



March, 2012

Volume 37

Number 1

## THE PRESIDENT'S MESSAGE

Time to start thinking Spring ... even if late season snow storms deposit another layer of white! This year's annual spring meeting will be on April 13th, and will be hosted by the Math and Science Department at the University of Maine at Presque Isle, with arrangements coordinated by Kevin McCartney (UMPI) and Keith Taylor (St. Germain). As in past years, the focus of this meeting will be student poster and oral presentations, with the Walter Anderson award given for the best Earth Science undergraduate oral and poster presentation. Please invite students to participate in this year's meeting. In addition to the posters and presentations, Kevin and Keith are arranging a panel discussion to give students an opportunity to learn about geological options after graduation. If you are interested in being part of the panel, please contact Keith Taylor ([KeithT@stgermaincollins.com](mailto:KeithT@stgermaincollins.com)).

The keynote speaker for the meeting will be Steve Kite, whose Maine connection includes UMaine and field work in The County. See other portions of this newsletter and the Society website for more meeting details.

Of course, thanks are in order to Lois Ongley for the superb setting and great organization of our Fall meeting at Unity College. Also, thanks to all the speakers who presented talks on a wide range of topics in Maine geology, especially our keynote speaker, Charlie Baeder, whose presentation brought us all up to date on the Penobscot River Restoration efforts.

Best to all as we move through the end of the winter and into spring ... and plan to be in Presque Isle for the Spring Meeting on April 13!

Alice R. Kelley, President (2011-2012)  
[akelley@maine.edu](mailto:akelley@maine.edu)

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## THE EDITOR'S MESSAGE

**Student Talks At Spring Meeting:  
Faculty, please inform your students.**

## See the format below for submission of abstracts to me by email, deadline April 2

Please send items of interest for the News from the Campuses and Member News columns, or other things you'd like to share.

Please check the date on your address label – members more than two years in arrears will be dropped from the mailing list. Send dues to Lois Ongley (see address on the last page).

Dan Belknap, Newsletter Editor (1998 – present)  
<[belknap@maine.edu](mailto:belknap@maine.edu)> (207) 581-2159, FAX: -2202

*PLEASE CHECK THE DATE ON YOUR ADDRESS LABEL – THIS IS THE DATE TO WHICH YOUR DUES ARE PAID UP. MEMBERS MORE THAN TWO YEARS IN ARREARS WILL BE DROPPED FROM THE MAILING LIST.*

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**GSM WEBSITE:** [www.gsmmaine.org](http://www.gsmmaine.org)



## GSM SPRING MEETING

**Friday April 13, 2012**

**University of Maine Presque Isle**

Northern Maine Museum of Science  
181 Main St, Presque Isle, ME 04769

## AGENDA

- 10:30 -12 Executive Committee meeting
- 12:00 -1 Lunch
- 12:15-12:45 Employment panel (meeting of students and professionals to discuss typical interview and employment practices)
- 1:00 - 3:30 Student posters and presentations
- 3:30 – 4:00 Business meeting, including remembrance of Bill Forbes
- 4:00 – 5:00 Keynote speaker Dr. Steve Kite

**STUDENT PARTICIPANTS:** Please submit your abstracts BY E-MAIL using some filename slightly more clever than "Abstract" to:

Daniel F. Belknap  
Dept. Earth Sciences  
University of Maine  
Orono, ME 04469-5790 <belknap@maine.edu>

Please be sure to designate **poster** or **talk**. Abstracts will be compiled and handed out as a Program and Abstracts supplement to the newsletter at the meeting. DEADLINE April 2.

**FORMAT:**

[Poster or Oral presentation]

DETAILED AND EXPLICIT TITLE, ALL CAPS

LAST NAME, First Name, Department, College, Address, <email.address>

Text of abstract describing the work succinctly, avoiding the form: "it will be shown that" and other fluff phrases. Please limit the abstract to 300 words, using GSA style.

