



Granite State Geologist

The Newsletter of the Geological Society of New Hampshire
Winter-Spring 2006 Issue No.52

www.gsnhonline.org
beeames@loureiro.com

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Haley & Aldrich, Inc.
Manchester, New Hampshire
dallen@HaleyAldrich.com

Website: gsnhonline.org

Julie Spencer
ENSR
Westford, Massachusetts
jspencer@ensr.com

Newsletter

Bettina Eames
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January 2006 Dinner Meeting

Submitted By: Julie Spencer, GSNH Nominating Committee Chair

On Thursday evening, January 12, 2006, approximately 70 GSNH members and guests enjoyed catching up with each other and networking at the Cat 'n Fiddle in Concord, NH. After our buffet dinner we were treated to a great talk by Dr. Jeff Johnson of UNH about "The Forgotten 2005 Eruptions of Reventador Volcano." Dr. Johnson incorporated some video clips of volcanic eruptions into his talk which generated some "wows" from the crowd! After a lively question and answer period and presentation of our appreciation gift to Dr. Johnson (a commemorative piece of Conway core), it was time for the raffle. Tania Brice Coffin won the Realgar crystal which was donated by Lee Wilder. Bob Francis won the Phyrrotite crystal and Vinnie Della Russo won the Memetite crystal, both donated by Greg Kirby. Bill Brice (father of GSNH member Tania Brice Coffin) won the book "Stepping Stones Across New Hampshire: A Geological Story of the Belknap Mountains" (donated by its author Jay Long). Congratulations to all the winners!

Geological Society of Maine Announcements and Field Trips

The Geological Society of Maine, Spring Meeting, Banquet and Field Trip will be held on April 7th and 8th, 2006 at the University of Maine Presque Isle, Northern Maine Museum of Science. This year's keynote speaker is Dr. Thomas V. Lowell, of the University of Cincinnati, who will talk on Climate Change, Glacial Lake Agassiz, and Other Misadventures: A Miner's Perspective. The field trip leader is Dr. John T. Hopeck of the Maine DEP's Bureau of Land and Water Quality who will lead a trip on the Stratigraphy of the Aroostook Matapedia Belt and Its Contact with the Central Maine Belt. For a schedule of events, abstracts, registration and information on the keynote speaker and field trip leader go to www.umpi.maine.edu.

DES Waste Management Division –Technical Topics/Lunch Seminars – Spring 2006

Submitted by Amy Azeredo, NHDES

The New Hampshire Department of Environmental Services Waste Management Division will be hosting a series of special interest technical seminars for staff and all interested public, consultants, municipal officials, regulated community and other stakeholders at our offices at 29 Hazen Drive in Concord, NH. The sign-in will **start at 11:45 a.m.** while the seminars themselves will be held in our auditorium from **noon to 1:00 p.m.** The presentations will be structured like a Town Meeting so that everyone can ask questions and participate in the discussion in any way they feel comfortable. Experts from UNH, industry and consulting will be part of the presentations and bring us up to date on the latest in technical innovations in waste site cleanup, waste management and waste reuse. A number of people have expressed interest in these topics so each seminar will certainly benefit from such free and open discussion.

Please contact Amy (Azeredo) Samson at asamson@des.state.nh.us or phone 271-2905, if you plan to attend so that we can plan our accommodations. Please feel free to bring your lunch. We also have a cafeteria with take-out in the building.

March 17, 2006 “The U.S. Coast Guard’s Response to Hurricane Katrina’s Damage in New Orleans. It Was Big But Not so Easy” The rescue and clean-up efforts of the USCG in New Orleans following hurricane Katrina were huge. An entire city was underwater, food and drinking water were in short supply and to make matters even worse the hurricane left the 2nd biggest oil spill in U.S. history since the Exxon Valdez. Come and see first hand how such a monumental operation was completed.

April 21, 2006 “The New Kids on the Block – Arsenic, Perchlorate and Chlorination Residuals. – What’s Next” There is an emerging new group of groundwater and surface water contaminants being detected today: Arsenic Perchlorate and Chlorination Residuals. Come and listen to what new treatment alternatives are available and what the state’s approach and schedule will be for removing them from our water and wastewater systems.

