

The Maine Geologist

NEWSLETTER OF THE GEOLOGICAL SOCIETY OF MAINE

March 2021 Volume 47 Number 1

PRESIDENT'S MESSAGE

Greetings from Bar Harbor. Some exciting geoscience in the news lately: Etna is erupting, Perseverance begins to explore the surface of Mars, 1 billion years of plate tectonic evolution is animated, magnetic reversals may cause mass extinctions, and extreme weather events are making 'polar vortex' a common household phrase (shout out to UMaine Climate Reanalyzer reference in this last article)! The geological news from my vantage point, my home office and surrounding forest, mainly features the daily contemplation of the layers of snow and ice as rock formation and the stratigraphy of stacks of coffee-stained papers, books, stray pens, and in-progress mending projects that clutter my work space. On daily walks along my road I consider the order of events: animal tracks in the snowy woods, delivery-person footprints, car prints, and salt rings on the road. I found a fist-sized piece of halite along the road the other day – perfect for a future Rocks and Minerals quiz. Being on sabbatical this term, I've been focusing my attention on some writing projects, professional development, and other community work. In joining the UMaine URGE (Un-learning Racism in Geoscience) "pod," I've enjoyed learning and working with grad students, faculty, and staff, as well as GSM webmaster, Cassy Rose, on actionable steps towards ending racism in geoscience institutions. The URGE project is a nationwide effort, impressive in design and scope with curated resources and thousands of participants nationwide!

Here in Bar Harbor, we had some beautiful powder for an excellent week of skiing on the Acadia National Park Carriage Roads in early February, but as I write this we have an icy coating on everything – preserving all our tracks in a fossilized record soon to be erased by longer, warmer days. Living in this winter unconformity, I'm feeling rejuvenated and

excited for the approaching spring and summer. I'm so impressed with my students who have kept up their energy and enthusiasm in their coursework and geoscience research projects throughout these challenging times. They are resilient and determined to make the most of their precious college years and as such they have served as a great inspiration personally. I look forward to hearing from students from around the state at the spring meeting, April 9, Students: please consider sharing your work at this meeting (cash awards for best and a presentations free annual **GSM** membership for presenting students)! More information about the meeting logistics and how to submit an abstract is included within this newsletter. With unique perspectives and being the next generation of geoscientists, we would like to welcome student representatives to the GSM Executive Council meetings. As discussed at the fall meeting, we are accepting nominations for two student representatives for a 1-year position to begin following the spring GSM meeting. Please nominate a student for this position with this form by April 1, 2021. Other opportunities to connect with students and colleagues from around the region and state this spring include the Northeastern Geological Society of America meeting in mid-March and the Maine Sustainability and Water Conference in late March. Keith Taylor is leading the summer field trip planning committee and I'm getting excited already. Even though we likely will not be able to gather in a large group again this summer, we have a head start on planning some opportunities for small gatherings and field trips to world-class field sites throughout Maine. Read more about the initial planning efforts in this newsletter.

Sarah Hall, GSM President shall@coa.edu

THE EDITOR'S MESSAGE

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

Amber Whittaker, Newsletter Editor amber.h.whittaker@maine.gov

GSM WEBSITE: www.gsmmaine.org FACEBOOK: facebook.com/GSMMaine

GSM SPRING MEETING

April 9, 2021 Virtual

The Spring Meeting of the GSM will be held on the afternoon of April 9, 2021, from 1-5pm. As in past years, this meeting will be a chance for students to share their research and ongoing projects. With the pandemic limiting interaction during this past year, the meeting will be a great chance to gather and hear updates from the various schools in Maine. A faculty or student representative from each school is invited to give a short update on happenings of the past year or upcoming plans. We will have some time dedicated to announcements from the community as well as a social hour for extended discussion following the presentations.

