



Granite State Geologist

The Newsletter of the Geological Society of New Hampshire, Fall-Winter (December) 2007 Issue No.59

www.gsnhonline.org

SEASONS GREETINGS & HAPPY NEW YEAR!

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and more!

2008 BOD ELECTION RESULTS

The election of the 2008 Geological Society of New Hampshire (GSNH) Board of Directors (BOD) was held at the Annual Fall Dinner Meeting on October 18, 2007 at the Cat n-Fiddle Restaurant in Concord. Fifty-one members voted with the results as indicated below. The winners are indicated in **bold**, with the term they are entering also noted:

President

Jutta Hager – 47 (1st term)
Paul Rydel -2
Tim Stone – 1
Lee Wilder - 1

Society Vice President

Lee Wilder – 49 (2nd term)
Selina Makofsky - 1
Mike Burke - 1

Council Vice President

Mike Burke – 49 (1st term)
Doug Allen – 1
John Cotton – 1

Secretary

Doug Allen – 50 (2nd term)
Rich Moore - 1

Treasurer

Rich Moore – 50 (2nd term)
Ralph Wickson -1

Member-at-Large

Ralph Wickson–50 (1st term)
Jutta Hager - 1

The second Member-at-Large is Paul Rydel who will be serving the second year of his current two-year term in 2008. A big congratulations to the 2008 Board of Directors and thank you to all the candidates. Contact information for the Board members will be posted on the GSNH website and is shown to the left and is also in the membership directory.

DON'T FORGET TO RENEW YOUR 2008 MEMBERSHIP!

Check your newsletter expiration date!

Annual Dues only \$20.00

**Please send in your dues payment to the GSNH Attention:
Doug Allen, Membership Chairman.**

GSNH ANNUAL FALL DINNER MEETING/EARTH SCIENCE WEEK 2007

Our October 18, 2007, 51 members of the GSNH gathered at the Cat 'n Fiddle in Concord for our Annual Fall dinner meeting. Dinner was the usual fantastic buffet which was accompanied by annual BOD elections. Dinner and the election were followed by two speakers in celebration of earth science week. Many of us earned 2.0 CEUs for the double header! Laura Preston, an earth science teacher from Salem High School, New Hampshire shared her experiences aboard the Atlantis II research vessel where she accompanied UNH professors on their expedition. She showed us some great pictures from her trip and how robots (controlled by humans of course!) operated various instruments were used to take measurement and collect samples from the seafloor. Laura was followed by Woody Thompson of the Maine Geological Survey (MGS) who presented a talk on the Recession of the Laurentide Ice Sheet from the White Mountains and refreshed us all on the happenings of glaciation in New England. After the presentations we held our customary mineral raffle. John F. Key won the Fluorite specimen from the William Wise Mine and John McRobbie won the Talc specimen from a site in Ludlow, Vermont. Thanks to Bob Whitmore who donated both minerals for the raffle. It was a great turn out and the weather cooperated nicely and was rather quite warm. If only the January 2008 winter meeting can be so lucky!

MESSAGE FROM THE PRESIDENT – Submitted by Jutta Hager, GSNH 2008 Incoming President.

Let me first express my appreciation to the membership for electing me to head the GSNH. This group is a strong force for geology in New Hampshire, and I am proud to be a member and officer. We had several present at this year's 2007 fall dinner meeting at the Cat-n-Fiddle Restaurant. It just goes to show that good company and interesting topics can compete with Red Sox fever, especially after Tom Fargo announced that the Sox had won! In keeping with Earth Science Week, one of our speakers was Laura Preston, an earth science teacher at Salem High School in Salem, NH. Her talk about her trip to the East Pacific Rise on the R/V Atlantis showed that summer can be a good time for independent research and dovetailed nicely with Woody Thompson's talk on the recession of the Laurentide Ice Sheet.

We're looking forward to more good speakers at our January and April meetings. Dick Boisvert, the New Hampshire State Archaeologist, who was ready to step in if necessary at last year's winter and spring meetings, is scheduled to speak at the January meeting as described elsewhere in the Newsletter. In addition, we have Jon Kim of the Vermont Geological Survey speaking on the "Application of Tectonics to Groundwater Problems in Vermont" at the April 10th meeting. We have a new Webmaster whom many of you met at the October meeting. He will post information, update job postings, and generally keep the website current. We appreciate his help.

On a sad note, Gene Boudette, the former New Hampshire State Geologist, passed away on November 10th. He was an active member of the GSNH and of the geological community and will be missed by those who knew him and of him. The Board sent his family flowers and a note of sympathy from the GSNH.