May 19, 2006 “How Did They do That? The NHDOT’s Road Building and Cleanup Program for the October 2005 Flood-Impacted Areas of Western New Hampshire.” The NHDOT’s road construction and cleanup after the October 2005 floods in western New Hampshire will go down as one of the great Civil engineering accomplishments of our generation. This project had to restore major transportation routes, reconstruct bridges and dispose of over 20,000 tons of flood debris in little more than an 8 week period. Come see how they did it.

GSNH General Announcement

GSNH Membership wishing to be on the GSNH e-mail list may receive information regarding NH geological events, GSNH Dinner reminders, workshops, field trips and related activities in a timely manner. Note that the GSNH **does NOT** share e-mail addresses with others. If you wish to receive timely GSNH e-mails, forward your e-mail address to GSNH Membership Chair, Doug Allen at: Dallen@haleyalrdich.com. Please use 'GSNH email list' in the email subject line.

NHGS Groundwater Level Monitoring-October 2005, December 2005 and January-February 2006 Submitted by Genevieve Al-Egaily, NH Geologic Survey

Ground water level measurements were collected by NHGS staff member Genevieve Al-Egaily on October 26th-28th 2005, December 21-23rd, 2005, January 24-26th and February 22-24th. 2006.

October 2005: The statewide average showed a 2.76 foot increase in ground water levels from last month. The record rainfall during the month of October resulted in large increases in the ground water levels in the New London and Enfield wells with increases of 8.81 and 7.11 feet respectively. The only well not to show an increase from last month was Greenfield, which showed a 0.34 foot decrease. All wells showed an increase in ground water levels when compared with the October 2004 levels. The average statewide increase was 2.69 feet.

December 2005: The statewide average showed a 0.81 foot decrease in ground water levels from last month. The monitoring well in New London showed the greatest change, with a decrease of 4.97 feet. However, all wells showed an increase in water levels when compared with December 2004, with a statewide average increase of 1.97 feet.

January 2006: The statewide average showed a 0.80 foot increase in ground water levels from last month. Increases were observed in all wells except Ossipee, which had a 0.04 foot decrease. When compared with January 2005, the statewide average ground-water level increased 1.60 feet.

February 2006: The statewide average showed a 0.57 foot decrease in ground-water levels from last month. The New London well showed the greatest change with a 2.69 foot decrease. When compared with February 2005, the statewide average ground-water level increased 1.48 feet. Increases were observed in all wells except Colebrook and Lee.

Glacial Sediment Micro-Morphology Workshop, June 5th-9th, 2006

The Department of Geosciences at Hamilton College is pleased to be hosting an NSF-OPP sponsored workshop on the micro-morphology of glacial sediments taught by Dr. John Menzies (Brock University) and Dr. Jaap van der Meer (Queen Mary, University of London). The workshop will be conducted in a new state-of-the-art microscopic laboratory in the college's new Science Facility on the scenic Hamilton College Campus. Both microscopy and field sampling techniques in glacial sediments will be covered as the facility is within walking distance of excellent exposures of Quaternary glacio- and glacio-lacustrine deposits. We will also review new advances in the observation and interpretation of laminated Antarctic glacial marine sediments as instructed by Dr. Jennifer Pike (Cardiff University), as long jumbo piston cores (25 m in length) will be available for examination and study. Hamilton College is located in Clinton, New York on the eastern end of the Finger Lakes landscape, is adjacent to the Adirondack Mountains and the glacially sculpted Mohawk Valley and Ontario Lowland. The course runs from June 5th to 9th with arrival and a welcoming reception planned for June 4th. Travel support will be available for students. Space is limited to 20 participants. Please contact Danelle Parker for registration details (dparker@hamilton.edu) by April 1st, 2006.

