



# Granite State Geologist

The Newsletter of the Geological Society of New Hampshire, formerly NH Geological Society  
Autumn 2003 Issue No. 42 [www.gsnhonline.org](http://www.gsnhonline.org)

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Colby-Sawyer College  
New London, New Hampshire

**Vice President-GS** – John Regan  
NH Dept. Environmental Services  
Concord, New Hampshire

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Portsmouth, New Hampshire

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Exeter Environmental Assoc.  
Exeter, New Hampshire

## Website

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## Newsletter

Tania Brice Coffin  
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## President's Message

Lee Wilder, President - Geological Society of New Hampshire

From all whom I spoke with, the Summer 2003 Geology Field Trip was great! Some seventy-five GSNH and GSM members spent a pleasant late July weekend in the Mount Washington/Berlin area of New Hampshire. John Cotton reports that the catered barbeque was delicious! Many thanks to Woody Thompson and Lisa Churchill-Dickson of the GSM for all that they did to make this joint summer field trip such a success. Tim Allen, Dick Boisvert, Thom Davis, Dyke Eusden, Brian Fowler and Woody Thompson were great trip leaders. A sincere thanks to all of you!

It seems like the "joint summer field trip idea" is a win-win for everyone. With attendance close to three digits, it makes all the planning that goes into such an event worthwhile, not only for the organizers, but also for the trip leaders and the attendees. So unless your BOD hears otherwise, I would favor organizing a joint summer field trip with the GSM for 2004.

It is that time in the Society's year to hold our annual election for members of the Board of Directors. The nominating committee has included in this newsletter information on the proposed slate of candidates. Voting will take place at the GSNH Fall 2003 Annual Dinner meeting. See the article on upcoming GSNH events. All currently active (those whose dues are paid in full for 2003) are entitled to vote at that time.

My term as GSNH President has been very enjoyable...thanks to a wonderful group of people on the GSNH Board of Directors. GSNH is a great organization and I look for it to only get better.

Lee Wilder

[Ed. We all thank Lee for his years of able service to GSNH. We will miss you]

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## Lunchtime Lecture Series

Dave Wunsch, NH State Geologist, will give a series of one-hour lectures on selected topics in geology. These are to be given at the Department of Environmental Services, Hazen Drive, in Concord, NH. For PG's, each lecture is worth one CEU/contact hour. To be put on the notification list for upcoming lectures, e-mail: [geology@des.state.nh.us](mailto:geology@des.state.nh.us) .

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## Mineral Box and Scholarships

Need mineral "props" to give a talk to a local school class, scout group or organization? As a current GSNH Member, you may sign up and borrow the "GSNH MINERAL TALK BOX". It contains everything you need to give a "hands-on-talk" on minerals, their identification and uses. Designed with NH specimens, this will make your presentation an interesting and educational event. To make arrangements to borrow the Mineral Talk Box, contact Lee Wilder at: [geology@des.state.nh.us](mailto:geology@des.state.nh.us) .

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## Did you know?

Kurt Swenson, of the Swenson Granite Works, on North State Street, Concord, NH informed Lee Wilder, GSNH President, that Swenson Granite Works recently supplied replacement steps for the Pentagon in Washington, DC. The steps were cut from Columbia Granite, a pink colored stone quarried from their quarry in Columbia, NH. This quarry is usually operated on an "as needed" basis. It seems that the color and texture of this rock, fit the specifications required. Columbia is along the Connecticut River, South of Colebrook, NH.

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## Fall Events in the New England Region

### The Geology of Maine:

If you hurry, you can still enroll in the daylong course "The Geology of Maine", offered by the Geological Society of Maine. CEU's are available for this course. Complete information including date, time, location, course schedule and registration information is available at: [http://www.gsmmaine.org/course\\_oct2003.htm](http://www.gsmmaine.org/course_oct2003.htm)

### NEIGC: The New England Intercollegiate Geological Conference

Is holding it's 2003 Annual Field Trip in Amherst, Massachusetts on October 10-12, 2003. For information see: <http://www.neigc.org/NEIGC/index.html> .

### Mineral Wonders of New England:

The Capital Mineral Club presents it's 40th Annual Gem and Mineral Festival at Sunapee State Park, on Saturday and Sunday, October 11 & 12, 2003. For information, see: <http://www.capitalmineralclub.org/index.html> .

