



Granite State Geologist

The Newsletter of the Geological Society of New Hampshire,
Fall Edition – September 2012 – Issue No. 78

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MESSAGE FROM THE PRESIDENT Julie Spencer, AECOM, GSNH 2011-2012 President

This summer seemed to go by so fast, but I think I say that every year! I hope that our members were able to take some vacation time this past summer to refresh and recharge your batteries. I traveled to Northern Ireland and the northern counties of the Republic of Ireland in August and was able to visit some well-known and not so well known geological features (see photos starting p. 11 in this newsletter). Many of us are familiar with pictures of the Giant's Causeway with its thousands of basalt columns stretching into the sea. This UNESCO World Heritage Site is a wonder to visit in person. I could not take enough photos. The new visitor center was only 6 weeks old when we were there. It contains a wonderful model of the whole Antrim coast giving you a bird's eye view of all the features. The next day we went to the Slieve League Cliffs. Most people have not heard of these cliffs because they are not as famous as the Cliffs of Moher from the western side of Ireland, but the Slieve League Cliffs are actually 2.5 times higher than the Cliffs of Moher. When our guide told us that we were at the start of the International Appalachian Trail in Ireland I was very excited! Thanks to our program from October 2010, I was the only person in the group who had ever heard of the IAT. I was hoping to get a photo of a sign commemorating the IAT, but they haven't installed one yet. If you would like to share photos from your trips to interesting geological destinations in future newsletters, please contact Wayne Ives, the Newsletter Editor.

Writing about the IAT makes me think about hikes and field trips. What better way to get out and enhance your geological education than by joining some of the trips put on by the NEIGC? This year's NEIGC will be held on October 12-14 in southwestern New Hampshire and

southeastern Vermont and will be headquartered at the Sunapee Lake Ski Lodge. It is being sponsored jointly by Keene State College and the University of New Hampshire. Some great field trips are planned! Look for more information in this newsletter.

Speaking of October, it is my favorite month because it is Breast Cancer Awareness Month. Since I ended my treatment in 2008 I have been an active participant in the American Cancer Society's Making Strides Against Breast Cancer walks. I am very honored to have been chosen

as the Survivor Speaker for this year's walk in Nashua! A survivor is selected each year to make a speech to the crowd before the walk to tell her story to motivate and inspire the walkers.

And of course October is when we will gather again for our Annual Meeting and election (see the candidate list in this issue and the meeting announcement at the end of the newsletter). I hope that many of you can attend the meeting and exercise your right to vote (a little practice before the November elections)! Your membership must be up-to-date in order to vote and you can renew right at the registration table. This will be the start of our biennial elections and the addition of a third Member-at-Large. As usual the Annual Meeting will be held during Earth Science Week on October 18, 2012. This year's theme for Earth Science Week is "Discovering Careers in the Earth Sciences" so celebrate your career choice among friends and reserve a space at the meeting today!

FROM YOUR GSNH NOMINATING COMMITTEE

by Lea Anne Atwell

The following slate of candidates for the GSNH Board of Directors is offered for your consideration (as per the GSNH Constitution and By-laws). **Current** GSNH members may vote at the GSNH Fall 2012 Annual Dinner Meeting, on Thursday October 18, 2012, at Makris Lobster and Steak House in Concord.

President

Julie Spencer – Julie is a Senior Program Manager with AECOM Environment in Chelmsford, MA. She lives in Nashua, NH and is a long-time member of the GSNH. She has volunteered on the Nominating Committee through several elections, has served as the Communication Committee Chairperson, was the Website Coordinator from 2003 through 2007, served as President for the 2006-2007 term, then as Past President from 2007 through 2010. Julie is currently serving as President of GSNH elected in October 2010.

Society VP

Wayne Ives - Wayne worked in groundwater exploration consulting for ten years conducting geophysics, drilling and testing wells, and managing projects in New England, New York, California, Georgia, Virginia and Sudan. He left consulting to work for the Department of Environmental Services starting in the Superfund Program as the Program's hydrogeologist, where he quickly began managing Superfund Sites. After seven years in Superfund, Wayne transferred to the Water Division to become the state's Instream Flow Specialist where he has been developing and testing criteria for meeting for stream flow standards and managing surface water withdrawal issues.

