



# Granite State Geologist

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[www.gsnhonline.org](http://www.gsnhonline.org)

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## **WELCOME SUMMER! IN THIS ISSUE:**

- **Message from the President**
- **NHGS Mappers Workshop**
- **Spring Groundwater Levels**
- **GSNH Summer Field Trip Announcement**
- **Geology In the News**
- **NH PG Statute Celebrates 10 Years!**
- **.....and all Sorts of Good Stuff!**

## **MESSAGE FROM THE PRESIDENT** Jutta Hager, GSNH 2009-2010 President



Although a week later than usual, the spring meeting at the Red Blazer brought another substantial turnout to hear Dr. Orrin Shane speak about his involvement with the world heritage site of Catalhoyuk in Turkey. The talk reflected his vast familiarity with the project and was a good combination of archaeology and geology. Kudos to Tina Cotton for getting him as a speaker, and thanks to everyone for helping work out the technical details of microphone setup and internet connections.

We also thank Melissa Smith of UNH for continuing our student poster “tradition” by reprising the poster from the Northeast GSA meeting describing her research on the atmospheric behavior and deposition of mercury.

We had three minerals and therefore three raffle winners at the April meeting: Adam Galonski won the epidote crystals, Julie Spencer the azurite sample, and Russ Wilder the calcite mass.

As described elsewhere in the newsletter, the summer field trip has come together, with the details finalized. It's a go, rain or shine, on Saturday, August 7<sup>th</sup>, with multiple stops and a catered lunch. What else could we expect after last year? In case summer memory lapse sets in, we'll be sending out a reminder email notice as well. Also, remember to check for updates and new information about the trip and other items of interest on the GSNH web site. Rich Mechaber has been keeping it quite current.

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## **NHGS ANNUAL MAPPERS WORKSHOP** NH Geological Survey

The NHGS held its Annual Mappers Workshop on Monday March 29, 2010 at the NH Department of Environmental Services in Concord. The Workshop was convened earlier this year, in an attempt to meet with the contracted mappers before the summer mapping season starts, and to avoid conflicts with other beneficial meetings such as the Friends of the Pleistocene (FOP). NHGS staff presented highlights of projects and programs ongoing over the last year. Kevin Stetson and Stan Sadkowski, from Sanborn, Head & Associates, spoke on a method of monitoring the parameters of drilling rigs and correlating that data with subsurface soil and bedrock conditions. The recently completed NHGS 1:24000 Surficial and Bedrock maps were discussed as well as being on display in the Poster Session. The NHGS wishes to thank Hager GeoScience and Sanborn, Head and Associates for coffee and donuts at the Poster Session.

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## **SPRING GROUNDWATER LEVELS** Submitted by NHGS

Ground-water level measurements for March 2010, April 2010 and May 2010 were collected by NHGS staff member Genevieve Al-Egaily.

March 22 - 25, 2010 - The statewide average ground-water level showed a 2.07-foot increase from February. Increases were seen in all wells. With the heavy rainfall and flooding, the water level in the Deerfield well exceeded the record high recorded in April 2007 by 0.10 feet. The water level in the Epping well was 0.01 feet below the record high recorded in June 2006. Water levels in the Deerfield and Epping wells have been recorded since November 1984 and November 2005 respectively. When compared with March 2009, the statewide average ground-water level increased 1.14 feet. The average ground-water level in the new bedrock wells showed an increase of 1.58 feet when compared with February. Increases were seen in all of the bedrock wells except for the deeper of the two wells in Stewartstown.

April 26 – 29, 2010 - The statewide average ground-water level showed a 0.39-foot decrease from March. When compared with April 2009, the statewide average ground-water level increased 0.09 feet. The average ground-water level in the new bedrock wells showed an increase of 0.45 feet when compared with March. Increases of 3.08 and 4.19 feet were seen in the Stewartstown wells. These are the only bedrock wells where a significant snow pack still remained last month, and recharge from the snow melt may be a contributing factor to the increased water levels in these wells

May 24 - 28, 2010 - The statewide average ground-water level showed a 1.00-foot decrease from April. Decreases were seen in all wells except for the well at the Concord airport, which showed a 0.15-foot increase. When compared with May 2009, the statewide average ground-water level increased 0.09 feet. The average ground-water level in the new bedrock wells showed a decrease of 1.61 feet when compared with April.

For historical groundwater data, please go to <http://nh.water.usgs.gov/WaterData>.