Upcoming Mount Washington Observatory EduTrips – Third Announcement/Reminder

Several of the EduTrips for the 2005-2006 academic year will be run by GSNH members. A list and description of the trips is as follows:

March 18-19, 2006 (Saturday-Sunday) The Glacial Landscape: Then and Now. Join geologist and former Observatory researcher Michelle Day on this trip devoted to glaciers and their impact. We'll consider how ice sheets and local glaciers shaped the Presidential Range - and how the Antarctic ice sheet today is an evolving force, harboring clues of the past and provoking questions about the future. Michelle will share also her

reflections on living and working in the Antarctic and the similarities and differences to life and work on Mount Washington.

April 1-2, 2006 (Saturday-Sunday) Glacial Geology of the Presidential Range. Thom Davis of Bentley College, will serve as leader for this trip, which will investigate the impact that glaciers, both continental and alpine, had on the White Mountain landscape. Learn what glacial features we can visit today, and discover how the study of today's glaciers elsewhere on earth gives us hints about the glaciers that once covered northern New Hampshire.

For all trips, the Observatory member Rate is \$439/non-member rate is \$479. More information on these trips and the complete listing for 2005-2006 can be found at <http://www.mountwashington.org/education/edutrips/index.php> .

Upcoming Continuing Education Opportunities

Submitted By: Julie Spencer, GSNH Nominating Committee Chair

This issue of the Granite State Geologist is packed with continuing education opportunities including the DES Waste Management Division spring lunch seminars, the Mount Washington Observatory EduTrips in March and April, the Geological Society of Maine field trips in April, and the Glacial Sediment workshop in June. Be sure to read through this newsletter to get all the details. Here are some more upcoming opportunities to get continuing education credit. This is the season for learning, so get out there and feed your mind!

Southbury Environmental will hold the following 8-hour seminars this spring (See below). For registration information please visit www.southburyenvironmental.com or contact Dennis MacCaskie at 203-264-2648.

March 16, 2006 - "Processes and Contaminants of the Metal Finishing, Surface Coating and Dry Cleaning Industries" in Wethersfield, CT.

March 23, 2006 - "Processes and Contaminants of Other Light Industries: Electronic and Electric Devices, Textile Processing and Rubber Processing" in Wethersfield, CT.

March 30, 2006 - "Sources, Fate and Transport of Barium, Chromium, Cobalt, Copper, Lead, Selenium and Zinc" in Wethersfield, CT.

April 5, 2006 - "Petroleum Products" in Chelmsford, MA.

May 4, 2006 - "Processes and Contaminants of Other Light Industries: Electronic and Electric Devices, Textile Processing and Rubber Processing" in Framingham, MA.

May 11, 2006 - "Sources, Fate and Transport of Antimony, Arsenic, Beryllium, Cadmium, Mercury, Nickel, Silver, Thallium, Tin, Cyanide and Perchlorate" in Chelmsford, MA.

The New England Section of the Association of Environmental & Engineering Geologists (AEG) has three upcoming chapter meetings (see below). For registration information please visit <http://aegnewengland.velociraptor.net>:

March 25, 2006 – AEG New England Spring Symposium (topic unknown at press time) will be held in Devlin Hall at Boston College.

April 20, 2006 - "The Floods of 2005 in Southwest New Hampshire" presented by GSNH member Dick Lane, NHDOT, will be held at the Crowne Plaza Hotel, Woburn, MA.

May 18, 2006 - "Katrina's Storm Damage Along the Gulf Coast" presented by Lee Wooten and Francisco Silva, GEI Consultants, will be held at the Crowne Plaza Hotel, Woburn, MA.

The Northeastern Friends of the Pleistocene will hold their annual meeting June 2 through 4, 2006. They will have a field conference on "The Glacial and Archaeological Features of the Penobscot Lowland, Central Maine." Some interesting field trips are planned! Contact Roger Hooke, University of Maine, at rhooke@verizon.net for further information and registration details.