Council VP

Russell J. Wilder - Russ is currently Vice president of Environmental Services at URS' Salem Office. He graduated from UNH in geology in 1970 and received his masters degree in soil and water science in 1971. He has over 30 years of senior management experience, including positions as manager of very large multi-disciplinary task order contracts for federal environmental services and Fortune 500 Companies. He has extensive experience working with New England regulators including the USEPA, USACE, USF&WS, NMFS, MADEP, CTDEP, VTAEC and NHDES. While at the USEPA Region 1, Russ received an award for his work with the USACE on the 404 Dredge and Fill Program. Also, while at the USEPA, he was responsible for the issuance of NPDES permits to industries and municipalities in Massachusetts, New Hampshire, Vermont, and Connecticut. Russ has served on the Windham, NH Conservation Commission and Planning Board for 24 years and is currently a member of the Alton, NH Conservation Commission. He currently serves on the legislative committee for GSNH. Russ is a Licensed Site Professional (LSP) in Massachusetts and a Professional Geologist in New Hampshire. He has three grown children, Daniel, Stephanie and Lindsey. He resides with his wife, Penn, in Alton Bay, NH.

Treasurer

Bill Abrahams-Dematte - Bill is a Project Hydrogeologist/Scientist for AECOM Environment in Wakefield, MA, where he has worked for the last 10 years. Prior to AECOM, Bill has worked for Continental Placer, Inc. in Laconia, NH, as a private consultant in Williston, VT, and for the Vermont Association of Conservation Districts, Montpelier, VT. Bill specializes in environmental site investigations, site characterization and remediation, hydrogeological studies, data management, and occasionally geotechnical work. He also employs GIS and ACAD to his environmental projects. Bill has been a member of the GSNH for the last 10 years, has acted as Council VP for a 1-1/2 year term; and is currently the Webmaster for GSNH. Bill is also a member of GSA, NGWA, and AIPG societies; and a licensed PG (NH #575). Bill lives in Wilton, NH and appreciates the GSNH for providing a means to being more connected with the New Hampshire geological community and excuses to go out and hike around on a bunch of rocks.

Secretary

Lea Anne Atwell – Lea Anne is a Project Manager with Sanborn, Head & Associates in Concord, NH, where she works on environmental site assessments, vapor intrusion investigations, and bedrock characterization studies. She previously mapped Paleozoic sedimentary rocks in two USGS quadrangles as part of the New Mexico STATEMAP project. Lea Anne is wrapping up a two-year term as Member-at-Large for the GSNH board since 2010, and has served as the chair of the Nominating Committee. Lea Anne served as Secretary for the Town of Pembroke Conservation Commission from 2006-2010. She completed her undergraduate work at Wittenberg University in Springfield, Ohio and her graduate work at the University of New Mexico.

Member-at-Large (Three Positions Open)

Doug Allen - Doug is a Senior Hydrogeologist and Project Manager with Haley & Aldrich, Inc. in Manchester, specializing in environmental site investigations and remediation, application of GIS to environmental projects, engineering geology, and hydrogeological studies. He is a licensed PG in New Hampshire. Doug has played an active role in GSNH since joining in 2002, volunteering on the membership committee (maintaining the membership database, preparing member directories, and communicating event information to members) since 2004 and previously served on the Board of Directors as Secretary and Society Vice President. Doug and his family live in Warner where he serves on the Town's Conservation Commission. Doug appreciates the professional fellowship that GSNH brings to the geological community of New Hampshire and looks forward to ongoing active participation.