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## **GEOLOGY IN THE NEWS**

Seacoast Online article ("*Storm Reveals Sunken Forest Along NH Seacoast*") reports that recent storms washed away sand at the northeast end of Jenness Beach on the N.H. seacoast, revealing stumps of trees that are several thousand years old. The instance of extremely low ebb tide and periods of increased storm activity have revealed the stumps of the cedar and pine trees, dating back more than 3,600 years, according to carbon dating. They've been seen only four other times in recent history, in 1940, 1958, 1962 and 1978, said Herlihy, though there has been at least one other non-recorded sighting.

The belief is there was forest extending far beyond what the elements have managed to uncover, said Herlihy, as the coastlines of world were altered radically due to glacial shifts and rising waters. He said the New Hampshire coastline might at one time have stretched up to 75 miles farther out to sea from where it is at present. One clue supporting that theory are the stumps of the cedars and pines. Those species do not thrive if their roots are in salt water. The story says a similar forest exists further north, near Odiorne Point in Rye, but is visible at a number of low tides. "When portions of the forest were uncovered previously, the original Atlantic Cable, laid in 1874, could be seen among the stumps."

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## **NEW HAMPSHIRE RESIDENT RECEIVES PRESTIGIOUS REGIONAL EPA ENVIRONMENTAL AWARD**

Joe Ayotte of the US Geological Survey (USGS) NH/VT Water Science Center has received the Individual Environmental Merit Award from EPA in ceremony recognizing 40th anniversary of Earth Day. Joe Ayotte and his colleagues at the US Geological Survey NH/VT Water Science Center created tools to help regulators better predict arsenic occurrence and better understand the correlation between public health and arsenic, one of the most common contaminants found in New England groundwater. Research by Ayotte and his colleagues also allows regulators to understand the correlations between geology and arsenic. Their work has been cited by scientific papers at least 87 times. Other arsenic investigations in New England have used Ayotte's work as a foundation for their own. And beyond the scientific community, Ayotte and the center have made sure that their efforts are used in real life applications. EPA New England has an ongoing project with Joe and the center looking at ways to reduce arsenic flowing into drinking water wells.

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**NEW BOOK TITLED “THE PRESIDENTIAL RANGE – ITS GEOLOGIC HISTORY AND PLATE TECTONICS” NOW AVAILABLE** Submitted by NHGS

A new book and accompanying map that describes the bedrock geology and geologic history of the Presidential Range in the White Mountain National Forest is now available for purchase through the New Hampshire Department of Environmental Services. The book, titled “The Presidential Range – Its Geologic History and Plate Tectonics” was written by Professor Dykstra Eusden at Bates College, and is published by Durand Press of Lyme, New Hampshire. The book includes the cumulative mapping and research of several geology students under Dr. Eusden’s supervision over the course of 10 years.

The geologic mapping and digital representation was partially supported by the New Hampshire Geological Survey, a bureau of DES, through the cooperative USGS STATEMAP Geologic Mapping Program. The book contains color illustrations and photographs of geologic features of interest located in the field and along the Mt. Washington auto road. The corresponding locations of the photo stops and features are identified on the map so hikers may find them in the field.

The accompanying geologic map is printed on weather resistant paper, and shows the geology of the mountains overlain on a shaded-relief topographic map that gives the viewer a 3-D interpretation of the landscape. Dr. David Wunsch, the New Hampshire State Geologist commented “*Dr. Eusden’s book and map contain a great combination of outstanding graphics and photos that compliment the geologic history and story of the Presidential Range. This book will be a “must have” for any hiker or naturalist who spends time in the White Mountains.*” The book and map are only available in hard copy and may be purchased for \$25 by contacting the DES Public Information Center at 603-271-2975.

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**UPCOMING MEETING: WATER AND EARTH: THE JUNCTION OF QUATERNARY GEOSCIENCE AND HYDROGEOLOGY** Submitted by Woody Thompson

The Canadian Quaternary Association (CANQUA) and the Canadian Chapter of the International Association of Hydrogeologists (IAH-CNC) invite you to attend their first joint meeting, organized by the Geological Survey of Canada and the Institut national de la recherche scientifique – Eau Terre Environnement (INRS-ETE). The conference will be held August 28-31, 2011 in historic Quebec City, a world-heritage site.