Add it to your calendar now: the 98th meeting of the New England Intercollegiate Geological Conference (NEIGC) will be held September 29 through October 1, 2006. This year's host is the Department of Natural Sciences at the University of Maine at Farmington. The meeting will be based at the Saddleback Ski Area in Rangeley, Maine with field trips in and around that area. For more information contact Dave Gibson at dgibson@maine.edu or 207-778-7402.

Also this fall, AEG will host its 2006 National Meeting in Boston from October 30 through November 4. The theme will be "New England Engineering Geology: From Till to Fill." There will be technical sessions, field trips and short courses planned. For more information visit www.aegweb.org.

Finally, be sure to read through the insert about the Northeastern Section Geological Society of America 2007 Annual Meeting, which will be held at the University of New Hampshire March 11 through 14, 2007.

NHDES Waste Management Update

Submitted By: Jutta Hager, GSNH Vice President

During March and April, Tim Stone of the GSNH Legislative/Regulations Committee will be participating in a NHDES Rules Work Group reviewing proposed "Contaminated Site Management" and "Groundwater Release Detection Permits" rules. The proposed "Contaminated Site Management" rules are a combination of the existing Env-Wm 1403 Groundwater Management and Release Detection Permits Rules, Env-1600 Reporting and Remediation of Oil Discharges Rules, and the Contaminated Sites Risk Characterization and Management Policy (RCMP). The "Groundwater Release Detection Permits" Rule is a revision of applicable portions of Env-Wm 1403 Groundwater Management and Release Detection Permits rules. If GSNH members who use these rules have specific comments or suggestions that should be considered during the review of the proposed rules, please email Tim at tstone@stonehillenvironmental.com or contact Tim by telephone at 603-433-1935.

Surficial Geology Mapping Update for New Hampshire

Submitted By Dr. David Wunsch, NH State Geologist

The New Hampshire Geological Survey (NHGS) actively participates in the STATEMAP Cooperative Geological Mapping Program. NHGS' long-term mapping plan includes mapping the surficial geology of the entire state at 1:24,000, followed by digitization of the geologic information to create a seamless, state-wide GIS coverage. Mapping and digitization of surficial geology were two of the top priorities listed by geoscientists and other professionals who responded to a questionnaire that was circulated by the State Geologist in 2000.

Our progress can be ascertained from reviewing the map index in this GSNH newsletter. Since 2000, 19 surficial maps have been completed, and 13 quads in southeastern NH are available in ARC/GIS format. Coverages can be obtained from the NH GRANIT at www.granit.sr.unh.edu. NHGS is also putting the final touches on a template that will be used to produce color, print-on-demand hard copy surficial geology maps. In addition to the standard map and legend, these products will have a brief geological history and description of the area, color images of glacial features and landforms, and a shaded relief image of the map area to assist in interpreting landforms and the Quad's physiography. Dr. Chad Wittkop joined NHGS in 2005 to manage the NHGS

surficial mapping program, and brings expertise in Quaternary geology, with specialty in sedimentology and geochemistry. Chad's presence will enhance many of the quantitative aspects of our mapping program.





Most of our mapping has been done in the southern part of the state in response to land use and water resources issues resulting from the sustained growth occurring from the Massachusetts border northward. However, we have ongoing clusters of mapping projects in other areas, namely the White Mountains, Lakes, and Connecticut River regions. Some mapping projects have been performed through cooperative efforts with town planning and conservation commissions. Cooperating towns have made financial contributions and/or commitments of in-kind resources, which can be used as match in our program budgets, and moreover, is viewed favorably during the peer review of our mapping proposals. Matching funds and in-kind contributions from communities and other interested parties allow NHGS to get more quadrangles mapped per mapping season, while instilling vital geologic information to the communities in most need. If you are aware of any town or group who would benefit, or is in need of updated geological information, they may contact the NH State Geologist, Dr. David Wunsch at the 271-6482, or dwunsch@des.state.nh.us. Existing open file maps may be purchased by contacting the Public Information Center at pip@des.state.nh.us; or writing the NHDES – PIC, 29 Hazen Drive, Concord, NH 03301; or call (603) 271-2975; or fax (603) 271-8815.

