



The Maine Geologist

NEWSLETTER OF THE GEOLOGICAL SOCIETY OF MAINE

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PRESIDENT'S MESSAGE

I hope everyone has been enjoying the excellent weather. Quite the contrast from the spring weather we received last year. The vegetables in my garden are doing fantastic, and so are the weeds. Though I finally invested in a stirrup hoe - a game-changer for sure!

In early June I had the opportunity to work with an undergraduate intern, Ryan Penny (Tufts University), at the Museum. We spent several days in the field sampling and mapping the Brimstone Mountain pegmatite located in Township D. It is one of several spodumene-bearing pegmatites within the Phillips pegmatite district. This district is the furthest inland and the least well-known pegmatite group in Maine. Ryan will be investigating the geochemical evolution and emplacement history of the dike.

A week afterward, I was fortunate enough to attend a Gordon Research Conference, held at Sunday River's Jordan Hotel. The meeting was focused on the geochemistry of ore deposits for a low carbon society. Though I could not be present for the entire event, I was able to see some very interesting and cutting-edge talks and posters from members of the USGS (including fellow GSM member, John Slack), industry, and students/professors from the U.S. and many other parts of the world (19 countries were represented at the meeting). It was a very humbling experience, and a wonderful opportunity to connect with colleagues and exchange ideas. Another Gordon conference will be held at Sunday River next year focusing on Geochronology, and I recommend that anyone in the position to attend do so. An outstanding international geoscience conference right here in Maine!

Big thanks again to Bowdoin College for organizing and hosting the spring GSM meeting and thank you to all who could make it. There were some

great student posters and presentations! The summer field trip is almost here and looks to be a great time. If you are interested, more details and the field trip registration form can be found on the [GSM website](#). The fall meeting will be held at the Augusta Civic center on November 8th.

In case you miss the GSM summer field trip, the New England Intercollegiate Geological Conference (NEIGC) will be held around Penobscot Bay this year. Details can be found in this newsletter. I'm looking forward to connecting with local/regional colleagues and leading a trip!

Best Regards,
Myles Felch
President, GSM
Curator, Maine Mineral & Gem Museum
mfelch@mainemineralmuseum.org

NEWS FROM THE STATE GEOLOGIST

This column will be brief and my last. I am in my final days as the State Geologist and Director of the Maine Geological Survey (MGS). I stepped up in July 2021 from a marine geologist position to lead the survey. In July 2024, I will step down and retire after a 38-year career at the MGS. I am comfortable departing because the entire MGS team has excellent experience and skills to help my successor lead in the days ahead. I look forward to continuing connections with the geoscience community through the Geological Society of Maine.

The Maine Climate Council's Scientific and Technical Subcommittee (STS) released a 268-page Scientific Assessment of Climate Change and its Effects in Maine, 2024 Update in June. The [Executive Summary](#) alone is 20 pages. There are

chapters on Climate; Human Health, Social and Economic Systems; Climate Resilience; Sea Level Rise and Coastal Storms; Marine; Agriculture; Biodiversity; Freshwater; Forests and Forestry; and Hope. There are references with links to the latest scientific publications. Appendices are data-rich with tables, graphs, and supporting information for direct application in climate adaptation planning, vulnerability assessments, and risk management. The report identifies the latest trends and extremes that influence stream flow, aquifers, water quality, seasonality in snow and ice, and terrestrial and marine carbon sequestration. The STS also held three webinars to present the highlights from the report. The [full report](#), [videos](#), and the latest resources are on the [MCC website](#).

The MGS STATEMAP program continues to publish bedrock and surficial geology maps based on summer fieldwork and winter compilation and these products include significant collaborations with colleagues outside the MGS. The most recent releases can be found on the [“What’s New”](#) part of the MGS website and through email announcements you can subscribe to at the bottom of the MGS homepage. The 2023 field season resulted in 1:24,000-scale bedrock maps of the Friendship, Monhegan, Lake Auburn East, north half of Limerick, and Spider Lake quadrangles; 1:24,000-scale surficial maps of the Farmington Falls and Wilton quadrangles; and a compilation of the Lincoln 1:100,000-scale quadrangle bedrock geology.

