



Granite State Geologist

The Newsletter of the Geological Society of New Hampshire,
Winter Edition – December 2011 – Issue No. 75

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MESSAGE FROM THE PRESIDENT Julie Spencer, AECOM, GSNH 2010-2011 President

Happy Holidays to all the GSNH members! It's my privilege to serve as your President for another term. The October election results are included in an article inside this newsletter. Congratulations to the newly elected board of directors. I'd like to extend my thanks to Bill Abrahams-Dematte, our outgoing Council Vice President who initially stepped in to fill Mike Burke's position when he moved out of state in the middle of his term. Bill will now be filling the position of Webmaster for Gsnh.org. A big thank you is also due to Rich Mechaber our outgoing Webmaster. Rich had succeeded yours truly as Webmaster, but I never really "mastered" that position, and I was very grateful when Rich agreed to take the job from me. In the past 4 years he has done a great job cleaning up the website, as well as quickly posting all the new information, and the links and pages all function much smoother thanks to Rich's work. He has positioned us well to move forward with plans to provide more resources to members on the website in the future.

We also have a transition in the Newsletter Editor position as Bettina Eames will be succeeded by Wayne Ives. Bettina graciously gave us much of her time compiling the newsletter for 6 years, making many trips back and forth to the Staples copy center and the post office back in the day of paper newsletters! On behalf of the Board of Directors I would like to thank both Rich and Bettina for their years of service. It has been a pleasure working with both of them.

October 13, 2011 was our annual meeting during Earth Science Week and approximately 70 of us were treated to a talk by Kristen Camp, a graduate student from the University of New Orleans. Kristen is doing pegmatite research in New Hampshire for her thesis and

presented a talk on the "Mineralogy and Geochemistry of Anorogenic Granitic Pegmatites Associated with the White Mountain Intrusive Suite." GSNH supported her with some grant money for her research through our educational outreach and were very happy to invite her to

share some of her results with us. The venue for the October meeting was a new location for us, Makris Lobster & Steak House. Feedback was very good for this alternate meeting location so look for future meetings to be held there from time to time.

Three raffle prizes were awarded during the annual meeting: Ben Grigas won a Twinned Mass of Fluorite and Sphalerite Crystals donated by the UNH Earth Science Department; Peter Beblowski won a Gypsum specimen of Crystalline White Alabaster from Port Hood Island, Cape Breton, Nova Scotia donated by Lee Wilder and Wayne Ives won a copy of Stepping Stones Across New Hampshire by Jay Long (donated by GSNH). As usual, proceeds from raffle ticket sales go toward our education outreach activities.

Remember that our membership year ends at the end of December so if you have not renewed your membership yet please go to the last page of the newsletter for a renewal form.

I look forward to seeing everyone on January 12, 2012 at the Red Blazer in Concord for our next meeting. We will have two speakers that evening and in response to requests to end the meetings earlier, we will be starting one half hour earlier, so please make note of the details in the meeting announcement in this issue.

On behalf of the Board of Directors and the Committee Chairpersons I would like to wish all of our members a most joyous and safe holiday season!

NEIGC Guidebooks 1920-1976 now online

<http://www.library.unh.edu/digital/>

Watch for more in the future.



You can help:

1. Permanently donate a paper copy for any of these years for scanning and archives: 1950, 1952, 1955, 1957, 1962, 1967, 1968
2. If you run across pre-1950 trips check online whether we have a copy already.

Contact: Thelma Thompson, UNH
thelma.thompson@unh.edu

Seed money for this project was provided by Northeast Section, Geological Society of America.

Did you notice the change in the start time for the January meeting? We're moving everything up a half hour. Social hour will now start at 5:30 and everything will follow at the usual pace—just a half hour earlier. Check the website www.gsnh.org January 12 for snow cancellation information.

