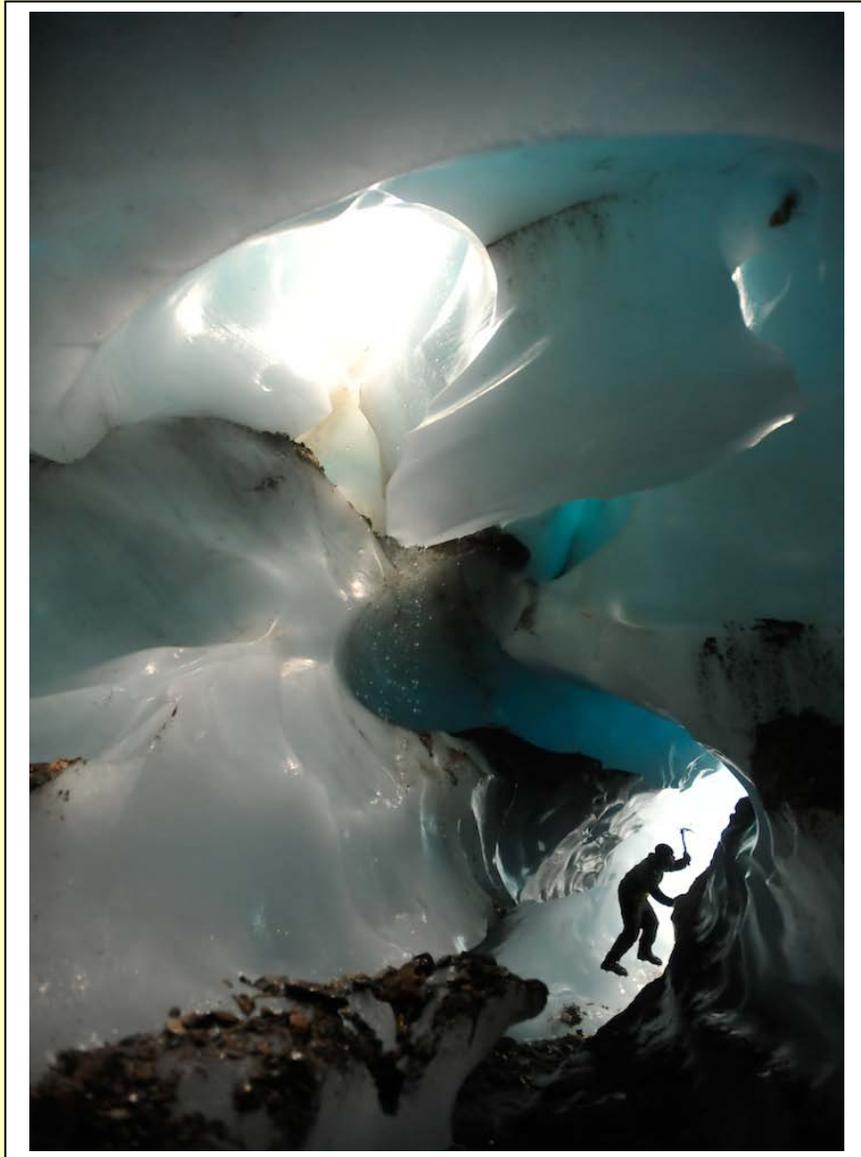
Presented in partnership with Radio Disney Fernbank's *Dinosaur Egg Hunt* is returning with expanded egg hunt times, additional giveaways, games, and more. You'll need a bigger basket. Details to be announced soon. Cost: Included with Museum admission. Free for members.

Summer Camp 2011

Give your child a summer of adventure and discovery! Week-long sessions for **rising Kindergarten through 2nd grade students** are available. Educators will guide campers on an exploration of the scientific world during a fun-filled week of activities, crafts, games.