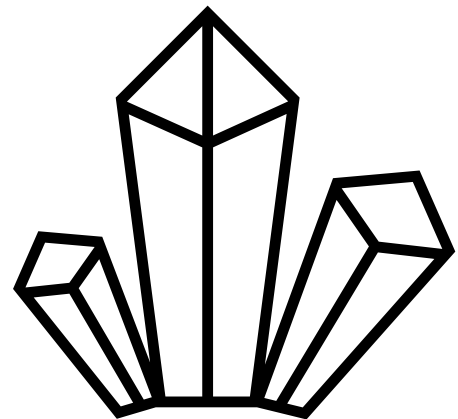
In the last session of the Maine Legislature, LD 1667 (An Act Regarding Recommendations for Changing Place Names in the State) was proposed by House Speaker Rachel Talbot Ross with the intent to create a Maine Board on Place Names. The bill had a small financial request to cover board meetings and ended up languishing on the Appropriations table at the end of the session and not moving forward into law. The eleven-member board (including the State Geologist) would facilitate and expedite name changes that are derogatory according to state law, as well as adding names for geographic features not yet named. For a geographic place name to be changed, it must be reviewed and accepted by the Board on Geographic Names ([BGN](#)) in the Department of

Interior. The Maine board would work closely with the federal board, provide municipal and public engagement, and consider historical consideration of appropriate place names. This effort would update the Geographic Names Information System ([GNIS](#)) layer available from the U.S. Geological Survey and used in geologic mapping as well as other map software.

As you may already know, the MGS has an enhanced collection of digital air photographs available for download. It is possible to search geographically and usually find multiple images for any one location. This can be a great chance to see how areas have changed over time. The [online viewer](#) allows you to easily find the place of interest, see what is available, and then select images to preview and possibly download at high resolution. We are continually amazed at the popularity of this feature and, of course, it is free. Typically, over 1,000 air photos are downloaded (by individuals, not bots) each month.

Once again, I extend my gratitude to the geologic community for their significant scientific contributions that benefit Maine. The work we all do extends far beyond the inner circles of science and reaches the people of Maine and beyond. I look forward to seeing many of you at future GSM meetings.

Stephen M. Dickson, Ph.D.
State Geologist



NEWS FROM THE CAMPUSES

University of Maine – Farmington

UMF Earth and Environmental Sciences students traveled to Iceland, May 7-21, with Drs. Julia Daly and Rachel Hovel. Needless to say, they had a spectacular two weeks exploring the geology and aquatic biology of the south coast (see photos below). Gil Hamilton presented ongoing results of our stream geochemical study near the Plumbago North lithium prospect at five venues (NEGSA, Maine Sustainability and Water Conference, GSM, UMF Symposium, and the Androscoggin Watershed district). Dr. Larry Tuttle will be arriving mid-July to begin his stint as the second Forrest P. Dexter Chair in Geology.

Doug Reusch and Julia Daly



Most of the UMF group at Geldinadalir.



All of the UMF group at Fjallsjökull.



Most of the UMF group at Reynisfjara.

Bowdoin College

Bowdoin's EOS department wants to thank everyone who participated in the GSM spring meeting - we had a great time hosting you all, despite the terrible weather. Thanks, especially, to the students who presented their research—so many great projects to see!

This spring, we celebrated our two honors students (Christine Reimer and Brielle Martin) who both conducted fabulous research projects with their advisors (Rachel Beane and Michèle LaVigne, respectively). Our oceanography course completed three research cruises, collecting data about the temperature, salinity, and productivity of our local waters - students then compared these data to the multi-decade time series dataset we have of these waters as part of their final product. Students in an intermediate tectonics course spent an afternoon at a local quarry, collecting some amazing specimens and learning all about mining in Maine (see photo below). Our seniors designed and carried out research projects in their capstone course - topics ranged from determining the sources and

concentrations of PFAS in our local watershed, to evaluating the timing and tempo of glacial lake outburst floods in Greenland, to the impact of salting Maine's highways. Students in our Geoscience for the Common Good developed projects with community partners here they could apply the skills they've learned over the last four years to help their partners solve a problem. Projects were conducted in Maine, Mexico, Ohio and beyond. Happy summer, everyone!

Emily Peterman



Bowdoin College tectonics class outing to a local quarry.

Unity Environmental University

Hello from Unity! This will be the last update from me for Unity Environmental University. The 90 Quaker Hill campus in Unity will cease operations on June 30, 2024 and all functions and equipment and some staff (but not I) will move down to Pineland, New Gloucester, the new home of the University. The move means that Unity's Hybrid Learning unit and associated programs of study (including Environmental Science) will end and be replaced by a new in-person learning unit (Unity Environmental University at Pineland) with new programs. At this time there are no geoscience programs in the new unit but there will be climate and environmental science courses. The online unit of the university, Distance Education, still has its Environmental Science and GIS programs and the university as a whole is retaining and pursuing its

environmental mission. So, keep an eye out for future developments that hopefully see the re-addition of a geoscience-themed program.