Keynote Speakers:

To showcase some professional work and opportunities for future geoscientists, we have invited two keynote speakers, currently working in Maine, to give ~ 15 -minute talks about their work:

- Or. Lindsay Spigel of the Maine Geological Survey will talk about her on-going research on paleo and modern landslides in Maine and her experience as a state government geologist.
- · GSM Councilor and Professional Geologist, Keith Taylor, of St. Germain, an environmental

consulting firm, will talk about tools of the trade and his experience as an environmental consultant.

Student Presentations:

Cash awards for best presentations! Free annual GSM membership for all student presenters!

Students interested in presenting their work in either a poster or short oral presentation should submit an abstract by March 20 using this Google Form. Oral presentations should be no longer than 10 minutes in length and will be presented live during the zoom meeting (content may be prerecorded). Poster presentations should be completed and uploaded ahead of the meeting. Poster presenters will have 3 minutes to introduce their poster live during the meeting. Meeting attendees will have access to pdfs of the posters ahead of and after the meeting. We will record the zoom event so members who cannot attend can watch the presentations at convenience. Presenters will their receive instructions about how to prepare and upload their presentation content upon abstract submission confirmation.

Please contact <u>president@gsmmaine.org</u> with any questions.

GSM SUMMER MEETING

Summer 2021 Virtual

While a group field trip isn't a great idea this summer, GSM still has a plan to get people out to see the geologic wonders of Maine. A virtual field trip is being developed that will be based on visiting Maine Geological Survey sites of interest published in the Geologic Facts and Localities series:

https://www.maine.gov/dacf/mgs/explore/explore_map.shtml

Like the recent geologic photo contest, people will be asked to visit sites and document them online over the summer with photos and narrative. To keep

the interest high, awards will be presented to those who visit the most sites, the most distant, etc. More information will be provided in the future.

EC STUDENT REPRESENTATIVES

Nominations Welcome

The Executive Council is looking to broaden the voices we hear from during our planning meetings throughout the year. We would like to add two student representatives to the council to serve for one year beginning at the student-focused Spring meeting each year. Their primary job would be to provide a student perspective at EC meetings and to engage with peers throughout the year to suggest ways the GSM may benefit current students and recent graduates. We invite GSM members to nominate potential student members to serve in this role. Students should be at least 16 years old and be enrolled at an educational institution in Maine. STUDENTS: if you are interested in this position, please ask a faculty or peer GSM member to nominate you. We are hoping to welcome our first two student members during the Spring 2021 GSM meeting. To nominate a student, please fill out this brief form.

NEWS FROM THE STATE GEOLOGIST

Living Shorelines

The ambitious "Maine Won't Wait" climate action plan, released in December 2020 by the Governor's Maine Climate Council, includes a strong emphasis on community resilience. Strategy F, Build Healthy and Resilient Communities, recommends that the State adopt official sea-level rise (SLR) projections to guide policy on coastal development. MGS Marine Geologists Steve Dickson and Pete Slovinsky, together with U Maine Marine Sciences Prof. Joe Kelley, developed the recommendation to manage for 1.5 feet of SLR by 2050 and 3.9 feet by 2100, and to plan to manage for 3 feet of SLR by 2050 and nearly 9 feet by 2100.

These projections use intermediate and high SLR scenarios, respectively, as determined by using the U.S. Army Corps of Engineers sea-level change calculator. Since 1912, sea-level in Portland has risen at a rate of 8.7 inches/century, and in the last 25 years, that rate has increased to 15.9 inches/century. Updating the State's coastal development policies with these projections is a step toward resiliency.

But we're not satisfied with simply setting a policy without providing some tools to help communities with their adaptation and resiliency efforts. In addition to setting SLR standards for policy, Strategy F also makes recommendations about community responses to SLR, among them to leverage nature-based solutions to address issues like coastal erosion. A living shoreline is a nature-based solution that we are exploring in several locations in Casco Bay. Living shorelines consist mostly of native vegetation or other natural elements, often in combination with materials like oyster shells, to They reduce erosion while stabilize shorelines. maintaining the land and water connection important to sustaining habitats, as opposed to the impacts to habitat by hard rock and other structures typically installed to control erosion. Our project is part of a regional collaboration managed by The Nature Conservancy with funding from NOAA that includes the states of ME, NH, MA, RI, and CT. Local partners in the Casco Bay project are the Maine Coastal Program, Town of Brunswick, Brunswick-Topsham Land Trust, Maine Coast Heritage Trust, Casco Bay Estuary Partnership, and MaineDOT.