### Geomorphology Courses:

Field Geology will offer two fluvial geomorphology courses this Fall, one in Concord, NH and one in Augusta, ME. Complete descriptions of the courses, pricing information, and on-line registration are available at [http://www.field-geology.com/short\\_courses.htm](http://www.field-geology.com/short_courses.htm). Several discounts are available with an early registration discount of \$25 available until September 1, 2003. To qualify for the discount, you need only submit your registration (or otherwise express your intent to register) by September 1st – payment is not due until the date of the course. Also, for those interested in earning CEUs, Field Geology is currently working on approval for such credit and is fairly certain that will be the case for the courses this Fall and Spring. Please feel free to call 207-491-9541 or e-mail [jfield@field-geology.com](mailto:jfield@field-geology.com) if you have any questions or need additional information.

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## Update from the GSNH Legislative Committee

The following Legislative Service Request (LSR) sponsored by fellow geologist Pierre Bruno, NH Representative for District 45, New Boston, recently caught our eye: "2003-H-2064-R relative to the membership of the board of professional geologists." We contacted Pierre to find out what the LSR was about and here is his email response. "Since most states have the State Geologist on [their licensing] board, it seems that NH lags behind in this aspect. The additional member [to the board] would be the State Geologist. No other changes. NH lags severely behind in utilization of the State Geologist's office. I have been working to support that office."

## Update from the GSNH Legislative Committee

continued

Kudos to Pierre for taking the initiative to correct what was an oversight during the development of the geologist licensing legislation. In many States the State Geologist sits on the geologist licensing board. As might be expected, both the State Geologist's office and the Geologist Board support the legislation.

Of all the groundwater withdrawal and water rights related legislation introduced during the past session, only bill, SB-155 "establishing a commission to study issues relative to groundwater withdrawals", survived to be signed by Governor Benson. SB-155 and the many other water related bills introduced this session, were primarily in response to the debate swirling around the large volume groundwater withdrawal application for a water bottling plant proposed in Nottingham. The bill establishes "a commission to study ways to clarify the hierarchy of water uses while considering existing private property rights, to bring a balanced approach to water use among residential, public water supply, industrial, commercial, agricultural, recreational and other water users, and to review the current process by which all such new water users may reasonably and efficiently use state water resources, including consideration of potential regional impacts and local water management issues, in order to best protect and preserve an adequate supply of water for the state." The commission is tasked to make an interim report of its findings and any recommendations for proposed legislation by November 1, 2003 and make a final report by November 30, 2004.

Within SB-155 there are provisions for who should be represented on the commission including "(m) A representative of the joint board of professional engineers, architects, land surveyors, foresters, professional geologists, and natural scientists who shall be a hydrologist or geologist, appointed by the governor." As such, Tim Allen, PG, a professor at Keene State and a member of the Board of Geologists, was nominated by the Joint Board to fill this position and appointment by the Governor. GSNH member Tony Giunta, PG, has also been appointed to the commission as the representative for NHDES. A complete copy of the bill text is available at <http://www.gencourt.state.nh.us/legislation/2003/SB0155.html>.

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## Gilsum Rock Swap – GSNH Summer Family Event

The Gilsum Rock Swap is a fabulous summer event; the outdoor location makes the rock swap easy for those members who have small and active children. A good time was had by all who attended this year's swap. Join us next year!

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## Continuing Education Requirements Revisited

Tim Stone, Vice-President GSNH PG-Branch

Over the past several months GSNH has received many inquiries regarding the continuing education requirements for Licensed Geologists in NH. The following has been prepared to answer some of the commonly asked questions.

*1) What qualifies for continuing education activity hours (CEAHs)?* Continuing education activities must be relevant to the practice of geology and may include technical, ethical, or managerial content. The licensed geologist must use his/her professional judgement to decide if a course or activity qualifies for the continuing education activity hours. Common activities include taking courses, attending seminars, teaching, publishing an article, participating in field trips, and attending professional meetings such as GSNH meetings;

*2) How many continuing education activity hours is an activity worth?* For many activities, the number of CEAHs obtained is equal to the number of hours attended up to 8 hours per day. For example attending a GSNH dinner meeting would qualify for 1.5 hours, participating in a field trip, such as the recent GSNH Mount Washington field trip could qualify for up to 8 hours per day, and completing a formal college course would qualify for 10 CEAHs for each Continuing Education Unit (CEU) earned.