Ben Grigas - Ben is a graduate of the University of New Hampshire with a degree in geology. He has worked in the environmental industry for over 11 years, first with Jaworski Geotech, Inc (AKA JGI Eastern, AKA Terracon) and now for the last six years with URS Corporation. His experience covers groundwater and soil investigation and remediation, industrial hygiene services and environmental compliance. He is a licensed/certified geologist in both NH and Maine. He lives in Rochester, NH with his wife and two young children.

Erin Kirby – Erin is a Senior Geologist for Geosyntec Consultants in Bedford, New Hampshire. Erin is a registered P.G. in New Hampshire and lives in Milford, New Hampshire. She earned her M.S. in Geophysics at Texas A&M University and her B.A. in Geology from Smith College in Northampton, Massachusetts. She has been a member of GSNH since 2004 and is running for a Member-at-Large position because she thinks GSNH is a very congenial society, based on camaraderie and technical expertise. Erin would like an opportunity to contribute to and serve such a great group of people.

Joe Schmidl - Joe has more than 22 years of experience in groundwater hydrology, wetlands evaluation, and soil science, as well as environmental site assessment, and has profession geologist licenses in Maine and New Hampshire. He has worked as a contractor to the U.S. Environmental Protection Agency (USEPA) in its Superfund program, assessing the risks

associated with some of the most contaminated sites in New England. He has served as a Project Leader in USEPA-Region I's Superfund Technical Assessment and Response Team (START), and has supported USEPA emergency responses to Hurricanes Katrina, Rita, and Ike. Joe has also served as a contractor to the U.S. Army Corps of Engineers (USACOE) as a Project Manager performing pre-remedial investigations of hazardous waste sites across New England. He has also served as a contractor to the New Hampshire Department of Environmental Services (NHDES) as a Project Manager, and is a Massachusetts Licensed Site Professional. In 2003, he founded Blackwater Environmental Design, a small business providing water resources/environmental services. Blackwater Environmental Design is a part-time endeavor, as Joe works full-time as a Senior Project Manager for Stone Environmental, Inc., a Vermont environmental consulting firm. Joe is an active participant in his community. He is currently chairman of the Town of Salisbury, NH Planning Board and is a Salisbury delegate to the Central New Hampshire Regional Planning Commission. He also serves as Parish Committee Chairman for the Unitarian Universalist congregation of Franklin, NH.

Thor E. Smith - Thor has worked as a hydrologist with the U.S. Geological Survey in Vermont and New Hampshire since 1994, and is a licensed Professional Geologist in NH. Before joining the USGS, Thor studied geology (Sc.B., Brown University) and hydrology (M.S., University of New Hampshire) and enjoyed a geographic variety of outdoor work, including acid precipitation research in the Adirondack Mountains, hydrologic monitoring for the Bureau of Reclamation in Colorado, and environmental consulting in California. Beyond geology, Thor has served on the Executive Committee of the Appalachian Mountain Club-NH Chapter, and remains an active AMC volunteer. Like other GSNH members, Thor has a tendency to carry home rocks and fossils from mountain ranges near and far.

...and of course, write-in candidates are always welcome.

RECENT GSNH ARTICLE SOLVES ARCHEOLOGY RIDDLE

The State Archeologist contacted the State Geologist with a question about some odd pots found in Lake Winnepesaukee. Luckily, the last issue of the GSNH newsletter was available as a resource.

State Archeologist Dick Boisvert wrote:

A couple weeks ago we were alerted to some odd pots found deep in Lake Winnepesaukee. Initially the finders thought that they might be prehistoric pots and we arranged for several to be retrieved. When I looked at them first hand they seemed not to be cultural but I had no clue what natural process could create them. I have worked with Jack Ridge of Tufts in the past and ran a few images by him.

