Granite State Geologist

The Newsletter of the Geological Society of New Hampshire,
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MESSAGE FROM THE PRESIDENT

I was reading about recent USGS work evaluating lithium-bearing pegmatites in the Appalachians and findings of "potential vast undiscovered lithium resources" within rocks that our local geologists have studied for decades. Extracting that lithium (same as uranium or thorium) is technically difficult and likely not financially feasible. Nevertheless, as a critical resource, I'm sure I'll be reading more on how it can or whether it should be mined.

I appreciate that things change over time. Our bedrock has been mapped, sampled, and studied for generations. Traditionally, NH is not known for mining. Yet, we've historically mined iron, copper, mica and moved on to graphite and beryllium. And now to lithium? This is part of what makes geology such an enduring science. We can return to an outcrop, a geologic map, or even a box of samples collected 50 years ago and look at them with new eyes, using new tools under new economic needs to ask new questions that reveal something that wasn't important or recognizable to the geologist who studied them in the past.

The rocks haven't changed. Our value of them and what we ask of them has. May there always be something new to discover in the rocks we thought we already knew.

-- Abby

DATES TO REMEMBER

October 29, 2026 – **13th Annual Pedro de Alba Geotechnical Engineering Lecture:** Foundation Design for Offshore Renewables. UNH. https://ceps.unh.edu/civil-environmental-engineering/opportunities/13th-annual-pedro-de-alba-geotechnical-engineering-lecture

October 2-4, 2026 – **New England Intercollegiate Geological Conference (NEIGC).** Narragansett, Rhode Island. https://www.neigc.info/annual-conference

October 11-17, 2026– **Earth Science Week: "Critical Minerals for a Thriving Society"** https://www.earthsciweek.org/

October 22, 2026 – **GSNH meeting.** Puritan Backroom, 245 Hooksett Rd, Manchester. See details on 2nd to last page of this newsletter.

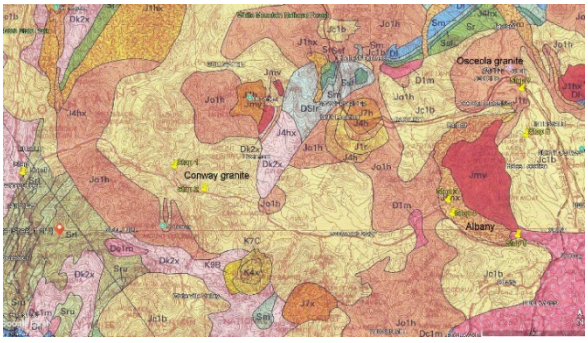
October 19-22, 2026 –**42nd Annual International Conference on Soils, Sediments, Water and Energy**, UMass Amherst, Amherst, MA. https://www.aehsfoundation.org/eastcoast

December 10, 2026 – **GSNH Board of Directors Winter Meeting**

July 2026 GSNH Field Trip Recap

By Nelson Eby

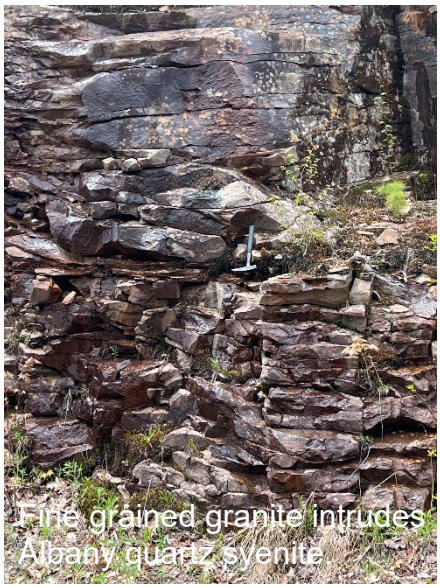
The annual Geological Society of New Hampshire summer field trip was held on July 25, 2026. The field trip investigated the geology of the eastern half of the Jurassic White Mountain batholith. The group assembled at the White Mountain Forest Information Center on the Kancamagus Highway. After a short introductory talk and the issuance of safety vests, we ventured forth on the Kancamagus Highway. To our surprise, and delight, we discovered that the Forest Service had cut-down all the high grass along the edge of the roadway. No Ticks!!!



The first stop was our only view of a mafic igneous rock, a dike in the Conway granite. Mafic igneous rocks comprise less than 0.5% of the exposed rock of the White Mountain batholith. We've seen a lot of Conway samples at GSNH meetings. It was nice to see the Conway in its "natural habitat". This was also our first encounter with *nice-day parking* on the Kancamagus Highway. Stop 2 was also in the Conway granite.

Stop 3 was in the Albany Quartz syenite ring-dike located on the west side of a down dropped block of the Moat volcanics. There was a lot to see at this site, but we had to compete with a swarm of eager campers, picnickers, and river splashers. Wearing safety vests also led to a number of questions about parking. On the south side of the highway a fine-grained granite intrudes into the Albany quartz syenite. The two lithologies show distinctly different fracture patterns.

On one end of the outcrop rock bolts have been installed to inhibit the fracturing of the Albany quartz syenite where it is in contact with the fine-grained granite (perceptive field-trip participant observation).



Fine grained granite intrudes Albany quartz syenite

Albany quartz syenite. Rock bolts used to stabilize the outcrop.

The Albany quartz syenite is exposed in the Swift River on the North side of the road. These outcrops have country rock xenoliths and enclaves of partly digested diorite, a lithology that is not seen at the surface.