Under the theme "Water and Earth: The junction of Quaternary Geoscience and Hydrogeology", the organizing committee wishes to promote valuable exchanges between hydrogeologists and Quaternary scientists of all persuasions during this long overdue event. The conference will consist of broad-scoped thematic sessions led by keynote speakers of international stature as well as a series of more specialized thematic sessions. In addition to the conference program, the meeting will include short courses, thematic workshops as well as pre- and post-meeting field trips.

Participants will have the opportunity to experience the "joie de vivre" and the many charms of Quebec City and its surrounding area. Suggestions for Technical sessions as

well as volunteers for session chairs are welcome. please visit web page <http://geohydro2011.ca>. Call for abstracts will close by December 15th 2010, upon acceptance, the authors will be asked to submit a 4 to 8 page paper by May 31st 2011. Looking forward to seeing you in Quebec City! Au plaisir de vous voir à Québec! On behalf of the organizing committee, Michel Parent, Ph.D., **Ressources naturelles Canada, Commission géologique du Canada, CGC-Québec, 490, rue de la Couronne, Québec (QC) G1K 9A9, Téléphone: (418) 654-2657, Fax: (418) 654-2615, E-mail: Michel.Parent@rncan.gc.ca**

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**NEW HAMPSHIRE PG STATUTE CELEBRATES 10 YEARS** Submitted by Dorothy Richter, P.G.

It is hard to believe that it has been ten (10!) years since the bill establishing the licensing of Professional Geologists in the State of New Hampshire was signed into law (RSA 310-A:118-139) by then Governor Jeanne Shaheen. Many GSNH members will never forget the melodramatic 2½-year roller coaster ride we had in getting the bill passed. It would never have happened without the individual contributions made by multiple members of the New Hampshire geologic community, GSNH members in particular. You know who you are.

Fortunately, any controversy or melodrama is long gone. The PG license is now well respected in the State, as we all knew it would be, and the New Hampshire Board of Professional Geologists (PG Board), which issues the licenses, is firmly established and running smoothly. It seems timely to provide an update of the Board's activities to the GSNH membership.

The PG Board is a part of the Joint Board of Licensure and Certification, administered by Louise Lavertu, Executive Director. The PG Board consists of five professional geologists (currently Dorothy Richter, John Cotton, Thomas Shevenell, Paul Rydel and the State Geologist David Wunsch) and one public member (Ronald Cook). Appointment to the Board is made by the Governor and Executive Council for five-year terms, except for the State Geologist, who is a Board member by definition in the statute. The staff of the Joint Board smoothly performs most of the administrative duties.

In the past decade, the PG Board has issued 794 PG licenses, 639 of which are in good standing as of June 1, 2010. The drop of 155 licenses is primarily due to non-renewals, many of which occurred during the first round of renewals following the end of the 'grandfather' period. The geographic distribution of active PG licenses is:

|               |     |             |    |              |    |
|---------------|-----|-------------|----|--------------|----|
| New Hampshire | 235 | Connecticut | 25 | New Jersey   | 15 |
| Massachusetts | 208 | New York    | 32 | Rhode Island | 6  |
| Maine         | 44  | Vermont     | 21 | Other States | 53 |

The Joint Board staff has administered the ASBOG examination, required for PG licensure in New Hampshire and other states, since the end of the initial 'grandfather' period for licensing without examination. We have data for September, 2007 - March, 2010, during which 42 people took the Fundamentals of Geology portion of the examination, and 32 passed (76%). In the same time frame, 32 individuals took the Practice of Geology portion of the test, and 31 passed (97%). The New Hampshire pass rates are much higher than the national averages of 58% and 71%, respectively, reported by ASBOG for the same time period.

The continuing education requirements of the PG statute seem to have been met by almost all licensees. The Joint Board contracts an outside party to randomly select 5% of the pool of PG licensees for an annual audit of compliance with the continuing education requirements. The PG Board is not informed whom is selected for audit and does not review results unless an

individual refuses to cooperate with the audit. Be sure to keep good records of your continuing education activities, and please cooperate with the Joint Board staff if you are selected for audit. GSNH provides many wonderful opportunities to help fulfill the continuing education requirements.

Unlike many other State licensing boards, the PG Board has not received any formal complaint about a NH PG since the Board was established. To date, there have been only three disciplinary matters brought before the Board, all of which were uncontested. Two of the disciplinary actions were related to non-compliance with the continuing education requirements of the statute uncovered during the annual audits, and resulted in involuntary revocation of the licenses. One disciplinary matter was due to a felony conviction of a licensee for crimes unrelated to the practice of geology, and resulted in voluntary surrender of the license.

