



Granite State Geologist

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WELCOME SPRING!

IN THIS ISSUE:

- Message from the President
- Restoration of Hitchcock Map
- Winter Groundwater Levels
- National Ground Water Awareness Week
- Mineral Talk Boxes Available
- Upcoming April Dinner Meeting Abstract
- UNH James Hall Open House Announcement
- NEIGC 2010 Announcement
- In Memory of Gretchen Rich and all Sorts of Good Stuff!

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



Congratulations to everyone for getting to Alan's of Boscawen for the January meeting, for which we had good weather as well as good attendance (75) despite the change in venue. Steve Arcone of CRREL told us what to expect if we decide to go for an illegal swim in Joe English Pond, so it's probably a good idea to wait until after the Air Force takes care of "the threats below." We also inaugurated our student poster program, with the first poster presented by Adriana Bregani. We hope for continued interest on the part of both students and GSNH members, so spread the word! Thanks again to Muriel Robinette and New England EnviroStrategies for sponsoring the January meeting, and to Muriel for double duty also running the mineral raffle. The raffle winners were Melissa Smith (smoky quartz) and Molly Stark (alabaster). For those of us who didn't know, smoky quartz has the distinction of being the New Hampshire gemstone. We send our best wishes to Mike Burke, who has resigned from the Board in anticipation of moving out of state. In the meantime, we look forward to seeing you all at the April meeting back at The Red Blazer on April 22 (the third Thursday of the month rather than the second), with an archaeological presentation. Hope to see you all there!

RESTORATION OF HITCHCOCK MAP David Wunsch, NHGS

The link below will take you to a video documentary of the restoration of the Hitchcock “3-D” geologic map of New Hampshire, with some parts of the surrounding states of Vermont and Maine included. Charles H. Hitchcock was the 2nd State Geologist of NH and served from 1868-1874 (but he was not the first State Geologist as misstated in the movie—the first was Charles T. Jackson assigned in 1839) and provided huge advancements to the knowledge of the geology of our state during his illustrious career. The restoration was pet project of Dr. Wally Bothner from UNH. Many of you with geologic training from UNH may have had classes from Wally at some time during your career. Wally is a member of the NH Geologic Resources Advisory Committee, the advisory board for NHGS, and a longtime member of GSNH.

This is a wonderful and professionally produced video which should be a great educational tool for the students and the general public about NH history, science, and geologic maps. As Wally points out, Hitchcock created the map in just 10 years (which is relatively short when you factor in the long, NH winters) using a horse and buggy. The map is made of wood and plaster, and was really advanced for the time when you consider it was an accurate, scaled representation of the topography and geology. Funding for the restoration was mainly through public and private donors (the NH way!). To see the 18 minute video go to <http://vimeo.com/8972779>.

WINTER GROUNDWATER LEVELS

Ground-water level measurements for December 2009, January and February 2010 were collected by NHGS staff member Genevieve Al-Egaily.

December 21 - 24, 2009: The statewide average ground-water level showed a 0.09-foot decrease from November. When compared with December 2008, the statewide average ground-water level decreased 0.88 feet. Decreases were seen in all wells except Ossipee, Greenfield, and Colebrook which showed increases of 0.03 feet, 0.53 feet, and 0.07 feet respectively. The average ground-water level in the new bedrock wells showed an increase of 1.29 feet when compared with November. The only well to show a decrease was the shallow Concord well which had a decrease of 0.40 feet.

January 25 – 28, 2010: The statewide average ground-water level showed a 0.30-foot increase from December. When compared with January 2009, the statewide average ground-water level decreased 0.06 feet. The average ground-water level in the new bedrock wells showed a decrease of 0.72 feet when compared with December. The water levels in the Stewartstown wells appear to be independent from each other. The deeper well showed a 3.24 foot increase while the shallower well showed a decrease of 7.64 feet.

February 22 – 25, 2010: The statewide average ground-water level showed a 0.61-foot decrease from January. Decreases were seen in all wells except Hooksett and Lee which showed increases of 0.06 and 0.70 feet respectively. When compared with February 2009, the statewide average ground-water level decreased 0.05 feet. The average ground-water level in the new bedrock wells showed a decrease of 0.19 feet when compared with January.