State Geologist Rick Chormann sent them a copy of the newsletter with the story titled, **THE UNDERWATER TREASURE OF THE SECOND CONNECTICUT LAKE** (from Issue No. 77 - June 2012 [Part I](#)) and encouraged them to contact the original authors, which they did. They were very interested and Rick believes arrangements were made for one or more joint dives. NH Geological Survey has some of the "pots" in their hyperbaric chamber. Our newsletter article was the seed from which the relationship has blossomed.

http://www.gsnh.org/publications/Documents/newsletter_2012-06-29_GSNH_Issue77_pt1.pdf

WHAT YOUR BOARD IS DOING

The GSNH BOD met September 13 at URS offices in Salem, NH. Member at Large Lea Anne Atwell is coordinating the culling of broken links from the website. Webmaster Bill Abrahams-Dematte is keeping the site current. Treasurer Jim Degnan reported there was only an interest payment as change in the Society's accounts since the last meeting. The new mailbox account will save the Society money and is more conveniently accessed. Doug Allen reported for the Membership Committee that membership is up to 204. The Board discussed the upcoming dinner meeting and felt that meetings in Concord were working well and would be continued. The Board also discussed ideas for the January meeting and the Summer 2013 field trip.

Lee Wilder reported for the Education Committee that the Geology of the Chesterfield Gorge brochure continues to be held up at DRED. Madison Boulder "management" is being passed from the Town's Conservation Commission to a "Friends of the Madison Boulder" group sometime this September. The Board continue its plans for how the Society will be taking part in the NE GSA March 2013 meeting. The Old Man Site continues to improve and Board evaluated a mock up of the Society's paver and made some edits. NH Geological Survey has recently acquired a state of the art stream table ("flume") which is available for public talks/demonstrations. See: http://www.carltonswcd.org/WaterStreams/Stream_Table.htm.

The Nominating Committee has gathered a slate of candidates for the many Board positions that will change this year because of term limits. Russ Wilder described the Legislative Committee's plan to have an active update posted to the website. (See the legislative update below.)

The next BOD meeting will be held December 6, 2012 (with the 13th as a weather contingency) and hosted by Lea Anne at Sanborn Head offices in Concord, NH.

NOW'S THE TIME TO SIGN UP FOR NEIGC

The 2012 New England Intercollegiate Geological Conference is three days of field trips in southwestern New Hampshire and southeastern Vermont over the weekend of October 12, 13 and 14. A welcome party will be held Friday evening and a banquet dinner on Saturday evening at the Mount Sunapee Ski Lodge.

Field trips will cover bedrock and surficial geology, river hydrology and geomorphology. This is a great opportunity to gain continuing education credits as well as get away from your desk and into the fresh air! The conference is being organized jointly by Keene State College and the University of New Hampshire in memory of Jim Thompson and John Lyons. For more information, or to register online, check the NEIGC website at <http://www.neigc.org/> at Mount Sunapee, New Hampshire.

GSNH LEGISLATIVE UPDATE from Russ Wilder

We will be tracking NH legislation of interest to GSNH again this year. Legislative Service Requests (LSRs) for incumbent legislators running for re-election are due by September 26th and all LSRs must be filed by December 7. Left over from the last session are several new study committees, including:

Committee to Study Entry Onto Private Property, Posting, Trespassing & the Definition of Recreational Uses of Private Land, HB 514, Chapter 202:3, Laws of 2012. This legislation could directly affect members' ability to conduct field work, depending how it is finally crafted.

As the legislative season develops, we will use the list of NHDES legislative bills of interest as the basis for our monitoring. If members are aware of specific legislation that they would like tracked, they should send information to me at Russ.Wilder@URS.com and RussWilder@msn.com.

TEACHER'S AID

Last January's speaker, Ryan Murphy, has a web site with middle school science PowerPoint presentations for teachers at <http://sciencepowerpoint.com/> that are similar to what he presented in January. Check it out.

DO-IT-YOURSELF LAVA FLOWS

The Syracuse University Lava Project is creating lava for fun and science. The project uses crushed 1.1-billion-year-old basalt from Wisconsin. Chips are melted in a natural gas-fueled furnace that is heated to 1,200 degrees Celsius. The bathtub-sized crucible can hold up to 800 pounds of molten basalt.