Crustal xenolith in the Albany

Partly digested dioritic enclave

Stop 4 was the lunch break and a chance to see what is alleged to be the most photographed covered bridge in New England. The Albany quartz syenite outcrop at the far end of the bridge is believed to be the type section for the Albany.

The last stop (Stop 6, we skipped Stop 5) was to look at the Conway granite that underlies Cathedral Ledge. A spectacular view and a good location for serious outcrop discussions (or meditation).

The intrepid field trip participants after a hard day on the Kancamagus highway (and no ticks), next page.

A copy of the guidebook is available online at https://doi.org/10.13140/RG.2.2.25761.77920

New Hampshire Geological Survey Update

By Shane Csiki, State Geologist and Director

September 2026

This past summer has been another busy one for NHGS. Mike Howley, Josh Keeley and Rebecca LeCain each spent a considerable portion of their time in the field this summer. NHGS' current mapping contractors have also been in the field. It is all important work that directly serves areas where we have been asked to work and provide geological insights, such as for the applied needs of NHDES, and the priorities of the Geologic Resources Advisory Committee (GRAC). But it has been a "boots on the ground" summer, in the John Cotton tradition, as discussed at our April Annual Mappers' Workshop.

In April and May, Dyk Eusden and Nell Davis were in the field mapping the north half of the Lancaster quadrangle for bedrock. The field review for that quadrangle, on May 27, attended by geologist colleagues from New Hampshire and Vermont, was fantastic and great early summer weather greeted us. Dave Converse, Dave Awwiller, Chris Jahrling, Phil Koch, and Lori Summa conducted field work in June in far northern New Hampshire to support the 1:100,000-scale compilation and culmination of his recent years of mapping work there. The field review for Dave's work was on June 10. It too was a

great review that, unfortunately . . . ended on a flat note for NHGS. (The state car got a flat tire at our last stop. But, after driving on the “donut” tire to Colebrook, NHGS got the tire repaired, and then we were on the way safely back to Concord!)

At the end of June, NHGS completed its 2-year mapping effort of the Manchester South 1:24,000-scale bedrock quadrangle. Josh is the lead author of this map, and it comes with 2 plates, plus a Fracture Trace Analysis product, led by Mike Howley. The maps are available through our viewers, and we encourage you to look at these products. Bedrock mapping in Manchester South, in the Merrimack Valley, with much in the way of glacial overburden, combined with some of the most complex bedrock in the state, was the ultimate in “boots on the ground” mapping (including some last-minute visits Josh made in June). However, the experience was instrumental for NHGS and has put us on a strong path for bedrock mapping in urban and suburban environments in the future.

In July and August, Mike Howley and Rebecca spent much of their time in the field for the southern 55% of the North Grantham quadrangle for surficial geologic mapping. They were aided in some of their work by summer intern Alexandra Rusler-Herebia (currently at Plymouth State). This is the first in a series of 5 quadrangles GRAC determined is a priority to map in western New Hampshire. A great field review was held for that work on August 25. Geologist Mike Quinn mapped the south half of the Derry quadrangle (bedrock), while Greg Walsh and Mercer Parker from the USGS mapped the South Merrimack quadrangle (also bedrock). The field reviews for these maps were held on August 4 and 5, were well attended and most productive. As you may gather, a busy summer for geologic mapping here in New Hampshire.

In the coming years, NHGS will be continuing to focus on “boots on the ground” mapping in the New Hampshire tradition, while focusing in those areas that most benefit the people of the state and their present needs. This includes bedrock mapping in southern New Hampshire, and surficial mapping in western New Hampshire, which are the broad priority areas GRAC has determined for the state’s geologic mapping program.

During the upcoming year, Josh is going to be setting aside time to make progress on the 1:24,000-scale surficial geologic map compilation project. This project will continue longer-term shifts toward a greater emphasis on digital forms of geologic mapping products. However, NHGS has been informed by stakeholders, including programs in NHDES, that they feel our paper/PDF maps that we produce remain critical. So, while we will be migrating to a greater emphasis on digital formats, the traditional paper/PDF for our new quadrangle maps will continue to be available for the foreseeable future.

What's Your Board Been Doing?

The GSNH Board of Directors met on Thursday, September 17th via Teams. They discussed the plans for the October 2026 and January 2027 GSNH meetings, potential online payment options for dues and meeting reservations, and updates to the GSNH website. We also discussed logistics around the John Cotton scholarship fund, including the application review process and the creation of a formal committee to review applications.

2026 GSNH Election - Candidates

The candidates for the October 2026 elections are listed below. You may also cast a ballot for a write-in candidate of your choice. The vote will be held during the October dinner meeting; see the last page of this newsletter for meeting details.

President - Abby Fopiano

Abby is a hydrologist and owner of Edgewater Strategies a firm focused on groundwater and wells. Abby has been working in New England's drinking water industry for 20 years – as a consultant, as a water system operator and as a NHDES regulator. Her focus is on source water optimization, groundwater withdrawal permitting, and small public water system operations, upgrades and asset management. Abby is NH Professional Geologist (P.G.), has a Geology degree from the University of Montana and a masters in Hydrology from the University of New Hampshire. She's been serving as the Society's webmaster for many years, served two terms as a Member-at-Large, three terms as Treasurer and is currently looking for her second term as the Society's President.