## Continuing Education Requirements Revisited

continued

3) *How should credits be documented?* The **licensed geologist is responsible** for documenting and maintaining records to support continuing education activity hours earned. A Generic Activity Form used to document individual event CEAHs and a Continuing Education Activity Log Form used to summarize continuing education activities and CEAHs earned between each license renewal, are available at <http://www.state.nh.us/jtboard/pgce.htm>.

Geologists should carefully review the [Geo 403.05 Continuing Education Requirements](http://www.state.nh.us/jtboard/georules.htm#geo400) which can be accessed at <http://www.state.nh.us/jtboard/georules.htm#geo400>.

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## Membership Update

Steve Shope, Membership Committee

Our membership remains strong. Our database has a total of 275 members listed. Of these, 192 members are current through 2003, with 83 members current as of 2002. At the bottom of this paragraph are the names of 29 individuals who have been inactive since 2001. If your name is on this list, please renew! If you know someone on the list, please ask them to renew! The dues are a bargain at \$20 per year, and the renewal form can be downloaded from the GSNH website. In order to vote in the upcoming election, your membership must be current through 2003.

We presently operate on a calendar year, with the 2004 renewal forms being sent-out with this fall newsletter. If there are questions about your membership status at any point, please feel free to e-mail me at [sshope@rcn.com](mailto:sshope@rcn.com).

Members inactive since 2001:

Joseph	Ayotte	George	Haselton	Andrew	St. Peter
Reidar	Bomengen	Carol	Hildreth	Andrea	Stiller
Eugene	Boudette	Gary	Jaworski	Andrew	Stone
Daniel	Bush	Stephen	Knollmeyer	Brett	Swartz
Glenn	Carlson	Curtis	Kraemer	Michael	Towle
David	Cedarholm	Thomas	Luby	Douglas	Van Citters
Krista	Dobbins	Gary	Lynn	Gregory	Warner
Maureen	Estabrook	Jack	McKenna	David	Whelan
David	Foster	Joseph	Salvetti	William	Gibbons
Neil	Frasca	Paul	Sanborn		

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## NHDES Consultants List Revision Proposed

Tim Stone, Vice-President GSNH PG-Branch

On July 14, 2003, NHDES issued a letter requiring that consultants who wished to remain on the Site Investigation and Remediation Consultants List, submit documentation indicating that they have a licensed geologist on staff or are a NH certified professional engineering business organization. A copy of the letter can be viewed at <http://www.des.state.nh.us/ORCB/doclist/consultantsLetter.pdf>. The NHDES's purpose for the letter is to revise their "Consultants List", which previously had no qualifications requirement to be listed, and to further support the implementation of the requirement that certain documents for submittal to NHDES must be stamped by a licensed geologist or a professional engineer. The new list would identify whether a firm had licensed geologists and/or professional engineers on staff, and in doing so indicate which firms could submit Site Investigations and/or Remedial Action Plans (RAPs). Unfortunately, the proposed revision could have an unintended impact on non-engineering firms by inferring that geologic/hydrogeologic consulting firms are not

## NHDES Consultants List Revision Proposed

continued

qualified to conduct RAPs and therefore, consumers referring to the list would in all likelihood avoid such firms if there was any chance remediation work may be required. In truth, many non-engineering firms are qualified and are involved with preparing RAPs. However, in accordance with NHDES requirements and the Engineering Rules, non-engineering firms must team with an engineer or engineering firm who would stamp the RAP document and submit it to the NHDES under the letterhead of the engineer or engineering firm. In most cases large components of RAPs involve geology and hydrogeology. Furthermore, such a list does not indicate whether a firm is actually qualified to complete either Site Investigations or RAPs. However, the list could have the affect of steering potential clients away from non-engineering firms. We encourage GSNH members who may be concerned about the proposed Consultants List revision to contact Fred McGarry at NHDES (271-4978 or [fmcgarry@des.state.nh.us](mailto:fmcgarry@des.state.nh.us)) and voice your concerns. Alternatively, contact Tim Stone (433-1935 or [tstone@stonehillenvironmental.com](mailto:tstone@stonehillenvironmental.com)) with your comments and we will pass them on to NHDES with alternative revision proposals.