The lava pours generate wide-ranging interest from kids toasting marshmallows to artists (and even geology students.) The lava experiments permit sculpture students to create works of art by pouring lava into molds and onto a variety of surfaces. Souvenir pieces of lava are available to everyone. One of the major goals of the program is to create large-scale, geomorphologically accurate, lava flow fields, tens of meters across.

For more on this story, lots of pictures and video, see: <http://lavaproject.syr.edu/> and <http://www.earthmagazine.org/article/do-it-yourself-lava-flows> and <http://arstechnica.com/science/2012/08/syracuse-makes-real-lava-in-parking-lot-for-kicks-and-science/>

NEXT GEOLOGY COHORT

Evelyn Audrey Degnan was born June 26, 2012 – 6lbs 10oz.— to Society Treasurer Jim Degnan and his wife, Amy Fortier.

Jim says: Here is a picture of Evelyn at 3 months, west strike, Brunton compass for scale



NEW MAILBOX ADDRESS FOR GSNH

Geological Society of New Hampshire
PO Box 3483
Concord, NH 03302-3483

YOU OUGHT TO KNOW DES

NH Department of Environmental Services has a new Assistant Commissioner.

In mid-June, Gov. Lynch swore into office Vicki V. Quiram, P.E., as the new assistant commissioner of DES. Vicki came to DES from Westwood, Mass., where she served as the town's public works director.

Craig Wright has been promoted from Assistant Director of the Air Division to the Acting Director position.

Keith Dubois has taken over as the Assistant Director of the Waste Division following Fred McGarry's retirement.



The DES Senior Leadership Team poses with Gov. John Lynch at Assistant Commissioner Vicki Quiram's swearing-in ceremony in June. From left to right are Mike Wimsatt, Craig Wright, Sue Carlson, Vicki Quiram, Gov. Lynch, Tom Burack, and Harry Stewart.

**! THE NEXT GSNH DINNER MEETING IS OCTOBER 18, 2012 AT MAKRIS LOBSTER HOUSE. ELECTIONS AND SOCIAL HOUR START AT 5:30, DINNER AT 6:30!
RESERVATION FORM IN THIS NEWSLETTER.**

MEMBERSHIP RENEWAL

It's that time of the year, when you get to support your favorite New Hampshire geological organization!! Please renew your membership for 2013 with the [one-page membership form, conveniently available on our website](#) or near the end of this newsletter.

<http://www.gsnh.org/membership/membership.shtml>

WHAT THE FRACK?

A recent paper uses geochemical evidence to show the possibility of natural migration of Marcellus Formation brine to shallow aquifers in Pennsylvania. This study shows that some areas of elevated salinity in northeast Pennsylvania were present prior to shale-gas development. One conclusion of the paper is, "The possibility of drilling and hydraulic fracturing causing rapid flow of brine to shallow groundwater in lower hydrodynamic pressure zones is unlikely but still unknown," but the paper leaves open as highly likely contamination by free-phase methane gas through fractures and annulae of wells which can occur in very short time scales.

<http://www.pnas.org/content/early/2012/07/03/1121181109.full.pdf>

SNAPSHOT OF DROUGHT STATUS ON A NEW WEB PAGE

This spring New Hampshire experienced a precipitation deficit of several inches coupled with a limited snow pack and an early snowmelt. These conditions caused stream flows to be significantly below the seasonal average throughout the state. New daily record lows were recorded at some stream flow gaging stations. At the same time groundwater conditions started out at normal levels, bolstered by early melting of the Halloween snow storm of 2011, but rapidly declined without the usual spring infiltration.

NH Department of Environmental Services has created a new web page that provides a current status of the state's drought condition, as well as quick links to real-time data and alerts. The page will be updated on Thursday afternoons for as long as a drought condition exists in the state. Look under "What's New" at <http://des.nh.gov> or go to <http://des.nh.gov/organization/divisions/water/dam/drought/documents/situation-summary.pdf>.