Newsletter Distribution Notification

Check your address label for the expiration of your membership. In an effort to reduce costs we will no longer be sending newsletters to those whose memberships expired at the end of 2004 or earlier. We understand that many members are still getting their renewals in for 2006, so if your label indicates an expiration of 2005 you will still continue to receive your newsletter. Please get your renewals submitted! Membership renewal forms are available online at www.GSNHonline.org and at the sign-in desk during each meeting. As of the next GSNH mailing, expired memberships from 2004 or earlier will only receive the dinner announcement...no newsletter. Your newsletter is a way for you to keep in touch with what's going on with fellow members, geology news of the state, opportunities for continuing education and so much more! Please renew your membership today.

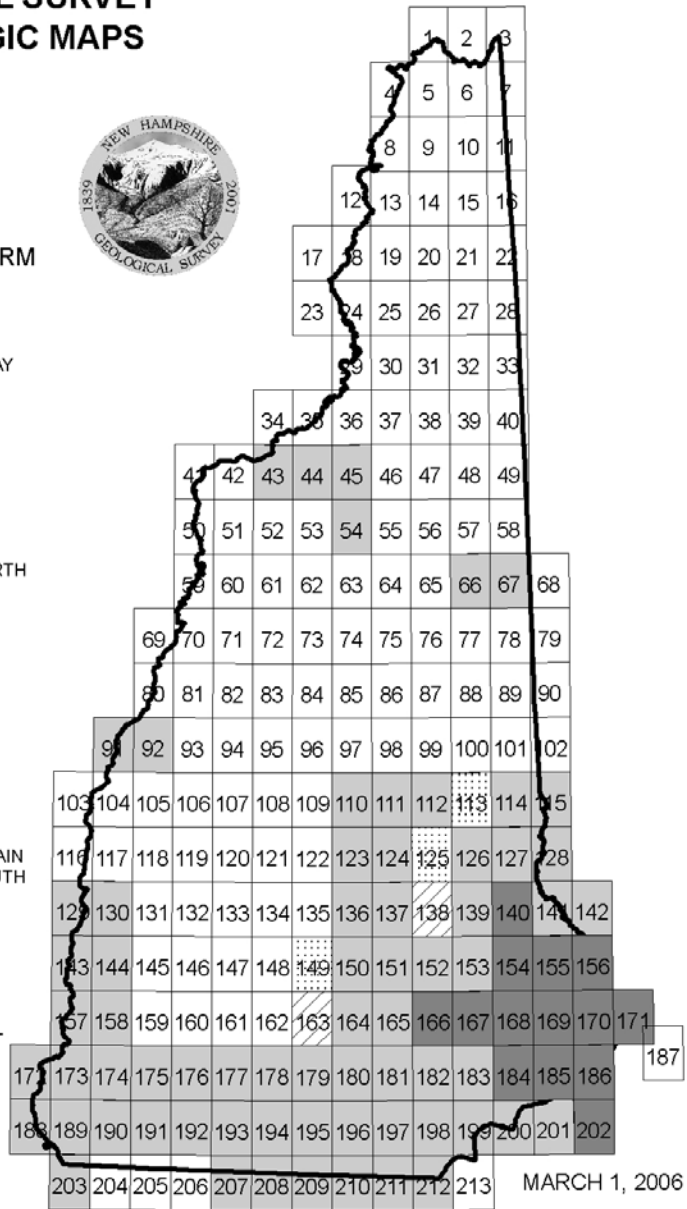
NEW HAMPSHIRE GEOLOGICAL SURVEY INDEX OF SURFICIAL GEOLOGIC MAPS

STATUS

-  PROPOSED 2006
-  STATEMAP 2005
-  EXISTING MAPS
-  AVAILABLE IN DIGITAL FORM



43 LITTLETON	165 MANCHESTER NORTH
44 BETHLEHEM WEST	166 CANDIA
45 BETHLEHEM EAST	167 MOUNT PAWTUCKAWAY
54 SOUTH TWIN MTN	168 EPPING
60 EAST HAVERHILL	169 NEWMARKET
66 NORTH CONWAY WEST	170 PORTSMOUTH
67 NORTH CONWAY EAST	171 KITTERY
91 HANOVER	172 PUTNEY
92 ENFIELD	173 SPOFFORD
110 WINNISQUAM LAKE	174 KEENE
111 LACONIA	175 MARLBOROUGH
112 WEST ALTON	176 DUBLIN
113 WOLFEBORO	177 PETERBOROUGH NORTH
114 SANBORNVILLE	178 GREENFIELD
115 GREAT EAST LAKE	179 NEW BOSTON
123 NORTHFIELD	180 PINARDVILLE
124 BELMONT	181 MANCHESTER SOUTH
125 GILMANTON IRONWORKS	182 DERRY
126 ALTON	183 SANDOWN
127 FARMINGTON	184 KINGSTON
128 MILTON	185 EXETER
129 SPRINGFIELD	186 HAMPTON
130 CLAREMONT SOUTH	188 BRATTLEBORO EAST
136 PENACOOK	189 HINSDALE
137 LOUDON	190 WEST SWANZEY
138 PITTSFIELD	191 TROY
139 PARKER MOUNTAIN	192 MONADNOCK MOUNTAIN
140 BAXTER LAKE	193 PETERBOROUGH SOUTH
141 ROCHESTER	194 GREENVILLE
142 SOMERSWORTH	195 MILFORD
143 BELLOWS FALLS	196 SOUTH MERRIMACK
144 ALSTEAD	197 NASHUA NORTH