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## GSM/GSNH Field Trip Mt. Washington /Gorham Area

Heather Hochuli, UNH Student and GSNH Member

[*Ed. We thank Heather for submitting this summary of the fieldtrip and Suzanne Wall, Doria Kuturbes, and Tania Brice Coffin for supplying the photos*  
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The weekend began with a talk Friday night on the Old Man of the Mountain, given by Brian Fowler. Apparently water damage caused the chin's center of gravity to move, causing it to topple. Once the chin was gone, the other slabs of rock that make up the Old Man toppled over too. In 1916, turnbuckles and tie rods were installed on the top of the Old Man, to prevent him from falling. These turnbuckles proved to be useful this year, determining the direction in which the rocks fell. Brian also said that one factor that helped contribute to the collapse was kaolinization of the Conway granite, the process of weathering of the feldspar into clay. Other major factors include air overflights from jets, and wind and rain from thunderstorms. He also talked about monitoring done on the Old Man to measure vibrations.

Saturday started off bright and early with a drive to the top of the Mt. Washington Auto Road. Although it was sunny at the base, the top proved to be completely clouded in, allowing no view of the surrounding mountains and the glacial features. The group split in half, with one group climbing to the top of the Mt. Washington Observatory and blown with howling 45 mph winds. The other half got to view structural and petrographic maps of the White Mountains and listen to descriptions of the geology of the area; then the two groups switched places. After this, we headed to our cars for some stops along the way down the auto road. Dyke Eusden led



this part of the trip. At our first stop, we saw some graded bedding in the Littleton formation, with great examples of folding there. [See adjacent photo of folded metasediments, photo:Tania Brice Coffin]

We also made several other stops to view micaceous quartzites and schists on Mt. Washington. At one of the stops we decided to eat lunch.



**GSM/GSNH Field Trip, continued**

There was a choice to stay around the stop and eat lunch and hear a glacial discussion lead by Brian Fowler and Thom Davis [*photo above right, photo: Suzanne Wall*], or hike a little way down to eat lunch and hear about the geology of the mountain by Eusden [*photo above left, photo: Suzanne Wall*]. It was quite a task to eat lunch at either spot due to the wind gusts.

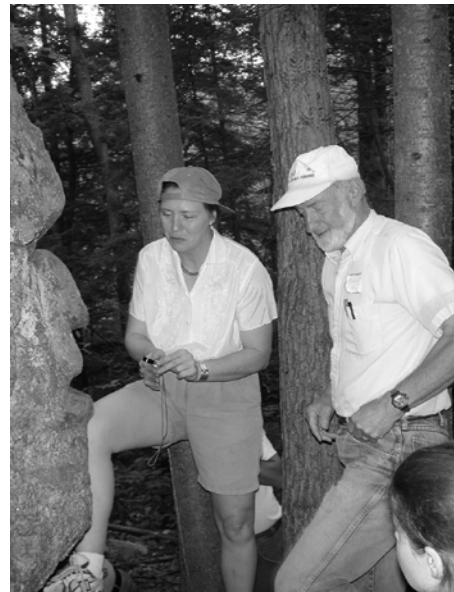


The second to last stop for the day was to see the Rangeley migmatitic gneiss with calc-silicate pods by the Peabody River, and was led by Timothy Allen. The layering of the pods appeared identical to the layering of the migmatite., with pegmatite cross-cutting the outcrop. There was debate on the nature of the pods, if they are intrusions or if they had sunk down into the surrounding rock [*photo below right of Tim giving the word on the pods, photo: Suzanne Wall*]. The day ended with a catered dinner near the campsite and a brief meeting.



The next day began with a stop to observe the roadcuts in Shelburne, NH. The roadcut was filled with a few faults, and a mafic, migmatite dike and quartz intrusions. The next stop was the Old Man of the Valley, which consists of a two glacial boulders brought down by ice on top of each other. Woody Thompson led this part of the trip. This “Old Man” is more accessible, and can be touched by everyone. There was some speculation if this Old Man is completely natural, or if his face received a little help being formed. [*See photo below left, photo: Doria Kutrubes*] This was a great photo opportunity, and also a good opportunity to view hawks, which were calling to each other in the surrounding trees.