After many months of site analysis, selection, materials acquisition, and planning, Pete, Steve, and the team installed materials at three sites - the Wharton Point boat landing, Maquoit Bay Conservation Lands, and Lanes Island. Salt marsh is eroding at the first two sites, where the typical wave and tide energy is fairly low. The Lanes Island site is an eroding bluff with more potential for damaging waves due to the prevailing fetch. During summer 2020, the team placed natural materials such as coir bags (fiber from coconut husks) filled with aged and cleaned oyster shells, shell-filled gabion bags, tree trunks, and root balls at each site, following detailed Many volunteers from the engineering designs. project partners assisted with this work. The concept is that the natural materials will trap sediment and promote additional salt marsh growth that will protect the sites from further erosion. For the most part, the installations worked well through the summer and fall, only requiring minor maintenance. Unfortunately, the Lanes Island site was hit hard by winter storms before the installation could promote marsh growth. In the coming months, Steve and Pete will continue to monitor the effectiveness of these living shoreline installations with an eye toward fine tuning the analysis of suitable sites and materials.

Finally, a personal note. My column in the June 2021 GSM newsletter will be my last. After 34 years at the MGS and 26 years as State Geologist, I'll be taking the off-ramp to retirement on June 30! More on that next time.

Robert G. Marvinney, State Geologist robert.g.marvinney@maine.gov

NEWS FROM THE CAMPUSES

College of the Atlantic

Multiple current students and a recent COA alum contributing continue to multiple components of the All About Arsenic groundwater quality and data literacy project, a collaboration of Mt. Desert Island Biological Laboratory, Dartmouth College, and College of the Atlantic, including a monthly well water sampling effort, advocacy toolkit for educators, and a project Story Map. COA alum, Sahra Gibson continues to lead the Coastal Maine Geopark steering committee. Working with Crystal Hitchings of the National Heritage Area planning group, Sahra is planning some public workshops about the Geopark in the spring - stay tuned! The new Center for Human Ecology building will open this spring housing a new Geology classroom and student research space. We are excited to finally have a home and showcase for the growing rock and mineral collection at COA (thank you to many who have donated samples in the past – along with some collecting during field trips throughout Maine, we now have quite a collection).

Sarah Hall shall@coa.edu

Unity College

Here at Unity we are settling in to our new academic calendar which is based around eight 5-week terms instead of two semesters. We are into the fifth such term, all still fully online, and on the faculty side of things the pace of curriculum design is slowing and we are transitioning into the more familiar work of adjusting and tweaking our courses. For students the combined change of the calendar shift and the switch to online has created challenges for a few and new opportunities for others (many – beyond just our Environmental Science students - are now pursuing off-season internships and work experiences in tandem with their online courses).

Huge congratulations to Ashley Petrello and Gunther Schletter for undertaking and completing theses during the pandemic. Both presented their work ("A Paleoclimate Record from Central Maine" and "Analysis of Maine Radon in Relation to Various Geologic Features" respectively) in late December prior to graduating. This spring other thesis projects are in the works and it is hoped that we may be able to share some of this work with you all at the Spring Meeting.

Unity is now beginning to plan our return to inperson instruction — something that all of us (students, faculty, and staff) are really excited for. But from a faculty perspective, one thing is clear as we do this: the experience of teaching and learning online for the past year, and the significant design work that accompanied it, has opened our eyes and taught us many things that will definitely find homes in our forthcoming in-person courses.

Best wishes from Unity!