Council Vice President – Sharon Lewandowski

Sharon is currently a Geologist at the New Hampshire Department of Environmental Services (NHDES) in Concord, New Hampshire and is a registered P.G. in both New Hampshire and North Carolina. She grew up in New Hampshire and earned her B.S. and M.S. in Geology from Bowling Green State University in Bowling Green, Ohio. Prior to coming to NHDES in 2018, Sharon worked in the environmental consulting field in New England and North Carolina. She has been a member of GSNH since 2015 and has previously served on the Board as a Member-at-Large.

Society Vice President – Lea Anne Atwell

Lea Anne Atwell has worked in state service for nearly ten years and currently serves as Supervisor of the State Sites Section within the Hazardous Waste Remediation Bureau at NHDES. Prior to her current role, she worked in the Department of Health and Human Services' Environmental Public

Health Program and with the NHDES lead in school and childcare drinking water program. Before joining state service, Lea Anne spent ten years working in environmental consulting.

Lea Anne is a licensed P.G. in New Hampshire. She earned a Master of Science in Earth and Planetary Sciences from the University of New Mexico and an undergraduate degree in Geology and Environmental Science from Wittenberg University in Ohio.

Lea Anne has been an active member of the GSNH for many years. She previously served as Member-at-Large from 2011–2012 and Secretary from 2013–2016 and is currently completing another term as Member-at-Large. Most recently, she has chaired the John Cotton Scholarship Fund Committee and has worked with the GSNH Education Committee.

Treasurer – Melissa Lombard

Melissa is a Research Hydrologist at the U.S. Geological Survey where she coordinates hydrogeological research projects related to PFAS fate and transport in the Cape Cod Aquifer system, environmental health impacts from restoration of coal mined lands, and links between drinking water contaminants and human health outcomes. With 25+ years of experience, her previous employment includes environmental consulting, environmental regulation, and university research and teaching positions. Her education includes a B.A. from William Smith College, M.S. from Rensselaer Polytechnic Institute, and Ph.D. from the University of New Hampshire all in geology or earth sciences. Melissa is a licensed P.G. in New Hampshire and resides in Antrim. She has been a GSNH member since at least 2007 and is finishing her first term as Treasurer.

Secretary – Mike Howley

Mike is a Hydrogeologist with the New Hampshire Geological Survey, specializing in near surface geophysics, remote environmental monitoring, geologic mapping, hydrogeological studies, and the application of GIS to geologic investigations. Prior to coming to NHGS, Mike worked for 12 years at Hager-Richter Geoscience where he conducted near-surface geophysical and geological investigations throughout the eastern US, and for 4 years as a environmental/geotechnical drill rig operator. Mike is a licensed P.G. in both New Hampshire and New York, and has BS and MS degrees in geology from UNH. Mike has been a member of GSNH since 2005, lives with his family in Bradford and has served two terms as a Member-at-Large for GSNH.

Member-at-Large (Three Positions)

Erin Cederberg - Erin McGuire Cederberg is a geologist at NHDES. She serves as the NH water well program manager. Erin's prior experience comes from the NHDES Brownfields group and in private

environmental consulting. She graduated from the University of Massachusetts Lowell with a BS in Geology in 2021. Erin is working towards her New Hampshire P.G. license, and has been a member of GSNH since 2025.

Dariusz Chlebica – Dariusz is a Senior Geologist with Geosyntec Consultants in Acton, Massachusetts, with over 13 years of experience in contaminant nature and extent assessments and hydrogeologic investigations. His experience includes delineating contamination in groundwater and soil, evaluating groundwater and surface water interactions, fractured bedrock hydrogeology, and developing three-dimensional groundwater flow and contaminant transport models. Dariusz is a licensed P.G. in New Hampshire and New York and a Massachusetts Licensed Site Professional (LSP). He earned a B.S. in Chemistry and Geography from Worcester State College and an M.S. in Geological Sciences from the University of Connecticut where his thesis research focused on developing innovative methods to identify transmissive fractures in open borehole wells. In his free time, Dariusz enjoys spending time outdoors with his wife, Renee, and their Labrador retriever, Tucker. He has been an active member of the GSNH since 2018, regularly attending dinner meetings and annual summer field trips, and looks forward to contributing to the society.

Nelson Eby – Nelson is a professor in the Department of Environmental, Earth and Atmospheric Sciences at the University of Massachusetts, Lowell. He has a BA and MS in geology from Lehigh University and Ph.D. in geology from Boston University. He is a geochemist whose research has taken him to 6 continents and a number of academic institutions and research centers. Nelson has published a number of papers and field trip guides dealing with the White Mountain magmatism of New Hampshire. He was a founding member of GSNH and has twice served as Society VP, first in the mid 1990s and 2020-2026 . Nelson has a life-long interest in GSNH and the geology of New Hampshire.

For more details about all the positions, see http://www.gsnh.org/gsnh-constitution-and-bylaws.html.

Have you renewed your Membership?

Have you renewed your membership yet for 2026? With your membership, you get a discount on dinner meetings and field trips, information of upcoming events of interest to the geological community, voting privileges at Society business meetings, access to cool GSNH gear (see order form on page 20) and automatic subscription to this newsletter! Membership dues also help to support outreach for the greater community.

See the last page of this newsletter for a membership renewal application.

Reminder: GSNH Hats, t-shirts and glasses available!

We have GSNH branded field hats, glasses, and t-shirts still available! See pictures below and order form on page 20.