Connecting stormwater and sewer infrastructure to the National Hydrography Dataset in the Seacoast region of New Hampshire

This 2-year data integration project will significantly improve the quality and utility of the New Hampshire Hydrography Dataset (NHHN) by expanding the hydrographic network to include connections with the stormwater and sewer infrastructure in a selected area of the Great Bay Estuary watershed. Existing data in ArcGIS® and/or AutoCAD® formats will be acquired from individual municipalities for this purpose and opportunities for future integration of comparable data will also be identified. This reflects an ongoing commitment by the NH Geological Survey, under the data stewardship program, to expand the scope and number of critical hydrologic features that are linked to the flowline network of NHHN and support the priority needs of the user community. The project area has experienced increasing stormwater runoff and discharge of treated wastewater that are suspected of contributing to declining water quality trends in the estuary.

Stream Network Extraction from LiDAR and Digital Orthophotography Data: Development of the Next Generation Hydrography Dataset for NH

Recent acquisition of LiDAR-derived land surface elevation data and 4-band digital orthophotography creates an opportunity to develop and test semi-automated techniques to delineate breaklines representing single-line streams at the nominal scale of the source datasets. The NH Geological Survey has been funded by the US Geological Survey to develop an efficient workflow for extracting stream centerlines from LiDAR point cloud data or a LiDAR-derived DEM using object-based image classification techniques. Two study areas, representing contrasting characteristics of topographic relief and land cover, have been identified based on expected availability of LiDAR data: the relatively low relief Great Bay drainage area in the Seacoast region and the steep, heavily forested terrain within the White Mountain National Forest. The objective is to develop a fully connected 1:2,400 or 1:4,800-scale hydrographic network that will better support hydrologic modeling and also satisfy the local scale interests of watershed advocacy groups, local river advisory committees, and conservation commissions, etc..

Groundwater Level Measurement Network

NHGS made significant progress in recruiting volunteers to continue monitoring groundwater levels in wells that comprise the long-term network. We have found volunteers for 11 additional sites (15 wells) so that part-time NHGS staff now monitor 11 sites (15 wells) that are closer to Concord, reducing overall travel times. The process of recruiting volunteers will continue.

Geologic Mapping

As a result of recent budget cuts, the NHGS has had to depend upon volunteers to maintain its eligibility for matching US Geological Survey funds under the cooperative STATEMAP geologic mapping program. We are extremely fortunate that professional geologists Brian K. Fowler and John Cotton are willing to freely contribute their time and expertise to help sustain the mapping program during this year and next. Surficial geologic maps scheduled for completion by September 2012 include the Ashland and Center Harbor quadrangles (Emery and Garrett Groundwater, Inc.), the Warner quadrangle (Carl Koteff), and the Carter Dome and Crawford Notch quadrangles (Brian K. Fowler). John Cotton will assist with edge-matching surficial geologic units along quadrangle boundaries for a series of maps located in the Merrimack River valley.

Redstone Core Thermochronology

NHGS facilitated recovery of remaining portions of the deep bedrock core from the Redstone Quarry in Conway in support of a student project at Middlebury College investigating the late Cenozoic thermal history of northern New England. The project will use low temperature thermochronology (apatite $3\text{He}/4\text{He}$ dating) to try and detect pulses of exhumation that might be related to changes in climate during the Cenozoic. Because the rocks cool as they ascend to the surface, their cooling history tracks erosional removal of the overlying rock, providing clues about when and how the White Mountains were formed. NHGS acknowledges Bob Whitmore and Dick Lane who have been custodians of the remaining core and assisted in making samples available for analysis.

Data Preservation

Deliverables due by June 30, 2012 for the National Geological and Geophysical Data Preservation Program (NGGDPP) grant include collection level inventories for sand and gravel maps and surficial well borehole videos and conversion of approximately 4,000 well reports from paper to digital format. Scanned documents will be made publicly available through the DES website. Individual inventories will be completed on two physical collections, the Paddock Lead Mine and the Copperville Mine cores, representing over 4700 feet of bedrock core.

RECENTLY COMPLETED PROJECTS

Data Preservation

The NHGS completed requirements set by the National Geological and Geophysical Data Preservation Program (NGGDPP) for the grant ending June 30, 2011. The primary priorities of this grant period were to (a) perform individual-level inventories on three collections entered into the NGGDPP online inventory in FY2009 (b) create metadata for well cutting samples, and (c) digitally convert well completion reports and create associated metadata. FY2010 goals which were set by NHGS were exceeded. NHGS digitally converted 4,026 well completion reports, which included the ten proposed Seacoast towns and three additional towns. Metadata was uploaded for 2,552 of the reports which contain georeferenced coordinates. This number exceeds the originally proposed number of 1,600 well completion reports. Three additional towns (Dover, Madbury and Newington), not originally proposed, were digitally converted and metadata uploaded to USGS.