The State's ethics and right-to-know statutes require that *all* questions, concerns, clarifications, suggestions, formal complaints, or any other matters to be considered by *any* State Board, including the PG Board, must be submitted in writing to the Board offices. All State Board business must be conducted only during scheduled meetings, for which minutes are kept and which are open to the public. Oral or other informal communications by Board members with members of the public or licensees outside of Board meetings are not permitted to avoid the appearance that any individual speaks for a Board.

Members of the PG Board are explicitly instructed not to respond to any individual or to discuss Board matters outside of scheduled meetings. Please *do not* contact individual PG Board members with your questions, but *do* send them in writing to the Joint Board offices. In most cases, the Joint Board staff will promptly answer administrative questions, and more substantive issues will be considered by the PG Board at its next meeting.

Please remember, too, that the PG Board cannot provide opinions about many professional issues. The role of the PG Board is limited to licensing Professional Geologists in the State of New Hampshire in accordance with the licensing statute. The purpose of that statute, for which we all worked so hard, is to regulate the practice of geology "in order to safeguard life, health, property and the environment and to promote public welfare" (RSA 310A:119). Please do visit the PG Board website for information and to review the statute that governs the Board and its administrative rules at [www.nh.gov/jtboard/geo](http://www.nh.gov/jtboard/geo).

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## **GSNH MEMBER RIDING PAN-MASS CHALLENGE**

As announced during the April dinner meeting, GSNH member/Society Vice President/membership chair Doug Allen will be participating in the 2010 Pan-Massachusetts Challenge (PMC), a two-day, 192 mile bicycle ride fundraiser to benefit the Dana-Farber Cancer Institute. With 5,000 riders participating this year, the PMC hopes to raise \$31 million for cancer research and advanced treatment at Dana-Farber! As Doug mentioned during the dinner meeting, he has two challenges - first, to ride his bike 192 miles (Sturbridge to Provincetown, MA) in two days! Second, his goal to raise \$4,200 in donations for Dana-Farber. Please consider generously supporting Doug's efforts and cheering him on! The PMC is considered a nationwide model of fundraising efficiency with 100% of every dollar donated going to cancer research at treatment. Donations for Doug's ride can be made online at: [www.pmc.org/profile/DA0092](http://www.pmc.org/profile/DA0092). Checks made payable to "PMC" can be mailed directly to Doug at PO Box 295, Warner, NH 03278. For more information, including corporate sponsorship opportunities, please call Doug at 603-391-3320. Thank you!

## NH BOARD OF GEOLOGISTS POSITION AVAILABLE

The NH Board of Professional Geologists will have one open position later this year when Dorothy Richter completes her current term. Resident NH PGs who wish to be considered for appointment to the Board may contact the NH Joint Board of Licensure and Certification at (603) 271-2219 for further information.

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## GSNH CONTINUES POSTER SESSIONS Submitted by GSNH Education Committee

Melissa Smith presented her student poster at the GSNH April 2010 Dinner Meeting. This is the second GSNH Dinner Meeting at which we have had a student poster presented. They have been well received and we hope to continue. If you see other poster presentations or know of a student who could present, please contact the GSNH Education Committee at: [jt\\_cotton@comcast.net](mailto:jt_cotton@comcast.net). Melissa' Abstract is below.

**SMITH, Melissa A.**<sup>1</sup>, BRYCE, Julia<sup>1</sup>, MAO, Huiting<sup>2</sup>, and TALBOT, Robert<sup>2</sup>, (1) Department of Earth Sciences, University of New Hampshire, Durham, NH 03824, [melissa.smith@unh.edu](mailto:melissa.smith@unh.edu), (2) Climate Change Research Center, University of New Hampshire, Durham, NH 03824

Mercury (Hg) is a global contaminant of concern due to its known toxicity and ubiquitous presence in the atmosphere. The primary source of Hg to terrestrial and aquatic ecosystems is atmospheric deposition. In an effort to understand the atmospheric behavior and deposition of Hg, event-based wet deposition samples were collected from July 2006 to September 2009 at Thompson Farm (TF), a near-coastal rural site in Durham, NH. These samples have been analyzed for total aqueous mercury. Seasonal trends in Hg wet deposition exist at TF. Lower deposition occurs in the winter with an average total deposition of 1.56 mg m<sup>-2</sup> compared to the summer average total deposition of 4.71 mg m<sup>-2</sup>. Similar trends have been observed at Mercury Deposition Network (MDN) sites located throughout the Northeastern United States. The deposition values at TF are typically elevated compared to those reported at MDN sites located in the adjacent state of Maine, possibly reflecting the proximity of TF to urban sources. In-depth analysis will be conducted using meteorological data and concurrent measurements of continuous gaseous elemental and reactive mercury to understand the mechanisms contributing to the observed variations in Hg wet deposition.