PORTABLE PROJECTION SCREEN WANTED

The GSNH is in great of a portable projection screen for use at our dinner meetings. The GSNH is looking for a donation of some kind and would be most appreciated. Ideally, we are seeking a large projection screen suitable for indoor presentations and possible portable enough for

outdoor use. Please check your attics, closets and storage area and if you have such an item, the GSNH would most appreciate!

UPCOMING GSNH WINTER AND SPRING 2008 DINNER MEETINGS

Keep your calendar open for upcoming GSNH dinner meetings. Times (Thursday nights starting at 6:00 PM) and place (Cat-n-Fiddle in Concord) are "as usual". See below for details:

Winter Dinner Meeting January 10, 2008 - Dick Boisvert, New Hampshire's State Archeologist, will present "New Hampshire Paleo-Indian studies from a geological perspective". All but a scant amount of data on the Paleo-Indian occupation of NH is lithic in nature and all of the sites are embedded in late glacial/early Holocene contexts. Consequently, the archaeology of this period leans heavily on geological data. Examples of contributions from geology will be presented with implications for future research.

Spring Dinner Meeting – April 10, 2008 - Jon Kim of the Vermont Geological Survey will present "Application of Tectonics to Groundwater Problems in Vermont". The causes of naturally-occurring groundwater problems in Vermont are deeply rooted in the early Paleozoic tectonic events that affected the New England Appalachians. Few would suspect that the tectonics driving ancient rift basins, subduction zones, and unconformities would be a factor in modern groundwater contamination. This talk will focus on two current projects at the Vermont Geological Survey where tectonics are an integral part of the groundwater story.

GENERAL EARTH SCIENCE NEWS

A recent fact sheet was published by the USGS (2007-3015) in March 2007 on the *Divisions of Geologic Time (aka the "Geologic Time Scale")* describing recent updates/changes in the names of major chronostratigraphic (position) and geochronologic (time) units. Over the years, development of new dating methods and refinement of previous ones have resulted in revisions to the geologic time scale. The geologic time scale endorsed by the USGS (STA7; Hansen, 1991) now reflects new unit names and boundary estimates ratified by the International Commission on Stratigraphy (ICS). For more information and a look at the revisions go to <http://pubs.usgs.gov/fs/2007/3015/fs2007-3015.pdf>.

GSNH WEBMASTER FOUND!

Thanks to Julie Spencer who convincingly recruited GSNH member Rick Mechaber to be the new webmaster for the GSNH website. Rich will take over updating the web page, entering new text and uploading documents as needed. Rich is an expert in this area and we are all so glad he said yes! If you have things to send to Rich, he can be contacted via email through the GSNH website at: webmaster@gsnhonline.org. Thanks again Rich! You're the best!

NHGS FALL GROUNDWATER LEVELS

Ground-water level measurements for September and October 2007 were collected by NHGS staff members Genevieve Al-Egaily and Kristen Svendsen.

September 24 – 26, 2007 - The statewide average ground-water level showed a 0.36-foot decrease from August. Decreases were seen in all wells except for Lisbon and Colebrook when compared with August 2007. When compared with September 2006, the statewide average ground water level decreased 0.78 feet.

October 24 – 26, 2007. The statewide average ground-water level showed a 0.10-foot increase from September. When compared with October 2006, the statewide average ground water level decreased 1.33 feet. Decreases were seen in all wells except for Lisbon when compared with September 2006.



REMEMBERING FORMER NH STATE GEOLOGIST EUGENE "GENE" BOUDETTE

Former state geologist Eugene L. ("Gene") Boudette passed away on November 10, 2007. Gene was a native of New Hampshire and grew up in Claremont and North Charlestown and served in the US Navy after graduating from high school. While in the Navy he was trained in aircraft electronics and served on Saipan, the Marianna Islands and at Quonset Point, R.I. He was awarded the World War II Pacific and American Theater service medals and the Victory Medal. After serving time in the Navy, Gene attended the University of New Hampshire where he earned a bachelor of science degree in geology and later earned his master of arts and

Ph.D. in geology at Dartmouth College.

Gene worked for the U.S. Army Corps of Engineers on projects in Greenland and around New England, including the construction of Pease Air Force Base. He later worked at the U.S. Geological Survey (USGS) until 1985. While at the USGS, his research field investigations included: the Colorado Plateau in Washington, the southeastern states and New England. He participated in the U.S. Antarctic Research Program (1959-60 Birdland Traverse), and for his accomplishments he was awarded the Antarctic Service Medal by the Department of Defense. He was a member of the Apollo Field Geology Investigation team for the Apollo Missions 15, 16 and 17, helping train astronauts to perform geologic sampling on the moon. Gene was appointed N.H. state geologist in 1986 in which he served until 2000. Most recently, Gene was an adjunct professor of geology in the Department of Earth Sciences at UNH. During his career, he authored or coauthored more than 80 geologic publications.