Carbon Sequestration

The NHGS completed requirements set by the National Geological CO Sequestration Assessment (COTSA) for the grant ending September 30, 2011. The purpose of this study was to locate the eight major soapstone deposits in New Hampshire by GPS and to analyze their potential value for CO_2 sequestration. Soapstone is a general term for rocks rich in talc, chlorite and magnesium amphibole. Most soapstones were derived from ultramafic rocks by hydration. Talc and amphibole are less soluble than olivine and serpentine, but still may hold some potential for CO_2 sequestration.

Geologic Mapping

Surficial geologic maps were completed at 1:24,000-scale for the Henniker (Carl Koteff) and Claremont North and NH portion of the Windsor 7.5-minute quadrangles (Carol Hildreth) under the STATEMAP cooperative geologic mapping grant ending September 15, 2011. A bedrock geologic map was completed at 1:24,000-scale for the NH portion of the Windsor quadrangle (Dr. Peter Thompson), contributing to a joint effort between the US Geological Survey and National Park Service for geologic mapping at Saint-Gaudens National Historic Site (SAGU) in Cornish, NH. SAGU is located at the corner of four adjacent 7.5-minute quadrangles: Hartland, North Hartland, Windsor, and Claremont North.

Fluvial Geomorphology Assessments

Fluvial geomorphology assessments were completed this past field season for over 60 miles of rivers in Seacoast region. This included the mainstem Cocheco River and two tributaries, Axe Handle Brook and the Mad River, within the Cocheco River watershed. The Lamprey River watershed was also assessed, including the mainstem and four tributaries, the Little River, North River, North Branch Lamprey River and lower Piscassic River. These assessments support the delineation of fluvial erosion hazard (FEH) zones identifying those areas most at risk from fluvial erosion during high flows, just as we recently saw in the North Country as a result of Tropical Storm Irene. Final FEH zone information will be provided to units throughout the Department of Environmental Services, our emergency response partners at the Division of Homeland Security and Emergency Management (Department of Safety), and the Regional Planning Commissions that represent communities in these watersheds.

National Spatial Data Infrastructure Cooperative Agreement Program

Over the last year, NHGS has partnered with a software development company, CubeWerx, to implement a solution for crowd sourcing revisions and updates to the NH Hydrography Dataset (NHHD). This project has involved implementing a web mapping interface that allows partners and the public to suggest edits to the NHHD. These tools use geosynchronization to broadcast proposed and accepted changes to the NHHD, much like RSS feeds, to all interested parties that request notification.

CAREERS THAT CHANGED THE WORLD BROCHURES Submitted by the GSNH Education Committee

Ever wonder how you or your company could promote the science and occupation of geology? The American Geologic Institute has a well-written and interesting brochure explaining the many careers in geology. Bundles of 10 brochures can be purchased for \$5 by contacting AGI at: <http://www.agiweb.org/pubs/pubindex.html>. Give them to students to take to school, have them available as handouts in your office or when you are on the road, take them to local school career nights, etc. Help spread the “geology” word.

NEW MAP OF MT. WASHINGTON & THE PRESIDENTIAL RANGE NOW AVAILABLE

A new map entitled “Surficial Geology of Mt. Washington & The Presidential Range, 2010” has just been published by B. K. Fowler. Among many other interesting things, the map provides new field evidence that the Late Wisconsinan Ice Sheet was likely not as thick in the region as its predecessors and thus did not completely remove post-Illinoian regolith from the highest peaks. It also describes evidence that a large reactivated ice mass may have existed in the Great Gulf cirque after the Late Wisconsinan ice sheet departed the area and that morainal material related to it dammed the Peabody River creating an ephemeral lake at The Glen in Pinkham Notch. The map is the first of its kind for the Presidential Range and is the result of 45 years of work by its author, lately in cooperation with both the N.H. and U.S. Geological Surveys.