Calling all Geology Students!

The Geologic Society of New Hampshire is now accepting scholarship applications for the John Cotton Geology Scholarship! To be eligible to apply, a student must be at least one of the following:

1. Pursuing their geological sciences degree from an accredited university or college in New Hampshire;
2. Be a New Hampshire resident pursuing a geosciences degree from any accredited university or college; or
3. Be requesting a scholarship for a project focused on New Hampshire geology.

Priority will be given to students whose study/research aligns with John's career interests of “boots on the ground” groundwater resource mapping and New Hampshire surficial and bedrock mapping. For more information about John Cotton's story and the application portal, please visit the Geologic Society of New Hampshire's JC Scholarship website.

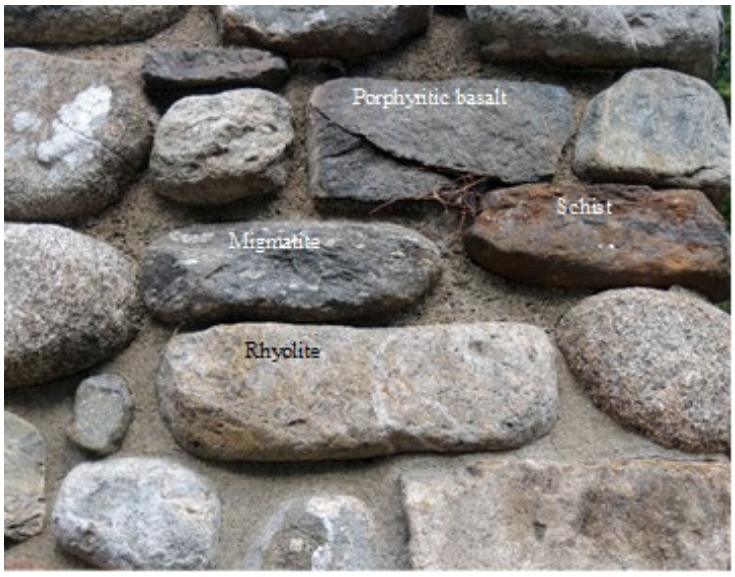
Geological Musings: Castle in the Clouds Building Stones

By Nelson Eby

A variety of local building stones were used during the construction of the Castle in the Clouds estate. Glacial erratics collected from the woods surrounding the Mansion were used to construct the stone walls and the two gatehouses. Ossipee rhyolite was used as the facing stone for the Castle and Conway granite was used for the door and windowsills.

A stone wall encompasses much of the estate. There are two gatehouses, one at the main entrance (Front Gatehouse) and the other on Ossipee Park Road (Maple Lodge). The Gatehouses and estate enclosing stone wall were built between 1913 and 1914. The Main Gatehouse is shown on the right and part of the wall is shown on the next page.

The glacial erratics were derived from northern New England and Canada (there was no border during the Pleistocene). There is an incredible variety of lithologies, encompassing all the major rock groups - sedimentary, metamorphic, and igneous. If you want to spend a fun afternoon try to identify these lithologies. The image on the right is a start.

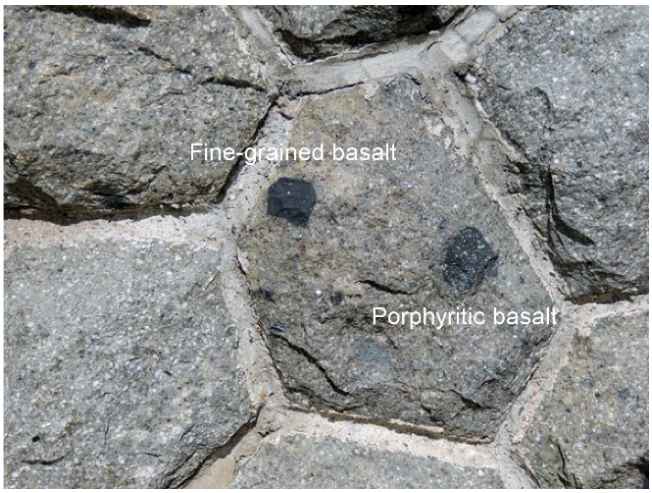


The Lucknow Mansion and the Carriage House are located within the Ossipee ring complex. The complex consists of a complete outer ring dike composed of porphyritc quartz syenite. The interior of the complex consists of rhyolite and basalt lava flows and a large Conway granite body. The Mansion and Carriage House are built on the Ossipee rhyolite. The rhyolite provided the building stone for the walls of these structures.

The rhyolite facing stones are geologically interesting. An earlier *Geologic Musings* described the occurrence of columnar jointing in the rhyolites which led to the formation of polygonal columns. The jointing is a response to fairly rapid cooling and could cause pervasive planes of weakness in the rhyolite. The walls of the Mansion, and Carriage House, consist of polygonal rhyolite blocks. These planes of weakness may have been utilized by the masons building the Mansion and Carriage House.

The rhyolites were emplaced after the period of basaltic magmatism, but prior to ring-dike formation. An examination of the façade of the Mansion and Carriage House reveals the occurrence of a variety of inclusions in the rhyolite which provide information on the earlier geologic history of the complex.