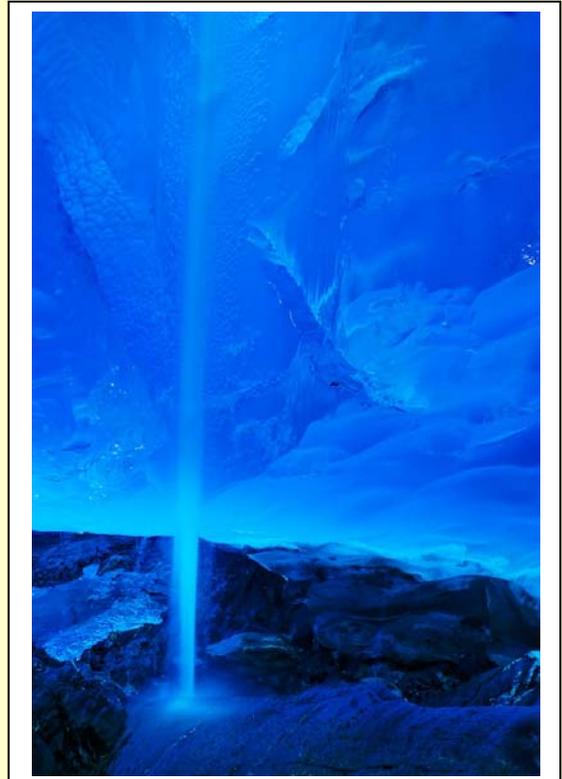
For tickets and details on exhibits, films, and events, please visit our website at www.fernbankmuseum.org

Follow us on Facebook or Twitter for the latest news and updates!



This link provides both beautiful photographs and a very unusual perspective of Alaska's Mendenhall Glacier. It is very interesting to see the interface between an active glacier and the bedrock. Nowhere else do you get those shades of blue!

<http://www.mymodernmet.com/profiles/blogs/inside-glacier-caves-17-photos>



The April Meeting

For the April meeting we will be having our annual poster session where students from UGA and GSU and West Ga and Ga Tech will display their posters exhibited at the GSA sectional meeting and Ga Water Resources conference. New this year is a **drawing for two setsof tickets to Fernbank's IMAX movie**. Please come out and support the students. Make them explain their poster – it will be good for both of you!

In case you know a student looking for a temporary job. Note it is only open 3 days.

New Procedures for 2011 Summer Student Temporary Employment Program

The U.S. Environmental Protection Agency (EPA) Region 4 will accept applications for the 2011 Summer Student Temporary Employment Program from **March 30 through April 1, 2011.**

The following positions will be advertised:

- Accountant Technicians
- Physical Science Technicians
- Biological Science Technicians
- Environmental Engineers
- Environmental/Life Scientists
- Office Automation Clerks
- Environmental Protection Specialists

Positions are located in the Atlanta Regional Office and the laboratory facility located in Athens, GA.

All applications will ONLY be accepted via a special link through USAjobs.

In order to receive the link, email R4_SummerHire@epamail.epa.gov and put in the subject line "Add Me".

Disabled individuals and veterans are encouraged to apply.

U.S. Citizenship is required

Exploring the Structure and Evolution of the North American Continent

The EarthScope scientific community is conducting multidisciplinary research across the Earth sciences utilizing freely available data from instruments that measure motions of the Earth's surface and record seismic waves, and from a drill hole that recovered rock samples from depths at which earthquakes originate.

<http://www.earthscope.org/>

The Saga of the Scientific Swindler – Please follow the link to read the story of a man who used 23 aliases to gain the confidence of some of the scientific leaders of the late 1800's.

<http://skullsinthestars.com/2011/02/24/the-saga-of-the-scientific-swindler-1884-1891/>

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www.atlantageologicalsociety.org

AGS 2011 Meeting Dates

Listed below are the planned meeting dates for 2011. Please mark your calendar and make plans to attend.

March 29 AEG/AGS Jahns Lecture "The Landslide that Ate Laprak", W. Hanneberg

April 27 Annual Poster Session + IMAX drawing

May 31 TBD

June 28 Annual Social and IMAX Movie

August 30 TBD

CALENDAR OF UPCOMING GEOLOGICAL ORGANIZATIONS' EVENTS**March**

- 17 SME lecture (6:30-8:30 at GC&SU). Alex Glover, Active Minerals – Atta What! Southwest Georgia & Northwest Florida Attapulgitic District Clay: Exploration and Utilization.
- 23-25 GSA annual section meeting.
- 25 GGWA lecture (12:00-1:00 at the GAWP office). Sustainable Technologies for Cost Effective, Expedited Groundwater Remediation, Nick Athens, Eco Vac Services.
- 26 AGS PG workshop (10:00-12:00 at the Fernbank Science Center). Ben Black.
- 29 AEG/AGS combined meeting (6:30-8:30 at the Fernbank Museum). Jahns Distinguished Lecturer Bill Hanneberg speaking on the following– The Landslide That Ate Laprak,

April

- 6 Clemson Hydrogeology Program field trip. Scott Brame, et al. – Chattooga River Geomorphology.
- 7 David S. Snipes/Clemson Hydrogeology Symposium (Clemson University Madren Center).
- 8 Clemson Hydrogeology Program field trip. Scott Brame, et al. – Chattooga River Geomorphology.
- 11-13 Georgia Water Resources Conference (GAWRC) biennial conference (UGA Georgia Center). Sustaining Georgia's Water Resources.
- 19-20 AIPG conference (KSU Continuing Education Bldg.). Innovative Environmental Assessment and Remediation Technology.
- 26 AGS annual poster session following GSA and GAWRC (6:30-8:30 at the Fernbank Museum).
- 30 AGS PG workshop (10:00-12:00 at the Fernbank Science Center). TBA.