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

NATIONAL GROUND WATER AWARENESS WEEK

The Department of Environmental Services (DES) is encouraging everyone with a private well to inspect their well and test their water during National Ground Water Awareness Week, March

7 to 13. Just like an annual inspection for your automobile and regular inspection of smoke detectors in your home, well inspection and testing is important for protecting the safety of you and your family. Approximately forty percent of New Hampshire residents get their drinking water from a private well, but 20 percent of private wells in New Hampshire produce water that exhibit unhealthy levels of naturally occurring arsenic, and even more wells produce water with elevated concentrations of radon for which treatment is recommended. Wells that have not been properly maintained may produce water contaminated with bacteria and other contaminants. Inspecting your well and testing well water is the best way to make sure that your water is clean and safe to drink, but well owners often don't have the right kinds of tests done or do not use accredited laboratories. DES's well inspecting and testing recommendations can be found at www.des.nh.gov/organization/divisions/water/dwgb/well_testing/wells.htm.

TECTONOCYCLE GSNH Education and Outreach Committee

At the October 15, 2009 GSNH Dinner Meeting, your dinner table had copies of the Mineral Industries Institute (Mii @ <http://mii.org/tectonocycle.html>) Tectonocycle. The GSNH purchased these for dinner attendees, in celebration of Earth Science Week 2009. Printed on heavy paper and pre-scored, the Tectonocycle helps demonstrate the concept of Continental Drift due to Sea Floor Spreading and Plate Tectonics. Do you think your local Earth Science Teacher would find these useful, instructive and fun to use with their students? They are \$20 for a classroom set of 25. See: <http://mii.org/tectonocycle.html>. Check with your son's/daughter's/neighbor's local Earth Science teacher and see if they would welcome a donation of a set of these...compliments of your company/employer/self. Plus such a donation is a tax deduction!



UNH JAMES HALL OPEN HOUSE



As most of you probably know, James Hall at UNH has recently undergone a major renovation. After years of planning, moving, constructing, and moving again - we have landed in a beautifully refurbished building! The project has been a real success story and we hope you can come see it. Please join us for the James Hall Grand Opening event on April 21 at 5:00 PM. This reception will include President Huddleston, state legislators, as well as alumni and students from the Departments of Earth Sciences and Natural Resources.

Refreshments and tours of the building will be available. If you are unable to attend, see the James Hall restoration video at: <http://vimeo.com/8995719>.

UNH LECTURE SERIES

On April 21, 2010, the Interdisciplinary Science & Engineering Symposium <http://www.unh.edu/urc/ise.html> will be held and the public is welcome to attend. This symposium is a hallmark part of the university-wide Undergraduate Research Conference and will include many of our undergraduate students presenting their research. You can be on the

Department of Earth Sciences Email by replying to us at: EARTH.SCIENCES@UNH.EDU. The time, date, and locations of a number of public lectures being given at UNH can be found at: <http://www.unh.edu/esci/colloquium.html>, <http://www.nre.unh.edu/events/>
http://www.sustainableunh.unh.edu/biodiv_ed/tapin.html#barlow.

NHGS ROCK AND MINERAL TALK BOXES GSNH Education and Outreach Committee



Need to give a geology talk? As a GSNH Member you may borrow our Rock and Mineral Talk boxes. Complete with hand samples, text, posters, etc. Most anything you would need to give an interesting presentation. They are stored at the NH Geological Survey in Concord, NH and can be reserved by contacting: geology@des.nh.gov

ANNUAL GILSUM ROCK SWAP AND MINERAL SHOW JUNE 26-27, 2010

The town of Gilsum, located in the scenic Monadnock Region in southwestern NH, will once again host thousands of people from all over the U.S for the Annual Gilsum Rock Swap and Mineral Show. More than 60 dealers, swappers, distributors, and collectors can buy, sell, or swap beryl, quartz crystals, semi-precious stones, and rocks and minerals of all sorts at this event. Displays range from newly found specimens in the rough to fossils, prized collector's pieces and even hand crafted jewelry. The event takes place at the Gilsum Elementary School grounds, Route 10 in Gilsum, just north of Keene, NH, and is about 2 hours from Boston. Show hours are 8:00 AM to 6:00 PM Saturday and 8:00 AM to 4:00 PM Sunday June 26 and 27, 2010. Admission is free. Activities include a presentation on prospecting Saturday, daily pancake brunch, bake sale, book sale, a traditional Saturday night New England ham and bean supper with all you can eat home-made pies and a chicken barbeque dinner Sunday afternoon. Admission is free, although donations are graciously accepted. All proceeds go to youth recreation and community programs. For more information please contact Rob Mitchell at the Gilsum Recreation Committee, P.O. Box 76, Gilsum, NH, 03448; call 603.357-9636; or send-mail to [gilsumrocks@\[http://gmail.com\]gmail.com](mailto:gilsumrocks@[http://gmail.com]gmail.com).