The next place we went was to see a glacial moraine. Woody Thompson led this part of the group, discussing how the moraine was formed by the Laurentide Ice Sheet. After this, we all got an opportunity to see and even stand on a





## GSM/GSNH Field Trip, continued

roche moutonnee, with one side smooth, where the ice intruded, and the other side jagged, where the rock was plucked. *[Photo of Woody describing the moraine below left, photo: Suzanne Wall]*



We then went to see the outcrops along the Androscoggin River. The rocks here are either aluminous schists or schistose gneisses, which are intruded by pegmatitic granite veins. There were large intrusions of a reddish color, which was also of interest. Some geologists say that these are garnet; however the color could have also been attained from an unnatural chemical reaction with the river. The next stop after this was Mt. Jasper, with a short hike that was about a half



hour to the top. This part of the trip was led by Kurt Masters, an archaeologist from the New Hampshire State Conservation and Rescue Archaeology Program, aka SCRAP. The view at the top was clear and you could overlook the region. This is where we stopped to eat lunch. There was also the option to hike a little further and see a cave of banded rhyolite. *[See photo of Kurt at cave entrance, photo: Suzanne Wall]* This was a somewhat steep hike, but well worth it. Unfortunately, we weren't allowed to take samples of this cave, because it is listed in the National Register of Historic Places and collection of the rhyolite is illegal. The Native Americans used the rhyolite dikes on Mt. Jasper to make their points, knives, and other materials. We also got to hear about archaeology around Mt. Jasper. After we all hiked back down, we said goodbye and headed back to our homes.

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## News of a Legislative Friend and a Former Foe

Dorothy Richter, PG #1

Most GSNH members will recall that the road to passing the bill for licensing Professional Geologists in New Hampshire in 2000 was a rocky one. Along the way, the geologists working on the bill came to know several legislators, some of whom were friendly, others definitely not. I am sad to report that one of our legislative friends has died. Rep. Maurice Goulet, 71, of Bedford, died in August. Maurice was as crusty and curmudgeonly a character that one could imagine. He was Chairman of the subcommittee on licensing and Vice Chairman of the committee that we needed to approve the PG bill. During our first hearing at the start of the legislative process, he seemed antagonistic and sarcastic to those who testified on our behalf. He shocked us with a 62-item "sunrise" questionnaire that required a hastily assembled ad hoc committee to write a lengthy response. We thought he might be a bit mean. How wrong we were! Having survived his 'little test,' Rep. Goulet bloomed into one of our staunchest allies and helped engineer the daring rescue of our bill after some [of] sneaky maneuvers by certain legislative foes. Long after the PG bill passed, Maurice remained a friend of

## News of a Legislative Friend and a Former Foe

continued

the geological community by supporting legislation to revive and strengthen the NH Geological Survey. He regularly attended the Joint Board holiday luncheons, and always made a point to greet each PG Board member warmly. We shall miss our friend.

Another colorful legislator, whom we were never able to convert to support the licensing of Professional Geologists, was Rep. Howard "Crow" Dickinson. Mr. Dickinson battled the PG bill vigorously from the start, succeeded in killing the bill the first time it reached the floor of the House of Representatives, and led the opposition the second time it reached the floor tucked inside a new shell. Mr. Dickinson made national news this summer when he was detained at the Manchester Airport for having a loaded handgun packed in his carry-on luggage(!)

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## GSNH Annual Meeting, October 16, 2003

The Annual Meeting of the Geological Society of New Hampshire (GSNH) will take place on Thursday, Oct 16, 2003, at the Cat'N Fiddle Restaurant, Concord, NH. The meeting begins at 6:00 PM with a social hour; the polls also open at 6:00 PM so you can cast your ballot for our new GSNH officer. Dinner will be served at 7:00 PM; our keynote speaker will be State Geologist, David Wunsch. His topic will be "The Old Man of the Mountain". Join us!

If the speaker alone is not enough to draw you, we will also hold a mineral raffle to support the GSNH scholarship programs. Greg Kirby has found two lovely specimens for prizes. Thank you, Greg!

First prize:

A choice specimen of malachite ( $\text{Cu}_2(\text{CO}_3)(\text{OH}_2)$ ) with chrysocolla ( $\text{CuSiO}_3 - n\text{H}_2\text{O}$ ) from the Star of Congo mine in the Republic of Congo. The specimen is typical of the two mineral associations and the deep green of the malachite contrasts well with the robin's egg blue of the chrysocolla. Valued at \$65.00, this miniature was donated courtesy of A Broader Concept, located on Route 28 bypass in Hooksett.

Second Prize:

A small cabinet specimen of tabular calcite from Hunan Province in China will be offered as second prize for the mineral raffle. The specimen has several crystals on matrix and makes for a handsome display specimen. The prize comes from the personal collection of Greg Kirby and is valued at \$45.00.