Tom Whittaker

OBITUARY

Roger LeBaron Hooke, 1939 – 2021

We are saddened to hear that Roger LeB. Hooke, professor in the School of Earth and Climate Sciences and Climate Change Institute at the University of Maine, passed away suddenly on

March 10, 2021. We learned of his passing right before publication of this newsletter. GSM would be pleased to publish any memories and photos of Roger that you would like to share with the community. Please feel free to send them to the newsletter editor (Amber.H.Whittaker@maine.gov) by the end of May for publication in the June 2021 newsletter.

SECRETARY'S REPORT

The Executive Council (EC) met by Zoom on Friday, December 4, 2020, prior to the GSM virtual fall meeting, for final planning for the fall meeting. Agenda items included planning for the fall 2020 GSM meeting, spring 2021 GSM meeting, and summer 2021 field trip possibilities, and an update on the new GSM website.

The EC met by Zoom on Wednesday, January 20, 2021. Agenda items included planning for the spring 2021 GSM meeting, an update on the new GSM website, status of GSM membership and Walter Anderson Fun, and options for a summer 2021 field trip.

Fall 2020 Annual Business Meeting Minutes

- 1. GSM President Sarah Hall welcomed all and called the meeting to order.
- 2. Lisa Jacob provided updates on behalf of the EC and Nominating Committee
 - a. First a note of thanks on behalf of the EC to our outgoing Officers and Councilors: Kevin Spigel as Vice President, Dan Belknap as Historian, Mike Deyling as Councilor, and both Henry Berry and Marty Yates for serving in multiple roles, both having served as Vice President, President, and Councilor. Marty even extended his service to stay on as Councilor an extra year. Many thanks from GSM for all your time, your commitment, and lending your energy and expertise to the work of the society.
 - b. From the Nominating Committee:
 - i. All Officer positions are two-year terms, and all are up for election this year. New nominations for Officers: Myles Felch for Vice President and Bob Johnston for Historian. All other Officers are willing

- to continue in their roles: Bruce Hunter, Treasurer; Lisa Jacob, Secretary; Amber Editor Whittaker, Newsletter Facebook Page Administrator; Cassaundra (Cassy) Rose, Website Administrator. We are particularly grateful to Sarah Hall for her willingness to serve a second two-year term as President.
- ii. Unusually, this year we have all three Councilor positions up for election. Councilors serve three-year terms and ordinarily there is one Councilor elected each year, but terms have shifted in recent years and all three positions are up for election. The Nominating Committee offers the following nominations: Keith Taylor (1-year term ending in 2021), Troy Smith (2-year term ending in 2022), and Geneviève Robert (3-year term ending in 2023).
- The opportunity was opened iii. nominations from the floor for Officers and Councilors. No new nominations were received.
- iv. GSM members voted digitally by Zoom All nominated Officers and poll. Councilors were elected.
- c. New Officers and Councilors Myles Felch, Bob Johnston, Keith Taylor, Troy Smith, and Geneviève Robert took a few minutes to introduce themselves. Cassy Rose also introduced herself, since she was unable to attend in person last year when the EC Officer position of Website Administrator was created and elected.
- 3. Sarah introduced the opportunity for student members of GSM to serve as representatives to the EC. In an effort to have student representation and hear student voices, the EC is proposing to add two student members to join the EC during planning meetings throughout the year. We hope to welcome two student members and are seeking nominations. GSM members are encouraged to nominate students by filling out a form: https://docs.google.com/forms/d/e/1FAIpQLSe6