The map, which is printed on a tear- and water-resistant synthetic base and packaged in a zip-lock pouch, can be ordered on-line from the publisher, Durand Press (www.durandpress.com), from the NH Geological Survey via its website, Observatory's Weather Discovery Center and Summit Museum Shops or it can be purchased from local book and map sellers in the White Mountain Region. Publisher's proceeds from the sale of this map support the expenses (hotdog & gas money) of volunteer field work up here in the White Mountains for the NHGS/USGS STATEMAP Program. This activity partially replaces the recently cut State of NH match for this program and helps keep the NH Geological Survey viable until Legislative match-budgeting improves.

2012 BOARD OF DIRECTORS ELECTION RESULTS Submitted by Lea Anne Atwell, Member-at-Large

The election of the 2012 GSNH Board of Directors (BOD) was held at the Annual Dinner Meeting on October 13, 2011, at Makris Lobster & Steak House in Concord. Forty GSNH members voted. The winners are indicated below, along with the term they will be entering noted:

President Julie Spencer (2nd term)	Society Vice-President Doug Allen (3rd term)
Council Vice-President Russell Wilder (1st term)	Secretary Muriel Robinette (3rd term)
Treasurer Jim Degnan (3rd term)	Member-at-Large Wayne Ives (2nd term)

The second Member-at-Large is Lea Anne Atwell, who is entering the second year of her current two-year term. Congratulations to the 2012 Board of Directors! Contact information for each of the BOD members is on the masthead on the front page and is also posted on the GSNH website. In addition, biographical sketches of the Board Members may be found in the September GSNH newsletter.

Changes to the GSNH Constitution and Bylaw were also passed at the Annual Dinner Meeting and include:

- Addition of a third Member-at-Large position to the BOD;
- Terms for all of the BOD members will be two years instead of the current one year terms for most (the Member-at-Large positions are currently two year terms); and
- BOD elections will be held in even numbered years (instead of annually).

The next BOD elections will be held at the Annual Dinner Meeting in October 2012.

2013 GSA MEETING TO BE AT BRETTON WOODS Submitted by Brian Fowler

The Geological Society of America has announced that the 2013 Northeastern Section Meeting will be held in Bretton Woods, NH with the Omni Mt. Washington Hotel as its headquarters. GSNH charter member Brian Fowler has been appointed General Chair for the meeting, and planning has begun to develop its program. 2013 is the 125th Anniversary of the founding of the GSA, and much of the programming for the meeting will incorporate this theme. The White Mountain region has a long list and rich history of prominent geologists who have worked here, many developing concepts and methods for the science that have brought us to where we are today. In addition, there is much current work underway in the region on its deglaciation, climate change, bedrock geology, exhumation during the Mesozoic, and early human habitation that will be prominent parts of the meeting's program.

Bretton Woods is an actual "geologic venue" for this meeting, and special ("once in a lifetime"!) hotel and downhill & Nordic skiing rates have been negotiated for the meeting, so GSNH members are encouraged to make reservations early when reservations open. This meeting is also an incredible opportunity to put geology "back on the map" in NH, and ideas to do this are also being considered. Suggestions along this line are welcome.

The meeting's organizing committee is also looking for program suggestions and volunteers to suggest and host symposia, theme sessions, and other activities. If interested, please contact the General Chair at b2fmr@metrocast.net. Further information about the meeting will gradually become available via the GSA and GSNH websites as planning proceeds.

UPCOMING EVENTS

March 23, 2012 - NH Water & Watershed Conference, Plymouth State University to the events page:
<http://www.plymouth.edu/center-for-the-environment/2012-nh-water-watershed-conference/>

June 1 - 3, 2012 - 75th Annual Reunion - Northeastern Friends of The Pleistocene - The Alpine Zone & Glacial Cirques of Mt. Washington & the Northern Presidential Range. See this article in this issue and the website early next year:
<http://www.geology.um.maine.edu/friends/>

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. This meeting takes place in northern NH (first time ever in the White Mountain Region) and it's also the 125th anniversary of the founding of GSA. See story in this edition.