## DRINKING WATER AND PRIVATE WELLS Submitted by NHGS

Governor John Lynch proclaimed May 2 - 8, 2010 as Drinking Water Week. Two of the biggest challenges with respect to drinking water in New Hampshire, according to the state's Department of Environmental Services (DES), are that users of private wells may be at risk without proper testing and treatment of the water, and public water systems are relying on old infrastructure that's sorely in need of replacement or upgrading.

Citing research indicating that 20 percent of private wells in the state have unsafe levels of arsenic, and that even more have unsafe levels of radon, DES urges private well owners to test their well water every few years. Contamination from salt and other human-caused contaminants such as the gasoline additive MtBE is less common, but does occur. DES estimates that 36 to 40 percent of New Hampshire residents rely on private wells for their drinking water at home, with the rest relying on public water systems, which are closely regulated. There are currently no statewide testing or treatment requirements for private wells, although work done by well contractors and pump installers is governed by state rules.

Public water systems have troubles of their own. Water supply sources (wells, reservoirs, dams), intake structures, pumps, treatment facilities, storage tanks, and underground water lines all need to be maintained and sometimes periodically replaced. Much of the water supply infrastructure in New Hampshire's cities and towns is 50 to 100 years old. The federal stimulus money that reached New Hampshire for drinking water projects left another \$577 million in drinking water projects unfunded over the next 20 years, according to the U.S. Environmental Protection Agency.

"New Hampshire is glad to be getting the federal stimulus money, and the state's water suppliers were eager to apply for it," noted Sarah Pillsbury, administrator of the Drinking Water and Groundwater Bureau at DES, "but we had over \$260 million in requests for only \$19 million in stimulus money."

New Hampshire's top drinking water issues and other related topics are covered in the New Hampshire Water Resources Primer, which is available from DES at 271-2975 and at [www.des.nh.gov](http://www.des.nh.gov) (look under "Hot Topics").

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### NEED A GEOLOGY FIELD POUCH?

I (Julie roller) have designed these sturdy field pouches 26 years ago and have been selling them to students and professionals across the U.S. and beyond ever since. Numerous universities consistently order these pouches, including UC Santa Barbara, UC Santa Cruz, Western Washington University, Colorado College of Mines, Northern Arizona University, Montana State University & University of New Mexico to name few. I do want to get the word out to Geologists that these affordable, easy-to-use pouches "designed by a geologist" are available. They are great for field camp, graduate work, and professionals in the field. My website is [www.plateaudeign.com](http://www.plateaudeign.com) or contact Julie Roller, Owner, Plateau Design, Santa Cruz, CA or by calling 831-331-3234 (cell). **Note: This product is not endorsed by the GSNH but is provided herein for informational purposes only.**



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### HITCHCOCK'S GEOLOGIC RELIEF MAP

Submitted by Wally Bothner, UNH Professor Emeritus of Geology

Over a ten-year period Charles H. Hitchcock, Dartmouth Professor of Mineralogy and Geology (1868-1908) and New Hampshire's second State Geologist (1868-73), mapped the State and adjoining areas with a few assistants, wrote the monumental 3-volume



Geology of New Hampshire (1874-78) and built three relief models at scales of one inch to the mile horizontally and one inch to either 1000' or 2500' vertically. The first of these, measuring 12 x 15 feet, is housed in newly renovated James Hall on the UNH campus (the others are in the Fairchild Tower at Dartmouth and the State Library in Concord). As part of the James Hall renovation at UNH, the Hitchcock map was restored to illustrate all of the geology in New Hampshire, northeastern Vermont, and western Maine from his 1878 Map Atlas of the Geology of New Hampshire and from his smaller scale, more generalized 1877 compilation of Vermont and New Hampshire.