All the best!
Tom Whittaker

GSM SPRING MEETING RECAP

April 12, 2024, Bowdoin College

Many thanks to Emily Peterman and Bowdoin College for hosting the GSM Spring meeting. The student presentation awards went to:

Christine Reimer (Bowdoin): Oral presentation

Riley Simon (Bowdoin): Poster

Sierra Guite (Colby): Poster



Spring Meeting awardees with the GSM President. Left to right: Christine Reimer, Myles Felch, Riley Simon, Sierra Guite. Photo courtesy of Amber Whittaker.



GSM SUMMER FIELD TRIP

The 2024 GSM summer field trip will be held in the Penobscot Bay region of Maine on July 27-28. Camping and trip headquarters will be at Camden Hills State Park. Saturday will feature a trip to bedrock localities on Islesboro and Sunday will include locations in eastern Penobscot Bay. *Registration deadline is July 19 - please see the [GSM website](#) for the registration form and more details.*

NEIGC 2024

October 11-13, 2024
Penobscot Bay Region, ME

The New England Intercollegiate Geological Conference is coming back to Maine in 2024! While it will be hard to top the University of Maine-Presque Isle's hospitality during the 2023 conference, the Maine Geological Survey and the University of Maine-Orono have accepted the challenge. A wide range of trips are in the works, but the focus will be on many recent bedrock geology projects and new mapping in the region. Check the [conference webpage](#) for updates or contact Henry Berry (henry.n.berry@maine.gov) with any questions.

GSM FALL MEETING

It's time to celebrate the GSM's *50th anniversary* at the fall meeting, which will be held on November 8, 2024 at the Augusta Civic Center. Presentations will celebrate the GSM and Maine geology, with experts giving overviews of their favorite or most significant localities in Maine, covering everything from coastal to bedrock topics. An agenda and more details to come.



THE EDITOR'S MESSAGE

The newsletter is distributed through email and on the GSM website in PDF format. Anyone with special needs should contact the Editor. Please send items of interest and photographs of GSM activities to:

Lindsay Theis, Newsletter Editor
lindsay.theis@maine.gov

GSM WEBSITE: www.gsmmaine.org

FACEBOOK: facebook.com/GSMMaine

APRIL 8, 2024 SOLAR ECLIPSE RECAP

The 2024 solar eclipse was quite the event with ideal weather! GSM members were out in full force to observe the event, along with the crowds that descended upon northern Maine, providing a [huge economic boost](#) to this region. Your newsletter editor did not make it into the path of totality but did experience [shadow bands](#). Amazing!



An attempt to capture the eclipse with an iPhone and cheap eclipse glasses (photos: Lindsay Theis).

SECRETARY'S REPORT

The Executive Council (EC) met on Friday, April 12 to discuss final plans for the GSM spring meeting, details of the summer 2024 field trip, and planning for the 2024 fall meeting (a celebration of the GSM's 50th anniversary).

**Fall GSM Business Meeting Minutes, Friday,
April 12, 2024**

- 1) GSM President, Myles Felch, gave an introduction and thanked Bowdoin faculty and staff for hosting the spring meeting.
- 2) The GSM 2024 summer field trip will be in the Islesboro area. Camping will be at Camden Hills State Park. Stops on Saturday will be on Islesboro, led by Doug Reusch and Taury Smith. Stops on Sunday will be in Ellsworth led by Rich Campbell, Harborside (Callahan Mine) led by Fred Beck, and Condon Point, Brooksville, led by Doug Reusch.
- 3) GSM 2024 fall meeting: With the 50th anniversary of GSM in 2024, the theme of the fall meeting will be Maine's greatest hits. Several speakers will be invited to share information about their favorite locales, and we will have an overview of the 50 years of the society.
- 4) Treasurer Bruce Hunter provided a Treasurer's report in the March 2024 GSM newsletter.
- 5) Announcements:
 - a. Maine Mineralogical and Geological Society will hold their annual meeting next weekend in Portland (Thompsons Point, April 20-21).
 - b. New England Mineral Association will hold their annual conference on May 17-19 at Sunday River.
 - c. Alexander Foster, experimental chemist at the Maine Mineral and Gem Museum, gave an update on new instrumentation at the museum and an internship opportunity.
 - d. Jason Langley, MEDEP Bangor office, announced an environmental hydrogeologist position to be posted next month on maine.gov.
 - e. Keith Taylor announced several job opportunities in the private sector (there are always geology job opportunities if you look around) and discussed the licensing process in Maine.