May 26 - June 2, 2013 – International Pegmatite Conference, Attitash-Bear Peak. Go to http://www.minsocam.org/msa/special/Pig/Peg_2013.pdf.

2013 - The 2013 Highway Geology Symposium is proposed to be held in NH.
<http://www.highwaygeologysymposium.org/History.asp>

NORTHEASTERN FRIENDS OF THE PLEISTOCENE

75th Annual Reunion

PRELIMINARY ANNOUNCEMENT

June 1 - 3, 2012

**The Alpine Zone & Glacial Cirques of
Mt. Washington & the Northern Presidential Range, New Hampshire**

Leaders

Brian K. Fowler, Mount Washington Observatory

P. Thompson Davis, Bentley University

Woodrow B. Thompson, Maine Geological Survey

J. Dykstra Eusden, Bates College

Ian Dulin, Bates College

The field trips of this Reunion will update The Friends on glacial, geomorphological, geochronological, and paleoenvironmental research within and below the alpine zone of Mt. Washington and the northern Presidential Range. This is the first return of The Friends to this area since the 33rd Reunion in 1970.

The Reunion will be hosted by the Mt. Washington Auto Road and the Mt. Washington Observatory. The Auto Road's Base Lodge will serve as Reunion and social event headquarters, while the Observatory will be our field headquarters in the alpine zone.

Further information will be posted on the Friends website under News early next year:

<http://www.geology.um.maine.edu/friends/>

MADISON BOULDER RECEIVES GRANT Submitted by Brian Fowler

November 2011 - Great news! I just got word from Deb DiQuinzio at NPS (the National Park Service) that the Madison Boulder Park, thru MBAC, (the Madison Boulder Advisory Committee) has been awarded a National Park Service Impact Grant for \$4,500 for the types of improvements we propose for the Park after the refurbishment of the road is complete I really didn't think we had a chance to get this, but "the wonders never cease"!



GSNH President Julie Spencer presenting Kristen Camp our Appreciation Award for her recent talk on miarolitic pegmatites at the GSNH Fall 2011 Annual Meeting.

NEW GSNH WEBMASTER FOUND

After many years of service Rich Mechaber has passed the GSNH webmaster duties to Bill Abrahams-Dematte. Bill volunteered (No, he really did!) Bill's duties are maintaining current information on the GSNH.org web site, posting society-related announcements to the web site, and providing input on how the web site can be improved. If you have ideas about the website, you can contact Bill at Bill.Abrahams-Dematte@aecom.com. Many thanks to Bill for stepping forward and many thanks to Rich for his years of service meeting this important Society function.

GSNH NEWSLETTER EDITOR TRANSITIONING TOO

Thanks are also due to Bettina Eames for her years of service editing this newsletter including making the transition from black and white paper issues sent in the mail to the full color e-versions you see now. Wayne Ives has figuratively donned the green eyeshades and will be editing the newsletter in the future.

We are looking for contributions to the newsletter. Don't you have a geo-story about a field trip or pictures to share? Send them to Wayne.Ives@des.nh.gov.

GEOLOGY PROGRAM ATOP MOUNT MAJOR September 10, 2011

Jay Long, author of *Stepping Stones Across New Hampshire: A Geological Story of the Belknap Mountains*, spoke about the geology of the Belknap range as seen from the summit of Mount Major. The hike to Jay's presentation was held on a beautiful Saturday morning. Several who got there early got to hike up with Dave Roberts, who has mapped the hiking trails in the Belknap Range and produced the trail maps that are available at local libraries.

This program was sponsored by the Belknap Range Conservation Coalition, a non-profit organization with a mission to promote the conservation of open space, responsible stewardship, and low impact public enjoyment of the scenic, natural, recreational and historical resources of the Belknap Mountain Range. The website for the Belknap Range Conservation Coalition who sponsored this presentation is at www.belknaprange.org.

Jay Long has hiked the Belknap Range for over 20 years. He is a registered engineer and land surveyor and has a Ph.D. in engineering geology. Jay's presentation was held on a natural amphitheater a short way from the summit before a crowd of geologists and conservationists. From this vantage he could point out features underfoot and in the distance to illustrate his presentation.