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## Ground Water Institute for Teachers

Garret Graaskamp, PG

The American Ground Water Trust convened its fourth annual Ground Water Institute for Teachers™ in Waterville Valley, NH on July 8-9, 2003. Thirty teachers spent two days immersed in ground water science concepts through hands-on activities and field trips. The Geological Society of New Hampshire continued its support of the Institute program by sponsoring Steve Beaupre. Steve teaches 8<sup>th</sup> grade Earth Science and Math at the Plainfield School in Meriden, NH. He enjoyed a program that included presentations by local water resource professionals from industry, academia and government agencies. Topics were wide-ranging and included among others, computer ground water modeling of the North Indian Bend Wash Superfund Site in Scottsdale Arizona, the basics of domestic water treatment, and the economics and politics of bottled water plants.



## Ground Water Institute for Teachers

continued

A field trip highlight was the afternoon spent with the USGS at the Hubbard Brook/ Mirror Lake Research facility in Thornton, NH. Ecological research began in the early 1960s at the site and it is now the longest established watershed research facility in the world. The teachers learned about the more recent investigations over the last decade by the USGS of ground water fracture flow and the importance of integrating the ground water information with the 40 years of surface water and ecological data and research that, in 1970, originally demonstrated the reality of “acid rain.”

All the teachers left the Institute with real life experiences and examples that they can use with their students to provide a better “view” of our ground water resource that is so often taken for granted because ground water is out-of-sight and, frequently, out-of-mind.

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## The Status of Groundwater levels in New Hampshire 2003

Tim Wilson, NHGS

The New Hampshire Geological Survey (NHGS) monitors and maintains records of groundwater conditions statewide. Groundwater levels in selected observation wells are measured every month on a year-round basis by staff from NHGS at DES and volunteer readers. This data is analyzed and published by the USGS. Only one of the wells in this network is drilled in bedrock (Hooksett HTW-5). All other wells are finished in stratified drift aquifers. The data presented does not address the condition of bedrock aquifers which are the predominant source of privately drilled water supplies in the state.

Statewide water levels monitored in July 2003 showed an average decrease of 0.87 feet from June of 2003. In comparison to last year however, July measurements increased on average by 0.07 feet from July 2002. Of the 25 wells monitored in New Hampshire last month, 10 wells were below normal, 14 wells were in the normal range and 1 well (Keene KEW-2) showed above normal levels. An interactive map of these well locations can be viewed at <http://nh.water.usgs.gov/WaterData/currghwmap.htm> . Clicking on a well location will bring you to various output formats of tabular data and hydrographs for that well. A more comprehensive look at water resource conditions in NH/VT can be viewed at <http://nh.water.usgs.gov/WaterData/curr.htm> One observation well of interest is located in Warner (WCW-1). This well is equipped with a real time data logger where information is sent daily at specified intervals via radio telemetry for analysis and publication.

August’s round of well monitoring showed an increase in water levels from July 2003. Five wells out of the NH Groundwater Level Monitoring Network continued to decrease from last month. (Yes, even with all the recent rains!) However, wells on average were up by 0.45 feet from last month. In comparison to last year at this time, current water level averages are up by 1.29 feet.

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## Have You Seen These Guys?

Suzanne Wall

“Well what do you think? Are they a hoax?” That was the question Joe Sinnott posed as I examined the three stone heads shown in the adjacent photo. Joe Sinnott, the former Mass State Geologist and inspector of the Widdah wreck, had seen the first head in 2000, and thought it was a hoax,



## Have You Seen These Guys?

continued

until he saw the second head a year later. Mr. Sinnott said “If there was only one, it would be considered an isolated incident, but two; that’s a lot more note worthy.”

The first head (#1) was found in 1990 in a field near Dudley, Mass. by a man who kept the 15 pound stone in a bowling ball bag in his barn. Head #1 would make occasional sojourns in the bag to local bars where the owner would swap stories for drinks. It was on one such outing that the two (man and Head) encountered another patron who had a relative who also kept a stone head in his barn..... Subsequently, the owner of head #1 contacted Mr. Sinnott. “To find two heads in the same town is really, really extraordinary” Mr. Sinnott said. Despite the ignominious decade in the bowling bag, Head #1 made its debut. An article authored by Bill Fortier of the Worcester Telegram and Gazette (Feb.19, 2003), “History Carved in Stone” was published as an inquiry for more information on the two granite heads.