**DIRECTIONS:** Heading North on I-95, to exit 302 in Houlton, exit N to Presque Isle/Mars Hill.

Continue N 26.6 mi. to left onto Benjamin St./US 1.

Continue N 13.7 mi. to 181 Main St., UMPI on left.

Folsom Hall is second building on the left, large parking lot is on the right.

<http://www.umpi.maine.edu/~mccartnk/gsm05.htm>



**GSM MEMBER NEWS**

The following people received Maine Certified Geologist standing recently: **John Cressey** of Summit Environmental, **Jason House** of Woodard & Curran, **Molly King** of the DEP, and **Jean Firth** of AMEC (see more on Jean below).

Summit Environmental hired geologist **Steve Marcotte** in 2011.

**Jean Firth** and **Hank Andolsek**, well-known DEP Brownfields staff, have left government and are now working for AMEC in Portland(formerly MacTec).

**Jim Hillier** has merged his Augusta-based company Hillier & Associates with GZA GeoEnvironmental of Portland. Employees **Brad Tirone** and **Amy Fitzherbert** have also made the move along with Jim.

Please send member news to:

Keith R. Taylor,

Member News Correspondent (2012 - present)

[KeithT@stgermaincollins.com](mailto:KeithT@stgermaincollins.com)

Senior Hydrologist, St. Germaine Collins

846 Main St., Suite 3, Westbrook, ME 04092

Phone: (207)-591-7000 ext. 22

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**THE STATE GEOLOGIST'S MESSAGE**

**Deep unused boreholes wanted!**

Here's an opportunity to have some good come from those deep boreholes in bedrock that didn't work out for your project! The Maine Geological Survey is working as part of a national consortium of state geological surveys to organize information about the nation's geothermal resources into a single comprehensive database. The National Geothermal Data System is funded by the Department of Energy and aims to develop a network of distributed databases and data sites that can be seamlessly used for research on geothermal resources. Read about state geological survey involvement here: <http://www.stategeothermaldata.org/>

In the first phase of this project, the MGS compiled available information ranging from heat flow measurements made in deep mineral exploration boreholes to groundwater temperatures from shallow water wells. In the next phase of this project, we are seeking to augment the existing information with new data, particularly in geographic areas that lack measurements. When we first scoped the project, we used our water well database to identify deep water wells in certain parts of the state, and particularly in granite bodies. Granites are likely to be more homogeneous through the depth range of a well than metamorphic rocks, greatly simplifying estimates of heat flow when rock samples are lacking. But using water wells is complicated by the hassle and cost of pulling pumps, not to mention the inconvenience to homeowners. Thus, we are seeking any unused deep boreholes in bedrock of which you may know.

While our preference is for boreholes in major granite bodies, we'll consider any available borehole of 300 feet depth or greater. To fill our geographic gaps we are most interested in boreholes in York County, northern Hancock and Washington counties, southern Somerset and Franklin counties, and central Oxford County, but we will consider boreholes anywhere. If you know of a borehole that might be

suitable for this project, please contact Dan Locke at 287-7171, or [daniel.b.locke@maine.gov](mailto:daniel.b.locke@maine.gov).

Robert G. Marvinney, Maine State Geologist:  
[Robert.G.Marvinney@maine.gov](mailto:Robert.G.Marvinney@maine.gov)

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**GSM SECRETARY'S REPORT**  
**Geological Society of Maine Fall Meeting,**  
**Unity College, Unity, Maine**  
**November 4, 2011**

**Secretary's Minutes of the Executive Committee Meeting**

**Secretary's Report:** No business was conducted at the summer field trip meeting at Deboullie.

**Treasurer's Report:** Lois Ongley provided the Treasurer's report, including three handouts:

Treasurer's Report Fiscal Year August 1, 2011 - July 31, 2012,

Treasurer's Report Fiscal Year August 1, 2010 - July 31, 2011

Proposed Budget Fiscal Year August 1, 2011 - July 31, 2012

Dan Belknap noted that the membership year and budget year are different in the bylaws, and that the handouts reflect the membership year, not the budget year. The first time presentation of a proposed budget was commented in appreciation by Dan, but noting that a budget must be approved by the Executive Committee.