May

- 6 Clemson Hydrogeology Program field trip. Scott Brame, et al. – Chattooga River Geomorphology. (no, it's not a duplicate) <http://www.clemson.edu/ces/hydro/symposium/fldtrp.html>
- 19 SME lecture (6:30-8:30 at GC&SU). Cesar Basilio, Thiele Kaolin – New Developments in the Kaolin Industry.
- 21 STEP Summit at Georgia Tech.
- 20 GGWA lecture (12:00-1:00 at the GAWP office). TBA.
- 28 AGS PG workshop (10:00-12:00 at the Fernbank Science Center). TBA.
- 31 AGS lecture (6:30-8:30 at the Fernbank Museum). TBA.

June

- 25 AGS PG workshop (10:00-12:00 at the Fernbank Science Center). TBA.
- 28 AGS annual social and IMAX movie (6:30-8:30 at the Fernbank Museum).

CALENDAR OF UPCOMING GEOLOGICAL ORGANIZATIONS' EVENTS

July

- 22 GGWA lecture (12:00-1:00 at the GAWP office). TBA.
30 AGS PG workshop (10:00-12:00 at the Fernbank Science Center). TBA.

August

- 11 SME lecture (6:30-8:30 at GC&SU). Krumb Distinguished Lecturer David Armstrong, Montana Tech – Different Techniques for Classifying Mineral Resources.
24-26 Georgia Environmental Conference (GEC) annual conference (Hyatt Regency, Savannah).
27 AGS PG workshop (10:00-12:00 at the Fernbank Science Center). TBA.
30 AGS lecture (6:30-8:30 at the Fernbank Museum). TBA.

September

- 20 AGS lecture (6:30-8:30 at the Fernbank Museum). TBA (could be prep for GGS field trip).
23 GGWA lecture (12:00-1:00 at the GAWP office). TBA.

October

- 7-9 GGS field trip. TBA (could be Fred Rich, Georgia Southern – Coastal Georgia)
20 SME lecture/webinar (6:30-8:30 at GC&SU or webinar). John Murphy, 2011 SME President – Seeking Opportunities for Dialogue with SME Sections.
25 AGS lecture (6:30-8:30 at the Fernbank Museum). TBA.

November

- 18 GGWA lecture (12:00-1:00 at the GAWP office). TBA.
29 AGS lecture (6:30-8:30 at the Fernbank Museum). TBA.

FROM Ken Simonton RE: The P.G. Study Class Dates

The scheduling person at the Science Center, Audrey Poole, has confirmed the following dates and rooms for the PG Classes in 2011:

DATE	VENUE	SPEAKER
Mar 26	Human Development Rm	Ben Black
Apr 30	Bird Room	
May 28	Bird Room	
Jun 25	Bird Room	
Jul 30	Bird Room	
Aug 27	Bird Room	

One last bit of earthquake graphics.

<http://www.nytimes.com/interactive/2011/03/11/world/asia/maps-of-earthquake-and-tsunami-damage-in-japan.html> See if you can use the second link to spot the NY Times mistake.
http://en.wikipedia.org/wiki/Okhotsk_Plate

Join the Atlanta Geological Society

Membership Application/Information Update Form

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). For further details, contact the AGS Treasurer:

Stacy Durden-Phillips
Phone: 678-594-9893. ext 205
Email: Stacy.Durden@lbgatlanta.com

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

Atlanta Geological Society
Stacy Durden-Phillips, Treasurer
1925 Vaughn Road NW, Suite 100
Kennesaw, GA 30144-4560

Name: _____

Organization: _____

Address: _____

Mailing Address: _____

Phone: (Work) _____ (Home) _____ (Cell) _____

Fax: _____

Email 1: _____

Email 2: _____

Ready to Serve the Society?

Remember that although we have officers and various standing committees, it is ultimately the membership that keeps the Atlanta Geological Society active and growing. We have a world of experience within our membership. Please consider volunteering. Your Atlanta Geological Society needs you.