Since the Feb. 19th article, six more carved stone heads have been delivered to Mr. Sinnott for evaluation, bringing the current total to eight. Three of the heads were removed from the ground, some were housed in cellars and barns, one served as a candle holder, and three were seated on fire place mantles for decades. Mr. Sinnott asserts that they were owned by people he did not know and people who do not know each other.

The heads range in weight from 6-25 pounds, weighing ten pounds on average. All are granitic in composition. Mr. Sinnott and Mr. Richard Lynch, a historical researcher from Greenville, RI have photographed and examined all eight of the heads, most of which are from the Quinnebaug River drainage area in south central Massachusetts and northern Connecticut. The most recent arrival, head #8 was found on the Connecticut New York line; greatly expanding the research area. The number of heads and spatial distribution diminishes the probability of a hoax.

As a member of the Mass. Archaeological Society, stone cutter and author of a paper on pre-historic soapstone cutting, I had the opportunity to examine four of the granite heads in detail. The results were startling. I expected to see little diamond –core drill marks, or surfaces polished to remove all marks. As Mr. Sinnott asserted in the Feb 19th article, “There is no evidence that any metal was used to carve the faces.” There were no chisel marks, nor were there any scratches one would expect with diamond saws. On all the stones the bottoms have been leveled by pecking and all the stones are cut in negative relief (inward). All the features are ground and pecked, but grinding appears to be the dominant suite of markings. Vertical lines, especially in the eyes have proven on examination to be mineral lineations, fractures and/or quartz healed partings that have been ground into small vertical stoss and lee ridges. The patina on all the stones is very old and undisturbed, with the exception of #5 which served time as a candle holder. In general the mouths are controlled by fractures and healed partings. The mouths are ground in a series of coalescing circles. The same cutting techniques were used in all the stones however there is enough variance in style and materials to indicate they were probably made by different people. There are clear design differences among the stones: #5 has brow ridges; vugs were exploited in #3; #1 has a nose and upper lip; #7 is pentagonal and the features are ground very close to the outer edge; and #2 has almost almond shaped eyes and a deeply concave mouth.

As a result of the examination of the four heads, I found no evidence of chisel marks, or diamond drill, or diamond saw marks. What has intrigued me the most is the similarity in stone cutting techniques. However, until the known locations are excavated and provenance established, the age of the heads remains undetermined. Because the geographic area has recently expanded across the Connecticut River, it will be interesting to hear if the stone Heads have cousins languishing in barns and bowling ball bags in South Central New Hampshire. “Well, what do you think? Are they a Hoax?”



# Geological Society of New Hampshire

## 2003 Annual Meeting

**Speaker: David Wunch, State Geologist of NH**  
**Topic: "Old Man of the Mountain"**

**When: Thursday, October 16, 2003**

**Where: Cat 'n Fiddle Restaurant**

Manchester Street, Concord, NH

6:00 pm Social Hour

7:00 pm Dinner

Polls open 6:00 to 7:30 PM

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**GSNH Annual Meeting, Thursday October 16, 2003**

Dinner will be a buffet.

Reservations: \_\_\_\_\_ members @ \$18.00 \_\_\_\_\_ non-members @ \$20.00 (in advance)

*Half-price for students (must show student ID card)*

*Reservations will be taken until Monday afternoon, October 13, 2003*

*\*\*There will be a \$2.00 surcharge for those paying at the door without reservations\*\**

Make checks payable to: Geological Society of New Hampshire

Mail to: Dave Wyman, Buoy Technologies, Inc., 31 Columbus Ave., Concord, NH 03301

phone: 603-224-9031 or [davew@buoytec.com](mailto:davew@buoytec.com) for information

Name: \_\_\_\_\_

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!

- Fall Dinner Meeting Thursday, October 16, 2003 6 PM Cat n' Fiddle Restaurant, Manchester St., Concord, NH. Dr. David Wunsch, NH State Geologist will speak about the Old Man of the Mountain.  
Note: This is also Earth Science Week 2003.
- BOD Meeting December 11, 2003, 6 PM at DES, Concord, NH
- Winter Dinner Meeting Thursday, January 8, 2004 6PM Cat n' Fiddle Restaurant, Manchester St., Concord, NH.
  - BOD Meeting March 11, 2004, 6 PM Place to be decided.
- Spring Dinner Meeting Thursday, April 8, 2004 6PM Cat n' Fiddle Restaurant, Manchester St., Concord, NH.
  - Summer 2004 Geology Field Trip

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



Your membership status is listed on the mailing label.