**Education Committee Report**

Julia Daly reported the education committee is undertaking a new project to provide some training and support for earth science teachers in Maine. The project goal is to reach a large number of high school students by training earth science teachers in map workshops that will utilize topographic, surficial and bedrock maps local to their area. These workshops would be held around the state in different localities. Julia has been in touch with the Maine Science Teachers Association, the Maine Math and Science Alliance, and other organizations about using their list-serves to reach teachers. The proposal includes a ~3-hour workshop for which teachers would potentially receive continuing education credits, a \$50 stipend for attending, and a \$50 set of maps for classroom use (funded by GSM). There may also be stipends for teaching assistants hired to assist with the workshops. The workshops are envisioned to

accommodate 6 teachers at each locality. Cliff Lippitt made a motion to approve a 1-year trial for the map workshops, to cover two workshops, accommodating 6 teachers each, with a total budget of up to \$2000. Dan Belknap seconded the motion. All voted in favor.

There ensued a discussion of disbursement of travel funds for high school students to attend GSM meetings continues. A new request from a Unity College student for travel to a non-GSM meeting was discussed. The discussion was tabled pending development of a policy by the education committee.

**Spring Meeting Planning:**

The spring meeting is to be held in Presque Isle in April 2012, per the rotation amongst college campuses.

UMPI faculty requested funding for travel for a proposed keynote speaker, Steven J. Kite, a University of Maine graduate who is now on the faculty at West Virginia University. His research interests are Quaternary stratigraphy, fluvial and glacial geomorphology, geoarchaeology, and surficial geology and geomorphology of the Appalachians and Ohio River Basin. Dan Belknap moved that the board authorize up to \$350 for Dr. Kite's travel. Tom Weddle seconded the motion. The motion passed unanimously by a show of hands.

**Summer Meeting and Field Trip:**

Two proposals have been made for summer field trips. One would be a kayaking trip along the coast at Sorrento. Discussions noted the high attendance of our coastal trips (Acadia and Camden Hills trips in recent years has 30 to 40+ attendees), the logistics of getting that many potential attendees into kayaks, and the lack of a volunteer field trip leader for this endeavor.

The other field trip proposal was for a trip in western Maine at Bald Mountain, with a base camp at Mount Blue State Park. The trip would be coordinated by Doug Reusch.

Julia Daly made a motion that we pursue the Western Maine idea. Martha Mixon seconded the motion. All were in favor.

Due to time constraints discussion of other agenda items was deferred. A motion was made to adjourn by Keith Taylor.

**Business Meeting**

Items from the Executive Board meeting were presented to the membership, including the

Treasurer's Report, Spring Meeting Announcement, Education Committee Report, all covered above.

The Education Committee's proposal was presented to the membership, with the recommendation that the membership support the plan for earth science teacher workshops. A motion was made by Peter Garrett to fund up to \$2000 and go forward with the program. The motion was seconded by Fred Beck and approved unanimously.

An announcement was made that anyone interested in serving GSM as an officer or board member should notify Alice. A nomination committee will be formed to come up with a slate of officers for the Fall 2012 meeting.

From the Floor:

Kevin McCartney, UMPI, will try to coordinate overnight accommodations for those needing them, for the Spring meeting. He also suggested holding mock interviews for students during the Spring meeting. This would require volunteers to hold the interviews.

Patti Millette related conversations with colleagues about the population of high school students that is 'not interested in anything.' She said there is a feeling that students and their teachers don't know enough about what commercial geologists do. She is interested in assistance with career development in geology for high school students, and would welcome input on that.