The relief model at UNH was exchanged for Hitchcock's rock and mineral collection in 1893-4 after the NH College of Agriculture and Mechanic Arts separated from Dartmouth College and moved to Durham, later to become the University of New Hampshire. The map was moved in three sections and originally installed on the third floor of Thompson Hall where geology was first taught. Shortly after the Department of Geology was established, the map was moved to Conant Hall and repainted by Professor T. Ralph Meyers in 1933. He generalized Hitchcock's geology to illustrate the major elements of the "not-so" granite state. The map accompanied the final move of the Department to James Hall in 1966 and stood for some 43 years in the lower foyer. Now fully restored with colors that for comparison purposes correspond closely to the most recent Geologic Map of New Hampshire (Lyons et al., 1997), the Hitchcock map occupies a prominent place on the third floor beneath a special skylight where it can be viewed easily from the balcony (see <http://www.unh.edu/esci> for links to building renovation and map restoration videos).

Hitchcock's geologic map illustrates the distribution of some 40 key lithologic units accurately and in detail appropriate for that scale. His original map data were carefully transferred from paper copy (scale 1" = 2.5 miles) to the relief map. In that process more and more of Hitchcock's keen observations became "AHAH" moments for us. To a remarkable degree his map anticipated many of the geologic features of the modern maps. These include: stratigraphic distinctions between what are now the Rangeley and Littleton Formations; the distribution of "Coos" conglomerates (now Silurian Clough Formation) and the fold nappes of the Bronson Hill; associations of gold and copper deposits in his Lyman and Lisbon belts (now Ordovician Ammonoosuc and Partridge Formations); isolated masses of Taconic slates/schists as the major Taconic klippe in Vermont; the Fall Mountain klippe of western New Hampshire; a trail of soapstone bodies that trace the Concord tectonic zone; the lithic distinction of "Bethlehem gneisses" are now known as the Oliverian Dome rocks; high-level intrusions reflected in the "porphyrys and breccias" (Moat Volcanics and associated hypabyssal rocks) as ring structures, fault blocks and screens in the Ossipee Complex and White Mountain batholith; discontinuous "Cambrian slate" that mark the faulted borders of the Connecticut Valley Trough (Silurian unconformity/Dog River fault zone and the Monroe Fault Zone); and "Bands of Quartz" in southern and southwestern New Hampshire that now define Mesozoic brittle faults.

Come visit. James Hall is open weekdays from 8am to 8 pm. Enter through the main door; access to the map is up the central stairs or via elevator to the third floor. More recent geologic maps of New Hampshire (1955 and 1997) and Vermont (1961 and 2010) will be on adjacent walls for ease of comparison. In addition, a full-scale reproduction of William Smith's 1815-17 map of Great Britain and Scotland is on display on the 2nd floor. Weekend access can be arranged with a little heads up notice.

## GEOSCIENCE EDUCATION WEB SITE AWARDED PRESTIGIOUS PRIZE

Visit the winning Web site, Carleton College's [On the Cutting Edge](#). A Web site created at Carleton College to make earth science come alive in the classroom has been awarded the *Science* Prize for Online Resources in Education. In an era in which knowledge of geoscience is fundamental to handling such pressing issues as climate change and environmental degradation, the Web site, known as *On the Cutting Edge*, fosters the sharing of ideas about teaching with the aim of improving education throughout the field.

“In the United States, many students get earth science in seventh or eighth grade—and never have another geoscience class,” says Cathryn Manduca, director of the Science Education Resource Center at Carleton College and a co-founder of *On the Cutting Edge*. “Yet now it is especially important for students in general to understand what is facing us environmentally, and for the workforce to have more and better-trained geoscientists.” *Science* is published by AAAS, the world's largest multi-disciplinary science society. The *Science* Prize for Online Resources in Education (SPORE) was designed to honor and promote the originators of the best online materials available to science educators.

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## NEW VIDEO: “NEW ENGLAND’S NEXT EARTHQUAKE” Submitted by the NHGS

A new earthquake video “New England’s Next Earthquake: The Writing on the Wall” is now posted on ReadyNH and can be viewed at this link; [http://www.nh.gov/readynh/video/next\\_earthquake.htm](http://www.nh.gov/readynh/video/next_earthquake.htm) .