<u>2D5q8YoiW6ZXWr2so2ufj9E4zwyNcqa_FcHk</u>3JA/viewform

- 4. Treasurer's report Bruce Hunter presented the Treasurer's Report, including income and expenses through December 2, 2020. Dues paid to date are substantially lower than this time last year invoices have not been sent out, in anticipation of rolling out an option to pay via credit card on the new GSM website. Expenses are very low so far this year, since the fall meeting is virtual instead of in person. Our expenses to date this fiscal year (beginning August 1) have mostly been website and payment processing fees. Some specific updates:
 - a. The investments in the Walter Anderson Fund are generally conservative and have earned approximately \$2,300 since the summer. This fund is managed by Bath Savings Trust.
 - b. The Kevin McCartney fund is growing in a certificate of deposit.
 - c. There is a total of \$51,217.16 in all accounts, most in the Anderson Fund account.
- 5. Communications Committee update
 - a. Cassy Rose provided an update from the Communications Committee. Amber, Bruce, and Cassy have been hard at work upgrading and updating the website for a couple of years. They have been working with ME Hosting to make upgrades to be able to allow payments and donations on the website, and keep content and features current to the work of the society. The committee expects to be able to launch the website in about two weeks. Cassy provided a digital tour of some of the functions of the new GSM website.
 - b. Amber offered thanks from the communications committee to Cassy for all her hard work and expertise in moving the website project forward. GSM uses GSuite, so all new officers and councilors will be provided a gmail address, and Amber will be in touch to set that up.
 - c. All newsletter updates can be sent to Amber.
- 6. Announcements and updates from the community
 - a. Cassy Rose coordinates the ME Climate Council, a 39-member council with wide

- representation that has been charged with developing an ambitious state climate plan to achieve carbon neutrality and improve community resiliency. Cassy reported that six working groups with 230 people have been meeting since September 2019 to discuss and research strategies. The ME Climate Council approved eight strategies last month, and Governor Mills delivered the plan to the legislature on December 1. State agencies and Governor Mills are now working to identify priorities and strategies to implement the plan within a very tight fiscal situation. The Climate Council is charged with developing a new plan every four years. Bob Marvinney offered thanks to Cassy for her huge effort on the Climate Council project to keep all coordinated and producing an exceptional report.
- b. From the MGS, Bob offered updates on current projects. MGS is in the second year of a USGS mapping initiative to map lithium resources in the Bethel area: planned activities are geologic mapping, geochemistry, and sampling of stream sediments to identify resource areas.
- c. MGS launched a sea level rise "ticker" on their website and graphs that show long-term trends in sea level rise, updated monthly with long-term trends.
- d. GSM members shared recent experiences using lidar. MGS has a viewer that allows users to view maps and lidar imagery.
- e. Discussion of possibilities for a summer 2021 field trip. Lindsay Spigel offered to plan a field trip centered on the Mount Blue State Park area. We are not sure whether we are ready to plan a field trip for 2021 at this time given the COVID situation. The EC is considering possibilities and will keep the conversation moving forward. We look forward to the opportunity to meet together in person, and to hear from students. It was a real sadness that the spring meeting was cancelled, and we did not have the opportunity to hear student presentations in spring 2020.

The GSM business meeting was adjourned at 4:05pm and was followed by a social hour.

Respectfully submitted,

Lisa Jacob, Secretary ljj@smemaine.com 207-829-5016

TREASURER'S REPORT

Partial Year Treasurer's Report August 1, 2020 to March 14, 2021

Operating Income and Expenses

Income	
Dues Paid	\$3,592.00
Subtotal	\$3,592.00
Expenses	
Corporate Reports	
2020 & 2021	\$70.00
Stamps	\$22.00
Donation to Anderson	
Fund	\$2,500.00
GSM Website	
Annual hosting cost	\$280.40
Upgrades to website	\$160.00
Online payment processing	
costs	\$334.58
Subtotal	\$3,366.98
Net Increase	\$225.02
Donations	
Donations to the Anderson	\$4,135.00
Fund	
Donations to the Kevin	\$15.00
McCartney Fund	
Total	\$4,150.00

Annual Asset Summary March 14, 2021

Account	Sub-Account		
General F	Fund		
Maine Sta	ate Credit Union		
	Business		
	Savings	\$21.84	
	Checking	\$5,571.09	
	Sub-Total	\$5,582.93	
Anderson	Fund		
Bath Savi	ngs Trust		
Managed			
	Account	\$38,977.13	
	Sub-Total	\$38,977.13	
Kevin Mc	Cartney Fund		
Maine Sta	ate Credit Union		
Business			
	Savings	\$20.01	
1-year CD			
	0.45% *	\$10,828.30	
	Sub-Total	\$10,848.31	
Total			
Assets	All Funds	\$55,408.37	