The two images below show several types of xenoliths found in the rhyolite. The image on the left shows a rhyolite block that has a massive basalt and a porphyritic basalt xenolith. The basalt is an earlier phase of magmatism. The image on the right shows a diorite xenolith in a flow banded rhyolite. Diorite is not found in surface outcrops. The presence of the diorite xenolith indicates that this rock type exists at depth under the Ossipee complex and represents an earlier phase of magmatism. A few diorite xenoliths have been found in the Conway granite



The Ossipee rhyolites show a range of textures. An ignimbrite (welded tuff) is shown in the image on the left (next page). An ignimbrite forms when a fast-moving mixture of hot ash, gas, and rocks fragments (a pyroclastic flow) flows down the side of a volcano. The material settles out of the flow and is covered by additional layers of pyroclastics. Given its high temperature (500°C or greater) and the weight of the overlying material, the ash and pumice pieces fuse to form a solid rock. Ignimbrites are exposed at several locations in the Ossipee complex. The most easily reached exposure is below the bridge crossing Coldbrook on the north side of the complex. The figure on the right (next page) shows a window sill of pink granite. This appears to be Conway granite, but the extraction location is not known.

The next time you visit the Castle in the Clouds, walk around the Mansion and look at the facing stones. Part of the geologic history of the Ossipee Mountains is found in these stones.

USGS Cooperative National Geological Map Now Covers 50 States, U.S. Territories

U.S. Geological Survey, September 3, 2026:
https://www.usgs.gov/news/national-news-release/usgs-cooperative-national-geologic-map-now-covers-50-states-us

RESTON, Va. — The U.S. Geological Survey today released Version 2.0 of the Cooperative National Geologic Map, expanding coverage to include Alaska, Hawaii, and most U.S. territories. This version is the first digital map to provide standardized geologic data for all 50 states and most territories. Through the innovative map interface developed by the USGS National Geologic Map Database, anyone can view and interact with the map data to learn more about the Nation's geologic framework, resources, and hazards.

"Mapping our nation is critically important to identify and access the energy and mineral resources we need to support and grow the American economy," **Assistant Secretary of the Interior Andrea Travnicek** said. "Geologic maps highlight locations of minerals, energy potential, and other natural resources. Better information will drive the mineral and energy economy, support advanced manufacturing and national defense, and free us from mineral dependence on foreign adversaries." Map version 2.0 brings some of the nation's most remote and geologically complex regions into standardized view for the first time, for example:

- **Alaska:** Alaska's vast size, remoteness, and geologic complexity have long made it one of the most difficult regions in the country to map comprehensively, and one of the most important,

given its abundant energy and mineral resources. Alaska's geology, from the Aleutians to the North Slope, is now searchable by age, material, and rock type, the kind of detail that can guide resource exploration in a state with incredibly abundant energy and mineral resources. Previous USGS efforts to synthesize more than a century of work conducted by the USGS and the Alaska Division of Geological & Geophysical Surveys made the rapid inclusion in version 2.0 possible.

- **Hawaii:** Despite the challenges of mapping in heavily vegetated and a rapidly evolving geologic setting, Hawaii's geology from Ni'ihau to the Big Island was mapped in detail by the USGS, including basalt flows, rift zones, and volcanic hazard areas. Providing this information as a foundational map supports hazard monitoring, groundwater characterization, and land-use planning.
- **U.S. Territories:** Most U.S. territories are included for the first time, spanning volcanic islands in the Pacific to coral-built islands and coastal terrain in the Caribbean. This includes all of Puerto Rico, the U.S. Virgin Islands, and Guam; parts of the Commonwealth of the Northern Mariana Islands, and part of American Samoa.
- These maps also reflect decades of mapping history, from World War II military geology studies to locally published updates of older USGS maps, and state-of-the-art compilations from the past year.

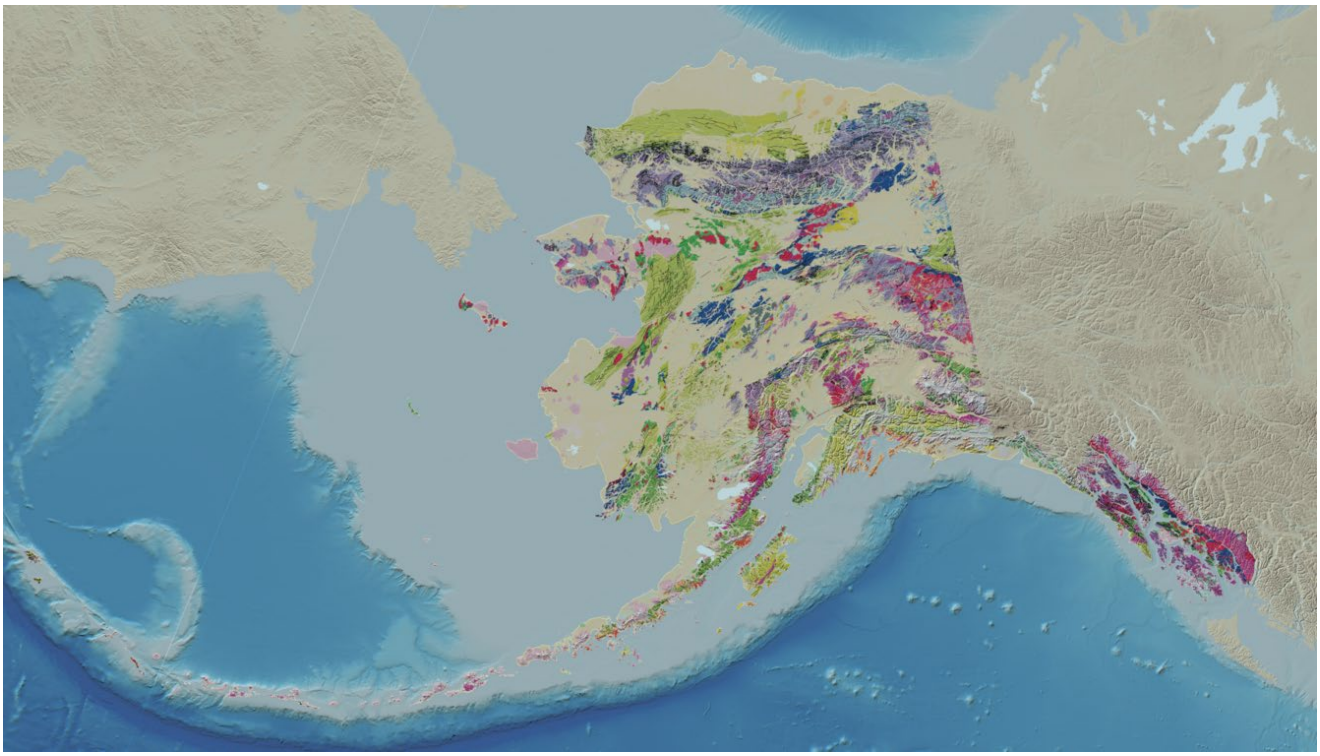
"This comprehensive digital map now covers the geology of nearly the entire nation, from Alaska's North Slope to Kilaeua in Hawaii, Cerro de Punta in Puerto Rico, and Mount Katahdin, Maine. Alaska's extraordinary geologic resource potential is included for the first time," said **USGS Director Ned Mamula.**