Bob Marvinney said many have asked how the survey is faring with the new administration in Augusta. Overall, he noted, the survey is doing well, and the new commissioner of Conservation, Bill Beardsley, is a person who recognizes the value of science in decision-making and sees the survey as an 'honest broker'. Among the changes that are under consideration which may affect MGS include the combination of the Departments of Agriculture and Conservation, which has been proposed by the governor, but will be decided by the legislature. Bob noted if it happens, it will be a long process. The closure of the State Planning office may leave MGS with the Coastal Program, which Bob sees as a good fit.

Land for Maine's Future may also come to MGS. John Tewhey noted it is an important program, and thought MGS a fitting home for it. Bob noted he would rather see it as a special program in the Commissioner's office to give it more visibility.

The legislative group is working on \$25 million in cuts and the governor has suggested larger cuts are in order. Bob may call on us at some point for help.

Bob also noted that Mark Foley, who has been with the survey for many years, is moving to the Submerged Lands Program. The MGS will miss him but he is not far away, and it is a more stable funding situation for Mark.

Motion to adjourn by Bob Marvinney.

Submitted by Martha Mixon, Secretary  
[Martha.mixon@gmail.com](mailto:Martha.mixon@gmail.com)

Martha N. Mixon  
11 Merriam Street, Portland, Maine 04103  
cell [\(207\) 400-0055](tel:2074000055) home [\(207\) 871-8012](tel:2078718012)



Monhegan Island, 06/18/2010, D.F. Belknap



Owls Head, 06/18/2010, D.F. Belknap

"The activity and passivity of a glacier depend upon its depth, speed of flow, and balance-sheet. The rate of movement of an active glacier is generally large in relation to its size and slope, while that of a passive glacier is small. The balance-sheet of an active glacier is also relatively large; the regime, however, may be positive or negative, for even when it is negative the material transported from the accumulation to the ablation area will be so large that the movement is considerable... Thus a glacier may be active although its tongue is in retreat." *Hans W. Ahlmann, Glaciological Research on the North Atlantic Coasts, 1948.*

## GSM TREASURER'S REPORT

January 15, 2012

At the last Executive Committee meeting on November 4, 2011, the committee approved a budget for the 2011-12 fiscal year. The budget, suggested by the Treasurer and modified by the committee, was loosely based on the previous year's income and expenditures.

GSM's fiscal year runs from August 1 to the following July 31 and seems to have been set when we first filed for our IRS status. This is different from our membership year, which has traditionally been September 1 to August 31, in line with the academic year.

Both the approved budget and our income/expenses for the present fiscal year to December 31 are presented below. Our only significant financial activities were the Fall meeting and membership renewals. During the next few months we will have newsletter and web site expenses as well as additional meeting expenses. In addition, although GSM contributes about 40% of a professional member's dues to the Walter Anderson Funds, the line item of donations does not include those amounts.

### BUDGET

#### Fiscal Year August 1, 2011 to July 31, 2012

##### Income

Dues	\$ 3,000.00
Dividends	\$ 75.00
Donations for Anderson Fund	\$ 200.00

**Subtotal** \$ 3,275.00

##### Expenses

Newsletters	\$ 1,200.00
Meeting Expenses	\$ 850.00
Anderson Fund Awards	
Teacher Map Workshop	\$ 2,000.00
Spring Meeting Awards	\$ 200.00
Website	\$ 100.00
Miscellaneous (10% of above)	\$ 230.00

**Subtotal** \$ 4,480.00

**Net Gain (Loss)** \$ (1,105.00)

### Current Membership

Students	23
Associates	18
Regular Members	194
Institutional Members	<u>7</u>
Total	<u>242</u>

### REPORT OF INCOME AND EXPENSE

as of December 31, 2011

#### Assets: August 1, 2011

Anderson Fund Prime Share	\$ 5,802.39
Anderson Fund CD	\$ 6,024.21
<b>Subtotal</b>	\$ 11,826.60

General Fund Prime Share	\$ 2,026.57
General Fund CD	\$ 3,769.00
General Fund Money Market	\$ 2,505.88
General Fund Share Draft	\$ 1,690.18
<b>Subtotal</b>	\$ 9,991.63