Jay Long describes the geology of the Belknap Mountains. September 10, 2011

Did you notice the change in the start time for the January meeting? We're moving everything up a half hour. Social hour will now start at 5:30 and everything will follow at the usual pace—just a half hour earlier. Check the website www.gsnh.org January 12 for snow cancellation information.



Rick Chormann and Lee Wilder GPS rock sample locations from Mount Major - September 10, 2011

ARE GEOLOGISTS REDUNDANT IN MASSACHUSETTS?

A new Geology/Geography GIS App is now available for the iPhone. The new app called **Geograph MA**, which is accessible even without any cellular or wireless coverage, will tell you what rock type you are standing on using the iPhone's built-in GPS receiver. Look for it on the MA state geologist's website at <http://www.geo.umass.edu/stategeologist/> or at <http://itunes.apple.com/us/app/geograph-ma/id347874479?mt=8>.

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Lee Wilder and Julie Spencer atop Mount Major - September 10, 2011

GENERAL INFORMATION

FOP - The next meeting (the 75th Annual!) of the Northeastern Friends of the Pleistocene (FOP) will be held on Mt. Washington and the Presidential Range on June 1-3, 2012 to review, among many other things, the newly-identified evidence of post-Late Wisconsinan cirque activity in the Great Gulf and indications the Late Wisconsinan Ice Sheet was not as thick in the region as its predecessors. The program is being formulated; an official announcement will be published around January 1st. Those interested should watch the FOP website at <http://www.geology.um.maine.edu/friends>.

GLACIOGRAMS AVAILABLE - If you know of someone - a colleague or a student - who should be on the *Glaciogram* e-mail list but is not, please recommend that they sign up via the webpage: <http://www2.newpaltz.edu/glaciogram/Subscribe.html>.

REMINDERS - Check the website for up-to-date information about our meetings and field trips. Announcements regarding changes or cancellations will be posted on the GSNH homepage www.gsnh.org

The Maine Geological Society has begun compiling bulletins and field trip guides on their website. It's pretty sparse at the moment, but look at <http://www.gsmmaine.org/bulletins-and-field-trip-guides/>.

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THE NH GEOLOGICAL SURVEY GROUND WATER LEVEL NETWORK SUMMARY Submitted by the NHGS

September 2011 measurements were collected from September 23 – September 28, 2011. The statewide September 2011 average groundwater level showed an increase of 0.46 feet from August 2011. When compared with September 2010, the statewide average groundwater level increased 1.28 feet. The September 2011 average groundwater level in the new bedrock wells showed an increase of 1.63 feet when compared with August 2011. When compared with September 2010, the bedrock wells with at least one year of data showed an increase of 3.76 feet. 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>.

October 2011 measurements were collected from October 21 – November 1, 2011. The statewide October 2011 average groundwater level showed an increase of 0.77 feet from September 2011. When compared with October 2010, the statewide average groundwater level increased 1.50 feet. The October 2011 average groundwater level in the new bedrock wells showed an increase of 1.12 feet when compared with September 2011. When compared with October 2010, the bedrock wells with at least one year of data showed an increase of 3.04 feet. 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>

November 2011 measurements were collected from November 21 – November 30, 2011. The statewide November 2011 average groundwater level showed a decrease of -0.15 feet from October 2011. When compared with November 2010, the statewide average groundwater level increased 0.78 feet. The November 2011 average groundwater level in the new bedrock wells showed a decrease of -0.08 feet when compared with October 2011. When compared with November 2010, the bedrock wells with at least one year of data showed an increase of 1.33 feet. 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>

2011 NEIGC WAS HELD AT MIDDLEBURY COLLEGE, MIDDLEBURY, VT

Submitted by Lee Wilder

The 2011 New England Intercollegiate Geologic Conference was held September 30 thru October 2, 2011 in the Middlebury area of NW Vermont and Eastern NY state. Dave West of the Middlebury College Geology Department chaired this well attended gathering. Dave recently reported, "We had over 325 registered participants – with more than half of those registering as students. We had about 200 people attend the banquet on the Middlebury College campus on Saturday night. 42 different field trip leaders were involved in the 14 different trips that we offered this year."

It was nice to see a number of geology students on the trips. Their enthusiasm speaks well for future member of the geology profession.