The GSNH community will miss him and remember him greatly. Some memories of Gene sent by GSNH members and friends are below:

Tina Cotton writes *"I was introduced to Gene by Linc Page in the USGS Boston office of regional geology shortly after I left graduate school for full time employment. Gene was in a publishing bind. He, Bob Moench, and others were preparing the field guide for the 1970 NEIGC trip in the Rangeley region of Maine. I helped meet their deadlines and from then on I was a friend for life. Linc and Gene were my mentors. Both included John in this friendship/mentoring, although their ties with Dartmouth certainly didn't hurt!*

We visited the Boudette family when they were living in an old farmhouse at the top of Eustis Ridge that had a fantastic view of Flagstaff Lake and the Bigelows during his field work days in Maine. Bea was just as cordial as Gene. She had adapted well to accepting unexpected visiting geologists at any time, offering coffee, snacks, and meals. The Eustis property was owned by geologist Andy Griscomb, who offered the acreage and buildings to the Boudettes for \$20,000. They were facing an uncertain future with a house in Virginia and graduate school in Hanover and passed the offer on to us. Andy said his offer was only for the Boudettes.

When we moved to NH, Gene told us the best place to buy corn-cob smoked bacon, ham, and cheddar cheese in the Quechee area. Best trout fishing (for size) was in streams underlain by limey rocks. Gene was a true Renaissance man having an encyclopedic knowledge that was based on extensive research on a wide variety of subjects from heating with wood, gardening, cars, music, fine dining, and antique houses, basically anything that piqued his interest. He

found a similar sole mate in his Reston, VA office with Pleistocene geologist Phil Schaffer. When Phil was hospitalized in Concord, the Boudette family adopted him into their Gilmanton home.

Gene's last appointment with the USGS was working from Clinton Street in Bow, where his office was next to John's. They mutually enjoyed picking each other's brains on a variety of subjects. In the 1980s, they coauthored a paper on sources of arsenic in NH ground water and served on a committee in response to NH being a front-runner choice for a long-term nuclear storage dump. (Yucca Mountain was the final choice.) As State Geologist, Gene took great pleasure in being a 'field assistant' for Cornelia Cameron, then in her nineties, when she was sampling peat bogs in NH. He assisted with sampling and navigating the boat, but I'm sure they took great pleasure in bird and moose watching and discussing worldwide subjects. For a man of relatively small stature, Gene had big feet, a large brain, and super sized heart".

Bob Moench writes "I recall that I met Gene during the summer of 1962, when I started work in the Rangeley 15-minute quadrangle and he during his second field season in the north-adjacent Kennebago Lake quadrangle, for the USGS and his dissertation at Dartmouth. We quickly became fast friends and mutually supportive colleagues--a relationship that lasted through the following 45 years of life. I miss him.

Gene was a true raconteur, always with a story that would tickle funny bones. He also was adept at creating innovative terms to describe the rocks he studied. Once while perusing his PhD dissertation I spied "HYPIDIOMORPHICGLOMEROPORPHYROBLASTIC GROWTHS". Any petrologist worth his or her salt would quickly grasp the precise meaning of said term, but not worth any salt as I commented that it sounds like some horrible tropical disease.

Gene did a great job of mapping in the Kennebago Lake quadrangle, where he defined, along with much else, the Silurian tectonic hinge between a source terrane to the north and the deep Central Maine basin to the south, where I mapped. He subsequently moved north into the Chain of Ponds quadrangle where he, and our mutual colleague Gary Boone, delineated an older stratigraphic pattern that defined an inferred Proterozoic and Early Paleozoic history. Although that history has recently been modified significantly by means of isotopic dating techniques that were not developed until after Gene and Gary did their work, their mapping of rock sequences was both innovative and accurate. It served to raise major questions that can only be answered when we learn better how to date rocks".

Rick Chormann of the NH Geological Survey..."I had the privilege and pleasure of working alongside Gene for a number of years after the Office of the State Geologist was transferred from UNH to the NH Department of Environmental Services. He became "attached" to the former Water Management Bureau by virtue of being assigned office space with us on the 3rd floor of 64 No. Main Street. We became forever attached to Gene in the bargain, sharing a great deal more than a clipped view of the Merrimack River and the impressive glacial delta beyond (better known as the home of "Delta Base") DES headquarters. He was our mentor and friend, a world class geologist and a remarkable human being with a seemingly endless history of almost larger than life experiences. I can picture him gathering up papers and tweed to perform the duties of "petit fonctionnaire" in support of the state's geological mapping program and ceremoniously uttering the immortal words of Captain Lawrence Oates (of the doomed Robert Falcon Scott Expedition), "I am just going outside and may be some time".