149 HOPKINTON	198 WINDHAM
150 CONCORD	199 SALWM DEPOT
151 SUNCOOK	200 HAVERHILL
152 GOSSVILLE	201 NEWBURYPORT WEST
153 NORTHWOOD	202 NEWBURYPORT EAST
154 BARRINGTON	203 NORTHFIELD MA
155 DOVER WEST	207 ASHBURNHAM
156 DOVER EAST	208 ASHBY
157 WALPOLE	209 TOWNSEND
158 GILSUM	210 PEPPERELL
163 WEARE	211 NASHUA SOUTH
164 GOFFSTOWN	212 LOWELL



Submitted by: Dr. David Wunsch, NH Geological Survey.



Geological Society of New Hampshire

Speaker: Carl Koteff

Chief Mapper New Hampshire Geological Survey Surficial Mapping Program

Topic: “Deglaciation of New England: The Dirt Machine Revisited”

A look at the evolution of concepts about ice retreat in the region and how this is applied to the New Hampshire Geological Survey’s mapping program

Thursday, April 13, 2006

*******Cat n’Fiddle Restaurant*****
Manchester Street, Concord, NH**

6:00 pm Social Hour
7:00 pm Buffet Dinner
7:45 pm Speaker

GSNH January Meeting, Thursday April 13, 2006

Advance Reservations: _____ Member (Dues Paid) @ \$20.00.

- Member at the Door or Non-Member with Reservation (\$22.00).
- Non-Member without Reservation (\$24.00).
- Students \$10.00 with valid student ID card (Reservation Requested).

Note: 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.

Note: Reservations will be taken until Wednesday Afternoon April 5, 2006!

Make checks payable to: Geological Society of New Hampshire

Mail to: Lee Wilder, 477 Putney Hill Road, Hopkinton, NH 03229

Reply via e-mail to: boslwne@tds.net.

Name(s): _____

Address: _____

Phone and/or Email: _____

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.

Dates to Remember!

- **Granite State Geologist Newsletter submission deadlines (March 1, June 1, September 1, December 1)**
- **Earth Science Week October 8-14, 2006**
- **GSNH January Meeting on April 13, 2006 at 6:00 PM at the Cat n'Fiddle Restaurant, Concord, NH.**
- **New Hampshire Science Teachers Spring 2006 Conference at Philips Exeter Academy PEA, Exeter, New Hampshire, Tuesday, March 21, 2006.**

**Geological Society of NH
PMB 133, 26 South Main Street
Concord, NH 03301**