FRIENDS OF THE PLEISTOCENE

The Northeastern Friends of the Pleistocene will hold their 73rd annual reunion on the weekend of June 4-6, 2010. The trip will be based in the Hanover-Lebanon area (NH-VT) and will visit sites relating to the Quaternary geology of this part of the Connecticut River valley. The trip leader will be Carol Hildreth, who has mapped the surficial geology of the region for the New Hampshire Geological Survey. Co-leaders include Meredith Kelly and Erich Osterberg (Dartmouth College) and Jack Ridge (Tufts University). The Friends have a long history as a "non-organization" with no dues, passwords, or other requirements. Anyone with an interest in glacial/Quaternary geology is welcome to attend! Registration details for the 2010 trip will be posted on the FOP website:



<http://www.geology.um.maine.edu/friends/> Woody Thompson, NEFOP Secretary , Maine Geological Survey, email: Woodrow.B.Thompson@maine.gov.

DOCTOR'S OFFICE HIT BY METEORITE Submitted by Lee Wilder, NHGS

Several times a month the NHGS gets an inquiry re the meteorite that someone just found. So when I saw this article in the DES clipping service, I was curious. The article stated: "When Lawrence Reese was cleaning up his sub shop in Lorton, Virginia, late Monday afternoon, he heard a tremendous impact outside. "Loud. Loud enough [that] you could hear it, maybe, a block or two away," recalls Reese. "I'm surprised it didn't break our glass. That's how loud it was." Something had come hurtling out of the sky, and crashed through the roof of a nearby doctor's office, landing in an empty examination room.

"I thought something fell in Dr. Gallini's office," explained his partner, Dr. Frank Ciampi. "I thought a bookshelf fell on him, so I ran out and saw that he was okay. And then I looked to the left and saw the debris in the hallway."The debris was smoldering and metallic. The two physicians puzzled over the items. Whatever had come through the roof had broken into several pieces. The two doctors speculated that part of an airliner had come off and fallen through their roof. A nearly circular hole was punched through the building's roof.

An acquaintance suggested the possibility of a meteorite, so the debris was sent to the Smithsonian's Natural History Museum in nearby Washington, D.C. "It's definitely a meteorite," concluded Linda Welzenbach, who oversees the museum's collection of natural space objects. "It has a black fusion crust which tells us that it's passed through the atmosphere." Most meteorites are small -- about the size of a pea. The one that landed in Lorton was bigger than a human fist, before it broke into pieces inside the doctors' office."

You can see a photo of the meteorite at: <http://www.myfoxny.com/dpp/news/national/doctors-office-hit-by-meteorite-0121101264170289032>.

2010 EARTH SCIENCE WEEK "EXPLORING ENERGY"

AGI invites you to take part in Earth Science Week 2010! Being held October 10-16, Earth Science Week 2010 will encourage people everywhere to explore the natural world and learn about the geosciences. "Exploring Energy," the theme of Earth Science Week 2010, will engage young people and the public in learning about Earth's energy resources. AGI hosts Earth Science Week in cooperation with sponsors as a service to the public and the geoscience community. Each year, local groups, educators, and interested individuals organize celebratory events. Earth Science Week offers opportunities to discover the Earth sciences and engage in responsible stewardship of the Earth. The program is supported by the U.S. Geological Survey, NASA, the National Park Service, the AAPG Foundation, U.S. Department of Energy, ExxonMobil, ESRI, and other geoscience groups. More at: <http://www.earthsciweek.org/>

IN MEMORIAM OF GRETCHEN RICH

Gretchen Rich, an Environmental Program Manager in the Waste Management Division, Wastewater Engineering Bureau at the NHDES passed away on Sunday, March 7 from a difficult battle with cancer. Gretchen was the Treasurer of the New Hampshire Geological Society from 1996 to 2000. The NHGS was the precursor to the GSNH and merged with the New Hampshire Council of Professional Geologists (NHCPG) in 2002 under the GSNH name. On her last day, she was comforted by her husband Dan Fenno and her beloved dogs by her side. Donations can be made to either: Sophia Gordon Cancer Center, Inc., 41 Mall Road,

Burlington, MA 01850 or to the Labrador Retriever Rescue, Inc., PO Box 77, Hamilton, MA 01936. We will miss you Gretchen.