- 6) The business meeting concluded at 2:05pm. Myles introduced the student speakers. Student presentations were followed by the keynote speaker, Dr. Allison Pfeiffer, Western Washington University: *What hides in the shape of rivers: Successes and inadequacies of the threshold channel model.*

Respectfully submitted,
Lisa Jacob, Secretary
ljj@smemaine.com

TREASURER'S REPORT

A Note About Dues:

The start of the new fiscal year for the GSM is coming up on 8/01/2024 and that is when we ask you to pay your dues. It is helpful for us to know how much money we have at the beginning of the fiscal year so that we can plan for the upcoming year. You will receive reminders to pay dues about a week before and a short time after August 1. Please make an effort to pay your dues on the website using the procedure below:

1. Hover over Membership at the top of the [GSM homepage](#), click Login.
2. Enter username and password. If you do not already have an account, make one by selecting Join GSM instead of Login under Membership.
3. Once logged in, click on pay dues in upper left area of the page.
4. Click on the invoice and pay with the credit card that you entered when you created your account on our secure website.

If you cannot pay on the website, please mail a check made out the Geological Society of Maine to the address below.

Respectfully submitted,
Bruce E. Hunter, Treasurer
44 Old Fairgrounds Road
Readfield, ME 04355

**Eleven Month Asset Summary
June 24, 2024**

Account	Sub-Account	Funds
General Fund	Maine State Credit Union	
	Business Savings	\$26.84
	Checking	\$1,581.19
	Sub-Total	\$1,608.03
EAPD fund (previously known as the Anderson Fund)	Bath Savings Trust	
	Managed Account	\$45,036.03
	Sub-Total	\$45,036.03
Kevin McCartney Fund	Maine State Credit Union	
	Business Savings	\$1,565.42
	13-month CD 5.250 %	\$16,774.75
	Sub-Total	\$18,340.17
All Funds	Total Assets	\$64,984.23

Semi-Annual Asset Summary June 24, 2024

	Actual
Income	
Dues Paid	\$2,670.00
Donations received by the Anderson Fund	\$1,390.00
Donations received by the Kevin McCartney Fund	\$1,590.00
Subtotal	\$5,650.00
Expenses	
<i>Meeting Expenses:</i>	
Fall Meeting	-\$2,412.59
<i>Research Awards:</i>	
Continuation of A Stream Geochemical Analysis of the Plumbago North Lithium Deposit, West-Central Maine	-\$1,000.00
UMaine Farmington Iceland field trip	-\$988.80
Spring Meeting Student Awards	-\$300.00
Summer Field Trip Camping Reservations	-\$295.25
<i>Donations to GSM Funds:</i>	
Donation to EAPD Fund	-\$1,200.00
Donation to Kevin McCartney Fund	-\$1,200.00
<i>GSM Website:</i>	
Annual hosting plan cost	-\$280.40
Online payment processing costs	-\$427.41
Subtotal	-\$8,104.45
Net Decrease	-\$2,454.45

UPCOMING EVENTS

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Organizer</u>
July 13-14, 2024	Western Maine Gem, Mineral, and Jewelry Show	Telstar High School Bethel, ME	Oxford County Mineral and Gem Association
July 27-28, 2024	GSM Summer Field Trip	Penobscot Bay Region	GSM
September 22-25, 2024	GSA Annual Meeting	Anaheim, CA	GSA
October 11-13, 2024	NEIGC	Penobscot Bay Region	MGS and U of Maine-Orono
November 8, 2024	GSM Fall Meeting and 50 th Anniversary	Augusta Civic Center Augusta, ME	GSM
December 9-13, 2024	AGU Annual Meeting	Washington, D.C.	AGU

Please submit events to include on the calendar to the Newsletter Editor: lindsay.theis@maine.gov

PLEASE PAY YOUR ANNUAL GSM DUES VIA THE GSM WEBSITE:

<https://www.gsmmaine.org/join-gsm/>

If you do not already have a membership account, click on the Membership Form button on the above page to get started.