**Total** \$ 21,818.23

#### Income

Dues	\$ 1,400.00
Dividends	\$ 32.99
Donations to Anderson Fund	\$ 40.00
Meeting Fees	\$ 179.00
<b>Subtotal</b>	\$ 1,651.99

#### Expenses

Newsletters	\$ -
Meeting Expenses	\$ 419.21
Anderson Fund Awards	\$ -
Web Site	\$ -
Miscellaneous	\$ -
<b>Subtotal</b>	\$ 419.21

#### Assets: January 1, 2012

Anderson Fund Prime Share	\$ 6,328.51
Anderson Fund CD	\$ 6,036.82
<b>Subtotal</b>	\$ 12,365.33

General Fund Prime Share	\$ 1,996.74
General Fund CD	\$ 3,776.90
General Fund Money Market	\$ 2,510.07
General Fund Share Draft	\$ 2,401.97
<b>Subtotal</b>	\$ 10,685.68

**Total** \$ 23,051.01

**Net gain [or loss]** \$ 1,232.78

Respectfully submitted,  
Lois K. Ongley, Treasurer (2010 - present)  
[longley@unity.edu](mailto:longley@unity.edu)

**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 Sept. 1 to Aug. 31. Annual dues and gift or fund contributions to the Society are tax deductible. There are four classes of memberships:

\$20.00	REGULAR MEMBER	Graduate geologists, or equivalent, with one year of practice in geology, or with an advanced degree.	<b>FEE SCHEDULE AS OF February, 2008</b>
\$20.00	INSTITUTIONAL MEMBER	Libraries, societies, agencies, businesses with interests in or practicing geology and related disciplines.	
\$10.00	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	\$20.00	\$ _____	Name _____	<b>Make checks payable to:</b> Geological Society of Maine Lois K. Ongley, Treasurer Unity College 90 Quaker Hill Road Unity, ME 04988
Institutional Members	\$20.00	\$ _____		
Associate Member	\$10.00	\$ _____	Address _____	
Student Member	\$ 5.00	\$ _____		
Contributions to GSM (please write gift or fund on check)		\$ _____		
<b>TOTAL ENCLOSED</b>		\$ _____	_____	

Email Address \_\_\_\_\_  
(GSM funds include the Walter Anderson Fund\_\_\_\_, and discretionary gifts as noted by contributor)

**2011/2012 SOCIETY YEAR BEGAN SEPTEMBER 1 - PLEASE SEND DUES TO TREASURER.**  
**The DATE on your mailing address refers to PAID UP DUES DATE**

**THE GEOLOGICAL SOCIETY OF MAINE**  
c/o Daniel F. Belknap, Newsletter Editor  
Department of Earth Sciences  
111 Bryand Global Sciences Center  
University of Maine  
Orono, ME 04469-5790 <belknap@maine.edu>



**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.

Return Service Requested

Correspondence about **membership** in the Society, **publications** and **dues** should be mailed to:  
Lois K. Ongley, Professor of Geochemistry, Unity College,  
90 Quaker Hill Rd., Unity, ME 04988 <longley@unity.edu>

Items for inclusion in the **Newsletter** may be directed to:  
Daniel F. Belknap, Dept. Earth Sciences, University of Maine,  
Orono, ME 04469-5790 <belknap@maine.edu>

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|-------------------|------------------------|--------------------------------|
| President         | Alice Kelley           | University of Maine            |
| Vice President    | Keith Taylor           | St. Germain-Collins Consulting |
| Secretary         | Martha Mixon           | Consulting geologist           |
| Treasurer         | Lois Ongley            | Unity College                  |
| Newsletter Editor | Dan Belknap            | University of Maine            |
| Directors         | Cliff Lippitt (08-11)  | S.W. Cole, Inc.                |
|                   | Tom Weddle (09-12)     | Maine Geological Survey        |
|                   | Rudy Rawcliffe (10-13) | Northeast Geophysical Services |