NEIGC OCTOBER 8 to 10, 2010

The 102nd New England Intercollegiate Geologic Conference (NEIGC) will take place over Columbus Day weekend (October 8-10, 2010) hosted by the University of Maine at Orono is the latest word, but check for updates on the NEIGC or Glaciogram websites. Contact: Tom Weddle, NEIGC Secretary, Maine Geological Survey or email tom at thomas.k.weddle@maine.gov.



GSNH APRIL 2010 SPRING DINNER MEETING ABSTRACT

Çatalhöyük has been characterized by one writer as a “city at the edge of the beginning” because it appears to be the first very large community to form after the beginnings of an agricultural way of life first characterized by small farming communities well documented throughout the “Fertile Crescent” of the Middle East. Çatalhöyük seems to be the first place on the planet where people began to live together in large numbers and began to deal with the social, economic and political issues that have characterized urban life over the past 9000 years.

But Çatalhöyük is unique in world history for another reason: the painted mural art and sculpture that decorated many of the homes in this ancient community. For reasons we do not yet understand, but for which research is seeking answers, literally thousands of residential buildings at Çatalhöyük were decorated with periodically repainted mural art and three-dimensional sculpture featuring scenes of everyday life and animals important to the people of Çatalhöyük 9000 years ago. This presentation will present recent archaeological findings and mural art from this unique community at the beginning of urban civilization. Images below are from Google Earth and the Çatalhöyük Project



Google Earth screen shot of Çatalhöyük East and Çatalhöyük West village debris mounds in Turkey. White rectangles are shelters over excavations. The mound is over 500 meters in length, or longer than five football fields.

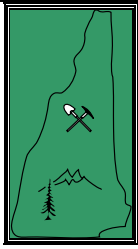
Artist's reconstruction of a small neighborhood of the ancient community.



Excavated building at Çatalhöyük showing small room with sculpture.

Mural painting on plaster wall of building at Çatalhöyük





Geological Society of New Hampshire

2010 SPRING DINNER MEETING

Topic:

“Catalhoyuk, Turkey: the Beginning of Urban Civilization”

Speaker: Dr. Orrin Shane

Dr. Orrin Shane received his PhD in the History of Science and Technology from Case Institute of Technology in 1967. Specializing in the technology of agriculture and agricultural origins, he has conducted fieldwork in the American Midwest, Mexico, Central America and the Republic of Turkey. He has taught at Kent State University and the University of Minnesota, and from 1978 until 2004 served as Curator for Archaeology at the Science Museum of Minnesota. Dr. Shane is currently Principal at Downeast Museum Services, a consulting service for non-profits. He is also a Program Director in the Division for Research on Learning in Formal and Informal Settings at the National Science Foundation. He works in Portland, Maine and Arlington, Virginia. From 1994 until 2000, he served as Director for Public Programming for the Çatalhöyük Project, a 25-year program of research and cultural heritage at the world heritage site of Çatalhöyük in the Republic of Turkey. In this capacity Dr. Shane led a team developing a Visitor Center and Museum for international tourism at Çatalhöyük, as well as on-site interpretation of a 9000-year-old community “at the edge of the beginning” of urban civilization.

**Thursday, April 22, 2010
Red Blazer Restaurant
Concord, NH**

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

GSNH 2010 Spring Dinner Meeting, Thursday, April 22, 2010

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

- Member at the Door or Non-Member with Reservation (\$24.00).
- Non-Member without Reservation (\$26.00).
- Students \$10.00 with valid student ID card (Reservation Requested).

GSNH will also accept dinner reservations by e-mail, which will then allow you to pay at the door. Please note that e-mail reservations constitute an agreement with the Society for which you will be responsible to pay, whether you are able to attend or not, unless you cancel your reservation by noon the day before the Dinner. Reservations will be taken until Monday, April 19, 2010! 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 1.5 hours of CEU contact hour credit.**



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