^{*} Note: A 16-month CD matured on 8/15/20 and was rolled over to a 1-year CD with a yield of 0.45%

I want to thank all members who paid dues and made donations to our educational support funds: The Walter Anderson Fund and The Kevin McCartney Fund. The dues payment process was very different this year. We didn't send out the usual reminder in the mail because we expected to have the new website up in October 2021 where payments could be made by credit card. The website wasn't launched until January 2021. There was no fall meeting where you could pay in person. I am very pleased that many of you have paid your dues, but we have not received as many dues as last year. So I want to remind those who haven't paid to go to the website and pay by credit card or write a check and send it to me, Bruce Hunter, 44 Old Fairgrounds Rd., Readfield, ME 04355. Instructions for using the website are written below. They were sent to you by email in early January by Cassy Rose, GSM webmaster.

Logging into your membership portal and paying dues:

Visit https://www.gsmmaine.org

- 1. Hover over "Membership" and then "Login"
- 2. Sign into your member account by entering your email address and the password gsmmaine2020 (let me know if your usual doesn't work and I'll look up how you're entered in the system)
- 3. Change this password once you log in for security purposes
- 4. Click Pay Dues. Look under Invoices, and you should have an invoice there. Under Status there will be a Pay button, which you should click to take you to the payment form.
- 5. Select either the credit card or pay by check options, then fill out your information appropriately and click Continue
- 6. If you select pay by check, you will need to physically mail your dues payment to Bruce Hunter, 44 Old Fairgrounds Rd, Readfield, ME 04355
- 7. If you choose to pay by credit card: when you're done you should see this message confirming that you have paid your dues.

Member Account

Add an Event Manage Listing Billing Log Out

Your account has been updated and this item is now active.

How to make donations to the Anderson Fund Endowment Campaign (AFEC):

- 1. Visit the AFEC page: https://www.gsmmaine.org/anderson-fund-endowment-campaign/
- 2. Click on one of three links that take you to the donation page
- 3. Fill out the donation form (you should have been brought to https://www.gsmmaine.org/product/anderson-fund-donation/), and click Add to Cart.
- 4. The page will reload, and there will be a message saying "Donate to the Walter Anderson Fund" has been added to your cart. Click View Cart.
- 5. Double check that the information you entered is correct, and click Proceed to Checkout.
- 6. Fill out the form and credit card information, and click Place Order.
- 7. You will receive an Order Received message, which you can then save for your records.

If you made a donation in 2020 or plan to make one in 2021 it is important to know that the IRS has changed the rules. You can take a deduction of up to \$300 even if you use the standard deduction for your 2020 taxes. Donations to GSM are eligible. This will be true next year also when you file your taxes for 2021. This is a good time to make a donation to the Walter Anderson Fund or the Kevin McCartney Fund.

Respectfully submitted, Bruce E. Hunter (Treasurer, 2021) March 14, 2021

The Maine Geologist

UPCOMING EVENTS

<u>Date</u>	Event	Location	<u>Organizer</u>
March 7–10	Prospectors & Developers Association of Canada (PDAC) Annual Convention	Virtual	Prospectors & Developers Association of Canada www.pdac.ca
March 14–16	56 th Annual Meeting of the Northeastern Section of the Geological Society of America	<u>Virtual</u>	Geological Society of America Northeastern Section
March 15–19	52 nd Lunar and Planetary Science Conference	<u>Virtual</u>	Lunar and Planetary Institute and NASA
March 25	2021 Maine Sustainability & Water Conference	<u>Virtual</u>	Senator George J. Mitchell Center for Sustainability Solutions
April 9	2021 GSM Spring Meeting	Virtual	GSM
May 17–19	GAC-MAC Joint Annual Meeting Hybrid London, Ontario		gacmac2021.ca/
July 4–9	Goldschmidt 2021 Conference	Hybrid Lyon, France	European Association of Geochemistry and the Geochemical Society
October 1	Anderson Fund grant proposal deadline		GSM