THE NH GEOLOGICAL SURVEY GROUND WATER LEVEL NETWORK SUMMARY

Submitted by the NHGS

June 2012 NH Groundwater level measurements were collected from June 26 – June 29, 2012. The statewide June 2012 average groundwater level showed a decrease of -0.24 feet from May 2012. When compared with June 2011, the statewide average groundwater level for June 2012 decreased -0.31 feet.

The June 2012 average groundwater level in the new bedrock wells showed a decrease of -1.06 feet when compared with May 2012. When compared with June 2011, the bedrock wells showed a decrease of -0.07 feet for June 2012.

July 2012 NH Groundwater level measurements were collected from July 27 – August 3, 2012. The statewide July 2012 average groundwater level showed a decrease of -0.87 feet from June 2012. When compared with July 2011, the statewide average groundwater level for July 2012 decreased -0.51 feet.

The July 2012 average groundwater level in the new bedrock wells showed a decrease of -1.87 feet when compared with June 2012. When compared with July 2011, the bedrock wells showed a decrease of -0.49 feet for July 2012.

August 2012 NH Groundwater level measurements were collected by the NH Geological Survey from August 24 – August 30, 2012. The statewide August 2012 average groundwater level for **wells in the overburden** (soil on top of the bedrock) showed a decrease of -0.10 feet from July 2012. When compared with August 2011, the statewide average groundwater level for August 2012, in these wells, decreased -0.25 feet.

The August 2012 average groundwater level in the new **bedrock wells** showed a decrease of -0.46 feet when compared with July 2012. When compared with August 2011, the bedrock wells showed a decrease of -0.78 feet for August 2012.

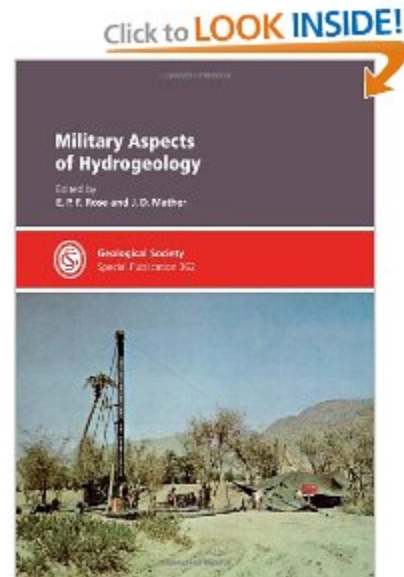
The groundwater level measurements for the deeper of the two Concord bedrock wells (CVWB-1) are now available in real-time on the USGS website at: http://waterdata.usgs.gov/nh/nwis/current/?type=gw&group_key=basin_cd. The data for all of the other wells are available from NHGS and are shared with and posted on the USGS website at: <http://groundwaterwatch.usgs.gov/StateMaps/NH.html>. The data for all of the wells are available from NHGS and are shared with and posted on the USGS website at: <http://groundwaterwatch.usgs.gov/StateMaps/NH.html>.

MILITARY ASPECTS OF HYDROGEOLOGY

The Geological Society* Publishing House issued a release containing several publications. This particular book includes examples from 20 authors of the influence of groundwater on battlefield tactics and fortress construction. The Society's book lists can be found at <http://www.geolsoc.org.uk/gsl/publications/books>.

This book is \$220 at Amazon via http://www.amazon.com/Military-Aspects-Hydrogeology-Publication-Geological/dp/1862393400/ref=sr_1_1?s=books&ie=UTF8&qid=1346868317&sr=1-1&keywords=9781862393400.

*Not the NH Geological Society, but The Geological Society of London



RECENTLY RELEASED USGS REPORTS NOW AVAILABLE ONLINE

See <http://nh.water.usgs.gov/>

NEW: SIR2012-5103: Effects of Urban Best Management Practices on Streamflow and Phosphorus and Suspended-Sediment Transport on Englesby Brook in Burlington, Vermont, 2000-2010 - <http://pubs.usgs.gov/sir/2012/5103/>

OFR2012-1079: Quality of Water from Crystalline Rock Aquifers in New England, New Jersey, and New York, 1995-2007 - <http://pubs.usgs.gov/sir/2011/5220/>