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## EARTH'S OLDEST ROCKS: GET 'EM WHILE YOU CAN *News Source: The Globe and Mail, Tuesday April 27, 2010*

A Canadian prospector has registered a claim to the world's oldest known rock and is selling it piece by piece. The rock is the Acasta Gneiss, a tiny area of the Canadian Shield that's been dated at more than 4 billion years old. Naturally, there's [a YouTube video](#) documenting the process by which Mark Brown, of Yellowknife, NWT, staked his claim. The *Globe and Mail* broke the story quoting Precambrian expert Sam Bowring as skeptical. The super-ancient rock is so intimately mixed with younger rocks that, Bowring says, it would be "a bit dishonest to sell it without dating every single piece of rock." That would make the price rather higher than the C\$149.99 Brown charges for a hand sample.

I have mixed feelings. What Brown has done is no different from what gem miners have done for centuries. As a result, for instance, the amazing zinc minerals of Franklin, New Jersey, are gone. Otherwise they'd just be sitting in the ground. But we love these things to death. Obscurity or depletion seem to be our only choices.

Geologic wonders are something like archaeological treasures, but only the geoheritage movement is doing anything to preserve them. Although there are many "geoparks" around the world, the New World has been barren ground for this movement. I hope this will raise some consciousness. Finally, it is very likely that the Acasta gneiss is not really

the oldest rock in the world, just the oldest we've found so far. When something a little older turns up, maybe the Friends of Ancient Rocks will exist to preserve them for a few centuries longer.

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## **UPCOMING EVENTS**

**JUNE 26-27, 2010** - Gilsum Rock Swap and Mineral Show, Gilsum Elementary School grounds, Route 10 in Gilsum, just north of Keene, NH,

**AUGUST 7, 2010** - GSNH Summer 2010 Geology Field Trip

**August 28-29, 2010** - CONCORD, NH: 47th Annual Gem, Mineral and Jewelry Festival— Capital Mineral Club, Everett Arena, Concord, NH,

**OCTOBER 8 -10, 2010** - 102<sup>nd</sup> New England Intercollegiate Geologic Conference (NEIGC)

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# Geological Society of New Hampshire

## GSNH Summer 2010 Geology Field Trip **Saturday August 7, 2010 Rain or shine**

### Tentative schedule:

- 0930EDT Meet at the Madison Boulder for sign-in and coffee and donuts at the end of Boulder Road, off NH Rte. 113, Madison, NH. (Type: Madison Boulder, Boulder Road, Madison, NH into <http://www.mapquest.com/>)
  - 1000EDT Madison Boulder cooperative agreement ceremony and Boulder site tour with possible visit to Whitten Ledge.
  - 1200EDT Catered GSNH cookout luncheon with salads, desserts, etc. at the Tin Mountain Conservation Center, 1245 Bald Hill Road, Albany, NH
  - 1300EDT Tour of the Redstone Quarry and famous Conway Geothermal Borehole, off US 302, southeast of Conway, NH.
- Approx. 1430 EDT Trip concludes at Redstone Quarry parking site.

CEU certificates will be available at the end of the field trip for 5 credit hours. **Note:** This field trip is RAIN or SHINE. Before you leave for this trip, check the GSNH website for any last minute details: <http://www.gsnhonline.org/index.shtml>

***Reservations:** Since we need have to have a definite number for the cookout, please register in advance. All reservations must arrive before noon on Friday July 30, 2010!!! GSNH will accept field trip reservations by e-mail, which will then allow you to pay at the sign-in. Please note that all reservations constitute an agreement with GSNH for which you will be responsible to pay, whether you are able to attend or not, unless you cancel your reservation by the reservation deadline. Reply via e-mail to: [Wayne.Ives@des.nh.gov](mailto:Wayne.Ives@des.nh.gov). Mail to: Wayne Ives, GSNH Summer 2010 GFT, 78 Clark Street, Franklin, NH 03235*

- \_\_\_\_\_ Advance Member(s) (dues paid) @ \$10.00
- \_\_\_\_\_ Member(s) at the door or non-member(s) with reservation @ \$14.00
- \_\_\_\_\_ Non-member(s) without reservation @ \$16.00
- \_\_\_\_\_ Student(s) with a valid student I.D. (Reservation requested) @ \$10.00

Name(s) \_\_\_\_\_

Address: \_\_\_\_\_

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

(Half the cost of this event may be tax-deductible as a business expense.)



**Geological Society of New Hampshire**  
**PMB 133, 26 South Main St.**  
**Concord, NH 03301**

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