The first version of the National Cooperative Geologic Map, released in August 2025, covered the Lower 48 states and was produced using a new automated approach to national-scale mapping. Version 2.0 shows how quickly that approach can scale: building on the same standardized data format and the same partnerships with state geological surveys, USGS was able to add these vast and remote areas in a fraction of the time that traditional mapping methods would require.

In 2020, the USGS and the Association of American State Geologists published a standardized digital map format, the Geologic Map Schema, or GeMS. With that process in place, GeMS has also provided the roadmap for regular growth and improvements. For example, version 2.0 was able to incorporate a new geologic map of Wisconsin in minutes after discussion with the Wisconsin Geological and Natural History Survey to align terminology. This model will continue in coming years

as the USGS National Cooperative Geologic Mapping Program funds new mapping by states that will feed directly into future updates of the Cooperative National Geologic Map.

Digital geologic maps are highly complex and, traditionally, have been mostly used by persons with technical knowledge using advanced software to view and explore the data. To enable the public to view and explore this, a highly innovative Web map interface was developed by the USGS National Geologic Map Database (NGMDB, see the link to "National Geology"). Version 1.0 of the map interface proved to be a popular and useful introduction to the Nation's geologic resources. User suggestions for enhancements to the interface resulted in additional functionality in this new release. The NGMDB also provides direct access to the map database, via file downloads and through ArcGIS Online. The Cooperative National Geologic Map and the NGMDB are funded by the USGS National Cooperative Geologic Mapping Program.



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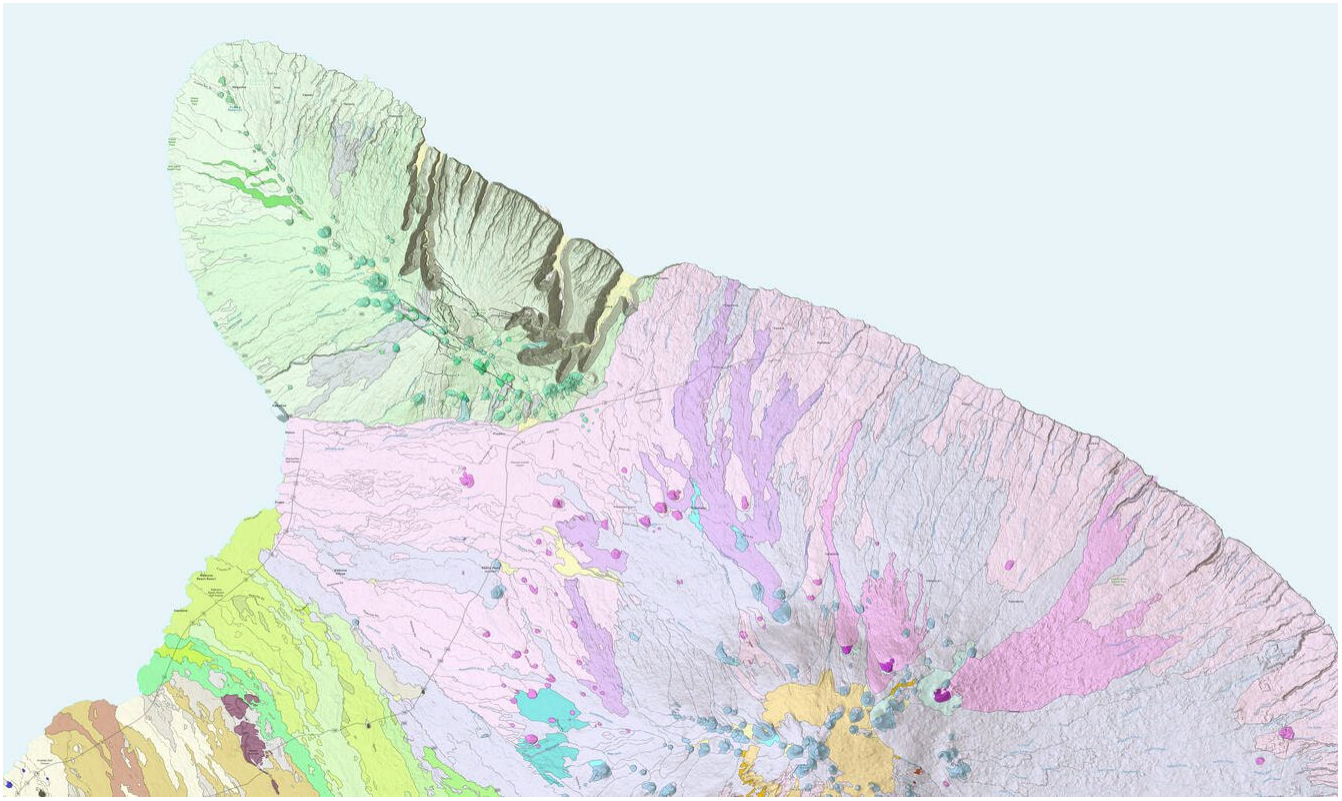
Alaska has a complex geologic history, and as a result, a rich tapestry of geologic hazards and endowed resources. The version 2 of the Cooperative National Geologic Map was able to bring that history into context with the rest of the US, building on previous USGS efforts to digitally integrate Alaska's mapping.