Environmental Science and Technology: Combined Sewer Overflows: An Environmental Source of Hormones and Wastewater Micropollutants - <http://pubs.acs.org/doi/abs/10.1021/es3001294>

OLD MAN OF THE MOUNTAIN MEMORIAL SITE

Site work continues. Have you or your company bought a paver yet? Next time you're going through Franconia Notch, stop by...you'll be pleasantly surprised. Progress and paver information at: <http://www.oldmanofthemountainlegacyfund.org/>

MADISON BOULDER UPDATE

Progress continues on upgrading the Madison Boulder Geological Site. Brian Fowler reports that the Grant recently awarded for site upgrades is being implemented.

NEW MAILBOX ADDRESS FOR GSNH

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DATES TO REMEMBER

October 8, 2012 – Lecture on “**INFLUENCE OF GLACIERS ON NUTRIENTS IN THE GULF OF ALASKA**” by Andrew Vermilyea, Castleton State College. 4:15 p.m. to 5:15 p.m. in Delehanty 219 - University of Vermont in Burlington, VT
<http://www.uvm.edu/geology/?Page=Calendar&agenda=geology&period=month&intro=calendarintro.html&SM=eventssubmenu.html>

Oct. 12-14, 2012 - NEIGC 2012 - NEIGC will be held in south- and central-western New Hampshire and adjacent Vermont, based out of either Hanover or Keene. This meeting is being organized in memory of Jim Thompson and John Lyons. On-line registrations at https://www.events.unh.edu/RegistrationForm.pm?event_id=10533. Trip schedule at <http://w3.salemstate.edu/~lhanson/NEIGC/>.

October 14–20, 2012 - EARTH SCIENCE WEEK 2012 <http://www.earthsciweek.org/>
Discovering Careers in the Earth Sciences engages young people and the public in learning how geoscientists gather and interpret data about the Earth and other planets

November 4–7, 2012 – **GSA** in Charlotte, North Carolina, Geosciences: Investing in the Future. Follow at <http://www.geosociety.org/meetings/2012/>.

March, 2013 - NORTHEASTERN SECTION GSA meeting at Bretton Woods.
<http://www.geosociety.org/Sections/ne/2013mtg/> or contact the General Chair, Brian Fowler at b2fmr@metrocast.net.

May 26 - June 2, 2013 – **INTERNATIONAL PEGMATITE CONFERENCE**, Attitash-Bear Peak. Go to http://www.minsocam.org/msa/special/Pig/Peg_2013.pdf.

September 9-12, 2013 - The **2013 HIGHWAY GEOLOGY SYMPOSIUM** to be held in Conway, NH. <http://www.highwaygeologysymposium.org/History.asp>

THE NEXT GSNH DINNER MEETING IS

OCTOBER 18, 2012

AT MAKRIS LOBSTER HOUSE.

**SOCIETY BOARD MEMBER ELECTIONS AND SOCIAL HOUR START AT 5:30,
DINNER AT 6:30**

DON'T WAIT – RESERVE YOUR PLACE!

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Julie Spencer at the Giant's Causeway in County Antrim, Northern Ireland.



The amazing basalt columns of the Giant's Causeway. The columns have anywhere from three to eight sides.



Some of the columns at the Causeway are quite large.



Julie Spencer at the Slieve League Cliffs in County Donegal, Republic of Ireland.



The Slieve League Cliffs are 1,972 feet high at their highest point. Our guide told us that this is the start of the International Appalachian Trail in Europe. [Remember Walter A. Anderson, GSA-Fellow, Geological Society of Maine spoke on the International al Appalachian Trail at the October 2010 GSNH Dinner Meeting.]



Geological Society of New Hampshire

GSNH 2012 Annual Fall Dinner Meeting Voting for 2011-2012 GSNH Board (Polls Open 5:30 to 7:00 p.m.)