Rest assured, finding funding was no "high mountain meadows" project. Whenever the bureaucratic obstacles became almost too much to bear, Gene would harken back to the roughneck resolve of a lesser hero from his Wyoming oil patch days with the words "I'm going to have to talk to those boys by hand". Gene taught me that you can be dignified and diplomatic, even with your sleeves rolled up, ready for a "fracas". My vocabulary and literally my entire life have been forever enriched through our collegial camaraderie".

ITRC INTERNET-BASED JANUARY 2008 TRAINING CLASSES

The Interstate Technology & Regulatory Council (ITRC) offers a wide variety of training courses on innovative environmental technologies and approaches specific to the areas of site characterization, monitoring and remediation as well as other environmental topics. ITRC's training courses consist of **free**, web-based internet seminars. The seminars consist of slide presentations with a companion audio portion and can be accessed either by phone line or streaming audio simulcast. Some recent topics covered this month (December 2007) included: *Vapor Intrusion Pathway: A Practical Guidance* (December 4, 2007), *Performance-based Environmental Management* (December 11, 2007), and *An Overview of Direct Push Well Technology* (December 13, 2007). The upcoming January 2007 offerings are as follows:

Upcoming January ITRC Training Classes

Date	Topic	Time (EST)
January 15, 2008	Perchlorate; Overview of Issues, Status and Remedial Options	2:00 PM to 4:15 PM
January 24, 2008	Remediation Process Optimization Advanced Training	11:00 AM to 1:15 PM
January 29, 2008	Risk-Assessment and Risk Management: Determination and Application of Risk-based Values	2:00 PM to 4:15 PM

To register for an ITRC training class today go to www.itrcweb.org or go directly to <http://clu-in.org/studio/seminar.cfm#upcoming> (you may need to scroll down to find the class of interest).

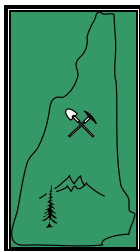
AREA SCIENCE ACTIVITIES AND EVENTS

Looking for things to do in the area with kids? You might be interested in checking out The Little Nature Museum Programs 2008 Season. Events are held on Saturdays at the Community Room in Hopkinton Town Library from 1:30 to 2:30 PM. Admission is free but donations are most welcome! For more details on the Little Nature Museum go to www.littlenaturemuseum.org. Talks and presentations may be canceled or rescheduled due to weather so call 746-6121 for cancellations: Three upcoming talks/presentations which might be of interest to the GSNH community are listed below:

February 2, 2008 - *Earthquakes in New Hampshire (or Why the Earth Moves Under Your Feet)* with David R. Wunsch, P.G. State Geologist/Director NH Geological Survey, NH Dept. of Environmental Services. Is New Hampshire due for a major earthquake? Learn more about earthquakes as they relate to our state from the state's expert.

March 29, 2008 - *Mount Washington Observatory...bitter cold, dense fog, heavy snow, incredible weather* with Michelle Cruz, Outreach Coordinator, Mt. Washington Observatory. Through images, demonstrations, and a video clip of a typical day atop Mt. Washington, you'll find out more about the weather that surrounds it as well as how meteorologists of the Observatory conduct daily operations in these extreme conditions.

April 19, 2008 - *Dig into the Past. The Mystery of the Sites...*a children's archeological program with Sheila Charles, M.A., historic and archaeological research consultant and Strawberry Banke archeologist in a hands-on and interactive introduction to archaeological research. Participants will be introduced to methods and concepts of archaeology, view an entertaining media presentation of an actual archaeological investigation and handle real artifacts in an attempt to solve the Mystery of the Sites



Geological Society of New Hampshire

2008 WINTER DINNER MEETING

Speaker:

“New Hampshire Paleo-Indian Studies from a Geological Perspective”

Dick Boisvert, New Hampshire State Archeologist

Thursday, January 10, 2008

Cat-n-Fiddle Restaurant

Exit 13, I-93, Manchester Street, Concord, NH

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

GSNH 2008 Winter Dinner Meeting, Thursday, January 10, 2007

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.

Reservations will be taken until Monday, January 7, 2008! Checks payable to GSNH.

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 hour of CEU contact hour credit.

Upcoming Events/Dates to Remember!

- **JANUARY 10, 2008** –GSNH WINTER DINNER MEETING, CAT-N-FIDDLE RESTAURANT, CONCORD, NH. *TOPIC: PALEO-INDIAN STUDIES FROM A GEOLOGIC PERSPECTIVE.*
- **APRIL 10, 2008** –GSNH SPRING DINNER MEETING, CAT-N-FIDDLE RESTAURANT, CONCORD, NH. *TOPIC: APPLICATION OF TECTONICS TO GROUNDWATER PROBLEMS IN VERMONT*
- **OCTOBER 12 - 18, 2008** - EARTH SCIENCE WEEK



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