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A detailed view of the island of Hawai'i highlights the Kohala peninsula and Mauna Kea, showcasing the details of individual flows captured by the source geologic map.

October Meeting Announcement

The next GSNH meeting will be held on Thursday, October 22 at the Puritan Backroom at 245 Hooksett Road in Manchester. See page 21 for a reservation form.

Speaker: Michael Dorais, Department of Earth Sciences, Brigham Young University

Presentation: *The New Hampshire Plutonic Suite: An Overview of the Magmatism of the Acadian Orogeny.* The New Hampshire Plutonic Suite (NHPS) consists of three syntectonic members (Bethlehem Granodiorite, Kinsman Granodiorite, Spaulding Tonalite) and the post-tectonic Concord Granite. This presentation will review the mineralogy, petrology, and petrogenesis of each member and how these magmas relate to the collisional tectonics of the Acadian Orogeny. The nature of the source rocks that partially melted and the reactions that produced the NHPS magmas will also be discussed.

Pricing: Advance reservation: Member (dues paid): $50.00 / Non-member $60.00
At the door: Member (dues paid): $55.00 / Non-member $65.00
Student with valid student ID (reservation required): $25.00

When: Thursday, October 24: Doors open and cocktail hour starts at 5:30 PM, meeting starts at 6:30 PM

Please RSVP to Sharon Lewandowski by noon on October 16 to receive the advance reservation discount: sharon.lewandowski@des.nh.gov

John Cotton Scholarship Fund Updates

The John Cotton Scholarship Fund was established in 2025 to honor John Cotton's immense contributions to the profession of geology. Thanks to generous donations, the fund is up to $24,250!

Celebrating Our First Recipient

The GSNH Scholarship Selection Committee is thrilled to announce that Nell Davis, a Ph.D. student in the Natural Resources and Earth Systems Sciences (NRESS) program at the University of New Hampshire, has been selected as our inaugural scholarship recipient. Nell was awarded the maximum individual allocation of $3,500 to support her late-summer field operations on the Wind River Reservation in Wyoming.

Nell's research demonstrates a strong alignment with the professional legacy and values of John Cotton, with a focus on applied fieldwork and community-focused resource management. Her project in the Wind River Range of Wyoming addresses hydrology, water rights, and riparian ecosystems, combining geomorphic mapping with tribal community engagement. Nell will be sharing updates about her project at an upcoming GSNH dinner meeting. Congratulations, Nell!

About the John Cotton Scholarship Fund

The purpose of the fund is to encourage field work related to groundwater resource mapping, surficial or bedrock geology mapping in New Hampshire. Awards may be used to support travel costs, summer stipends, laboratory costs, field supplies associated with field work or assist with tuition and travel to attend a geologic field camp, or other similar costs. Awards may also be used to assist with exam fees for the Association of the State Boards of Geologists (ASBOG) Fundamentals of Geology Exam. Scholarships will be awarded for up to $3,500 to support these efforts.

Funds are still available, and applications will be accepted on a rolling basis. Please encourage any students you know to apply! Check out the GSNH website for more information about John's legacy and the scholarship requirements.

Other Geology News

See the next page for a roundup of recent geology articles that caught the interest of GSNH members:

Granite Geek: A bright green rock is a New Hampshire representative
From David Brooks, Concord Monitor, July 20, 2026.
https://www.concordmonitor.com/2026/07/20/fluorite-rock-new-hampshire-smithsonian/

A new exhibit at the National Museum of Natural History features natural and cultural representatives from each US state and territory from its collections, and New Hampshire's contribution is a calcium fluorite sample from the William Wise mine in Westmoreland. This mine produced about 3,500 tons of fluorospar, with pit operations from about 1908 to 1917.