Topic: "Mineral Collecting and Mining Tours of Morocco"

Speaker: Robert Whitmore

Robert Whitmore, lifetime mineral collector and owner of the Palermo Pegmatite Mine in North Groton, NH, will show us the highlights of his March 2012 tour of selected metal mines in the Atlas Mountains of Morocco. The Natural History Museum of Los Angeles, CA sponsored this two-week tour.

Thursday, October 18, 2012

Makris Lobster House

354 Sheep Davis Road, Concord, NH 03301

5:30 pm Social Hour; 6:30 pm Buffet Dinner; 7:15 pm Speaker

GSNH 2012 Fall Dinner Meeting, Thursday, October 18, 2012
(RSVP by 4 pm Monday, October 15, 2012 to get the reservation price)

Advance Reservations: _____ Member (Dues Paid) \$22.00
_____ Non-member \$24.00

_____ **Please indicate the number of vegetarian meals – leave blank for none.**

- Member at the Door (\$25.00)
- Non-Member at the Door (\$26.00)
- Students \$10.00 with valid student ID card (Reservation Requested)

GSNH will also accept dinner reservations by e-mail, which will then allow you to pay at the door. Please note that e-mail reservations constitute an agreement with the Society for which you will be responsible to pay, whether you are able to attend or not, unless you cancel your reservation by noon the day before the Dinner. Reply via e-mail to: Wayne.Ives@des.nh.gov. Mail to: Wayne Ives, GSNH Dinner Meeting, PO Box 3483, Concord, NH 03302-3483. **Checks payable to: GSNH.**

Name(s) _____

Address: _____

Your phone or e-mail: _____

Half the cost of the dinner may be tax-deductible as a business expense. **The lecture part of the program counts as 1.5 hours of CEU contact hour credit.**



Geological Society of New Hampshire

PO Box 3483, Concord, NH 03302-3483

New member

Check here if you do NOT want your information published in the directory.

Renewing member

Check here if you have updates to your information.

Name & Home Address:

Business Name & Address:

Home Telephone

Office Telephone

Home Fax:

Office Fax:

E-mail:

E-mail:

Preferred address to receive GSNH communication: ___Home or ___Business

Quarterly newsletters are distributed electronically. Check here if you prefer a paper copy: _____

New Hampshire PG # (if applicable): _____

Education: Degrees received or in progress:

<u>Year</u>	<u>Degree</u>	<u>Major</u>	<u>College or University</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

I volunteer to help with one of the following committees or tasks:

___ Membership Committee

___ Regulations Committee

___ Communications Committee

___ Legislative Committee

___ Education Committee

(Newsletter or Website, circle preference)

___ Giving a talk at a meeting

___ Events Committee

___ Other:

Membership Category:

_____ Regular Member (Annual Dues \$20.00)

_____ Student Member (Annual Dues \$10.00)...Please complete Education section above.

Make checks payable to "**Geological Society of New Hampshire.**" Note that GSNH dues are not deductible as a charitable contribution, but may be deductible as a business expense. Please return this completed application form with any necessary corrections and a check for the appropriate dues to the GSNH at the address above.

The Society's Membership year runs from January 1 to December 31.

Signature: _____ Date: _____



U-shaped valley at Portage Glacier, Alaska (above) and Portage Glacier, Alaska (below.)
Photos by Bill Abrahams-Dematte



BEING A GEOLOGIST IS A DAY AT THE BEACH

Pictures from the Degnan/Waryas Mother's Day picnic at North Hampton State Beach. The old children joined the young children playing in the sand at the site of a seep as the tide receded. Although it is not known if the seep contained any freshwater or was entirely temporary bank storage of ocean water, the flow was observed to decrease as the tide went out. Figure 1. Bill and Sam digging a storage pond for the canal system at the site of the seep. Figure 2 shows Jim and Vic digging the downstream portion of the approximately 40 foot long channel. Figure 3. Sam observes turbulent flow and sediment transport after he breaks dam number 2 in the channel. Figure 4. Sophia watches the flow upstream as the water level rises in the channel and carries her boat downstream.