Peter Thompson explains the geology of this stop on his NEIGC Field Trip.

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WALLACE BOTHNER FIELD TRIP FUND – submitted by Will Clyde

I am happy to report that Thom Davis (UNH '71) recently initiated the "Wallace Bothner Field Trip Fund" to honor emeritus faculty member Wally Bothner and to ensure ongoing financial support for field trips in the UNH Department of Earth Sciences. The establishment of the Bothner Fund could not come at a better time as we have initiated a new field trip program in the Department where at least every other year we take a major 1-2 week trip to a distant field location. In 2007, we offered a trip to the Pacific Northwest, in 2009 it was the Grand Canyon, and last March a group went down to study the Mississippi Delta in Louisiana.

These trips are in addition to the numerous local and regional trips that we continue to take as part of our normal course offerings. None of these trips would be possible without substantial subsidy from the Department and my hope is that the Bothner Fund will fill that role.

Your support is especially critical now given the drastic budget cut (46%!) that recently came down from Concord. The importance of field work in geoscience education can not be overstated and I hope you can help us make sure that these experiences are an ongoing part of the UNH Earth Sciences experience.

To contribute, please send a check made out to the "Wallace Bothner Earth Sciences Field Trip Fund" to

Department of Earth Sciences
James Hall
56 College Rd.
Durham, NH 03824

or go to <https://foundation.unh.edu/make-gift>, scroll down and click "other", and then type in the name of the fund. Feel free to call 603-862-3148 or email wclyde@gmail.com if you have questions and thanks in advance for your support!

DO YOU KNOW DUES ARE DUE?

Maybe if you hum a few bars!?! It's that time again. Society dues are \$20 per year and cover the calendar year. Don't get behind—your dues support important activities like the summer field trip, keeping dinner meeting prices low, new Society equipment like the Public Address system, and various geological activities. A Membership Renewal/ Application form is part of this newsletter. Consider joining one of the Society's committees this year. Do you know somebody that would like to be a member?



MADISON BOULDER IN THE WINTER

(from <http://www.nhgeology.org/>)

Did you know about this site? It provides geologic information for students and teachers.



MEMBERSHIP APPLICATION/RENEWAL

Geological Society of New Hampshire

75 South Main Street, Unit #7, PMB #133, Concord, NH 03301

[] New member
your

directory.

[] Renewing member

[] Check here if you have no updates to your information.

[] Check here if you do NOT want

information published in the

Name & Home Address:

Three horizontal lines for Name & Home Address

Home Telephone

Home Fax:

E-mail:

Business Name & Address:

Three horizontal lines for Business Name & Address

Office Telephone

Office Fax:

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:

Year Degree Major College or University

Three horizontal lines for Education information

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: _____



Geological Society of New Hampshire

GSNH 2012 Winter Dinner Meeting Double Feature

Topic: "Surficial Geology, Mt. Washington & The Northern Presidential Range"

**Speaker: Brian K. Fowler, P.G.
Geologic Mapper**

NHGS/USGS STATEMAP Program for 2009

Topic: "Molding Mountains: Blending Technology with Learning Styles at the Middle Level"

**Speaker: Ryan Murphy
Andover Elementary Middle School**

Science Department Head and Middle Level Educator

Thursday, January 12, 2012

Red Blazer Restaurant

72 Manchester Street, Concord, NH

Change → → → 5:30 pm Social Hour, 6:30 pm Buffet Dinner, 7:15 pm Speaker

GSNH 2012 Winter Dinner Meeting, Thursday, January 12, 2011 (RSVP By 4pm Monday, January 8, 2012)

Advance Reservations: _____ Member (Dues Paid) @ \$22.00.

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

- Member at the Door or Non-Member with Reservation (\$24.00)
- Non-Member without Reservation (\$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 2011 Annual Fall Dinner Meeting, Unit #7, PMB #133, 75 South Main St., Concord, NH 03301

Name(s) _____

Address: _____

Your phone or e-mail: _____ Checks payable to: GSNH.

Half the cost of the dinner may be tax-deductible as a business expense. **The lecture part of the program counts as 2.0 hours of CEU contact hour credit.**