Please submit events to include on the calendar to the Newsletter Editor: amber.h.whittaker@maine.gov

MEMBERSHIP DUES STATEMENT

The GEOLOGICAL SOCIETY OF MAINE, INC. (often referred to as GSM) is a non-profit corporation established as an educational Society to advance the professional improvement of its members; to inform its members and others of current and planned geological programs in Maine; to encourage continuing social contact and dialog among geologists working in Maine; and to further public awareness and understanding of the geology of the State of Maine; and of the modern geological processes which affect the Maine landscape and the human environment.

The Society holds three meetings each year, in the late fall (Annual Meeting), early spring, and mid-summer (usually a field trip). A newsletter, *The Maine Geologist*, is published for all members three times a year. The Society year runs from Aug. 1 to Jul. 31. Annual dues and gift or fund contributions to the Society are tax deductible. There are four classes of membership:

2021 FEE SCHEDULE

\$ 30.00 REGULAR MEMBER	Graduate geologists, or equivalent, with one year of
	practice in geology, or with an advanced degree.
\$ 30.00 INSTITUTIONAL MEMBER	Libraries, societies, agencies, businesses with
	interests in or practicing geology and related disciplines.
\$ 15.00 ASSOCIATE MEMBER	Any person or organization desirous of association
	with the Society.
\$ 5.00 STUDENT MEMBER	Persons currently enrolled as college or university students.

THE GEOLOGICAL SOCIETY OF MAINE ANNUAL RENEWAL / APPLICATION FOR MEMBERSHIP

Regular Member \$ 30.00 \$	Name	Make checks payable to:
Institutional Members \$ 30.00 \$		Geological Society of Maine
Associate Member \$ 15.00 \$	Address	Bruce Hunter, GSM Treasurer
Student Member \$ 5.00 \$		44 Old Fairgrounds Rd
Contributions to GSM \$		Readfield, ME 04355
(please write gift or fund on check)		
TOTAL ENCLOSED \$		
En	nail Address	
(GSM funds include the Walter Anderson Fund, and discretionary gifts as noted by contributor)		

THE MAINE GEOLOGIST is the Newsletter of

the Geological Society of Maine, published three times a year, in mid-winter, summer, and early fall, for members and associates.

Items for inclusion in the Newsletter may be directed to:

Amber Whittaker, Newsletter Editor amber.h.whittaker@maine.gov 207-287-2803

2020/2021 SOCIETY YEAR BEGAN August 1 PLEASE SEND DUES TO TREASURER.

(or pay online at our website: gsmmaine.org)

THE GEOLOGICAL SOCIETY OF MAINE

c/o Bruce Hunter, GSM Treasurer 44 Old Fairgrounds Rd Readfield, ME 04355

PLEASE PAY YOUR DUES!

THE GEOLOGICAL SOCIETY OF MAINE EXECUTIVE COUNCIL

President	Sarah Hall	(2022)	College of the Atlantic, shall@coa.edu
Vice President	Myles Felch	(2022)	Maine Mineral and Gem Museum, mfelch@mainemineralmuseum.org
Secretary	Lisa Jacob	(2022)	Sevee & Maher Engineers Inc., ljj@smemaine.com
Treasurer	Bruce Hunter	(2022)	Maine DEP (retired), bruce.e.hunter@gmail.com
Newsletter Editor	Amber Whittaker	(2022)	Maine Geological Survey, amber.h.whittaker@maine.gov
Website Admin	Cassaundra Rose	(2022)	Governor's Office of Policy Innovation and the Future
Councilors	Keith Taylor	(2021)	St. Germain, keitht@stgermain.com
	Troy Smith	(2022)	Maine DEP, Troy.T.Smith@maine.gov
	Geneviève Robert	(2023)	Bates College, grobert@bates.edu
Historian	Bob Johnston	(2022)	Maine Geological Survey (retired), rajohnston73@gmail.com