There's a hidden geological mystery taking shape beneath New England
By Jordan Nathaniel Fenester, The Hour, Norwalk, Connecticut (from the Union Leader), August 20, 2026.
https://www.unionleader.com/news/back_page/theres-a-hidden-geological-mystery-taking-shape-beneath-new-england/article_7f00835e-5a03-40dc-b119-0eee11cf0d7f.html

Scientists using high-resolution images of the Earth's interior have identified a narrow column beneath Connecticut where seismic waves travel unusually quickly – the "Connecticut Fast Anomaly". This anomaly is next to the much larger and better known Northern Appalachian Anomaly, which is a zone of unusually warm mantle where seismic waves travel unusually slowly. Researchers will place about 300 seismic instruments across northern Connecticut in spring 2027 to evaluate the anomaly, which may be a piece of continental lithosphere that detached because of processes related to the Northern Appalachian Anomaly, sinking material in a circulating cell of mantle, or something entirely different.

Nearly 300 metres beneath Mexico's Chihuahuan Desert, miners tunnelling for ore broke into a chamber filled with crystals as long as a bus — giant beams of gypsum up to 11 metres long, hidden underwater for hundreds of thousands of years until mine pumps exposed them
From Daniel Moran, Science Daily, September 3, 2026.
https://spacedaily.com/d-nearly-300-metres-beneath-mexicos-chihuahuan-desert-miners-tunnelling-for-ore-broke-into-a-chamber-filled-with-crystals-as-long-as-a-bus-giant-beams-of-gypsum-up-to-11-metres-long/

In April 2000, minor cutting a new tunnel 300 meters down in the Naica mine broke through a void and encountered giant gypsum crystals, created by the unique conditions: temperatures slightly below 54 degrees Celsius and low salinity water. Under these conditions, anhydrite (dehydrated version of gypsum) dissolves and reprecipitates at an incredibly slow rate, feeding existing crystals rather than creating new ones. After possibly millions of years, the crystals grew to the enormous size seen in 2000. However, operations at the mine was suspended in October 2015 and it is unknown whether the cave is dry (causing the crystals to slowly degrade) or water-filled (causing the crystals to grow again).

GSNH Order Form

	Number of Items	Price per Item	Shipping (1 item)*	Shipping (2 items)*	Total
GSNH T-Shirt**		$18.00	$7.00	$10.00	
GSNH Field Hat		$20.00	$10.00	$15.00	
35th Anniversary Pint Glass		$10.00	$7.00	$10.00	
				Total	

*Email gsnhinfo@gmail.com for shipping estimate for mixture of above items.
**Specify Unisex or Women's style. Available in Small, Medium, Large and Extra Large sizes.

Ship to:

Name	
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City, State, Zip Code	
Phone # (in case of questions about your order)	

Please make checks payable to "GSNH" and mail with this completed order form to:

GSNH
P.O. Box 401
Concord, NH 03302

Geological Society of New Hampshire

Topic: The New Hampshire Plutonic Suite: An Overview of the Magmatism of the Acadian Orogeny
Speaker: Michael Dorais, Brigham Young University

Thursday, October 22, 2026
Location: Puritan Backroom Pappas room (restaurant building)
245 Hooksett Road
Manchester NH

5:30 pm Social Hour - 6:30 pm Dinner - 7:15 pm Speaker Presentation

RSVP by noon on Friday, October 16 to get the reservation price

Advance Reservations: _____Member (Dues Paid) $50.00
_____Non-member $60.00

- Students $25.00 with valid student ID card (Reservation Requested)
- Member at the Door $55.00
- Non-Member at the Door $65.00

Checks payable to: GSNH

_____**Please indicate special food issues – leave blank for none.**

GSNH will also accept dinner reservations by e-mail, which will then allow you to pay at the door.
Reply via e-mail to Sharon Lewandowski, Sharon.A.Lewandowski@des.nh.gov or
Mail to: **Sharon Lewandowski, GSNH Dinner Meeting,**
PO Box 401,
Concord, NH 03302.

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 Tuesday before the dinner.

Name(s) _____

Address: _____

Your phone or e-mail: _____

The dinner and lecture program counts as 2.0 hours of CEU contact hour credit.

MEMBERSHIP & RENEWAL APPLICATION

Geological Society of New Hampshire

PO Box 401, Concord, NH 03302

Name: _____ *(Please print clearly)*

E-mail: _____

***Renewing Members**: Only update this section if you have changes to your contact information (including email) or educational history.*
***New applicants:** please complete this section.*

Preferred address/email to receive GSNH Communication: ___Home or ___Business

Home Address:

_____

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Business Address:

(Employer): _____

_____

_____

Home Telephone: _____

Office Telephone: _____

New Hampshire PG # (if applicable) _____

Education: Degrees received or in progress:

Year	Degree	Major	College or University

I volunteer to help with one of the following committees or tasks:

__ Membership Committee
__ Legislative Committee
__ Giving a talk at a meeting

Membership Category:
__ *Regulations Committee*
__ *Education Committee*
__ Events Committee

__Communications Committee
(Newsletter or Website, circle preference)
_ Other:

_____ Regular Member (Annual Dues $20.00)

_____ Student Member (Annual Dues $10.00). Please complete **Education** section above.

Make checks payable to **"Geological Society of New Hampshire."** Note that GSNH dues are not deductible as a charitable contribution, but may be deductible as a business expense. Please return this completed application form with any necessary corrections and a check for the appropriate dues to the GSNH at the address above. The Society's membership year runs from January 1 to December 31.

Signature: _____ Date: _____