



October, 2002
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The President's Message

Greeting fellow members and, as my term of office expires soon, this will be my last epistle to you for a while! I know you all will miss these ramblings of the wee Irishman up in Farmington. At least in this presidential message there will be no mention of terrorism or war!!

First of all I would like to thank my committee, Lisa Churchill-Dickson (Vice-president), Liz Champeon (Treasurer), and Pat Seaward (Secretary), for all their hard work and indeed for making this society run as smoothly as it does. My sincere thanks also to Dan Belknap who gets us all together to produce this Newsletter. I don't know quite how he does this (and be chair of a department at the same time) but I hope he keeps doing it! When I began my tenure as VP and then Prez I wondered what the directors do? Now I know and my thanks also to Marty, Joe and Walter for their collective wisdom and abundant good advice.

As many of you know I am on sabbatical this semester. I started this off with a trip to Edinburgh to attend the International Mineralogical Association conference and also do some sampling on Skye. It was an excellent meeting in a superb setting. While I was over there I often thought how great it would be to do a GSM summer field trip to Scotland. Maybe someday!

In talking with some colleagues who teach in the university system in the British Isles there it was still the same depressing story of closures and contracting Geology departments coupled with difficult to non-existent funding in certain areas. Just last year my alma mater, Queen's University, Belfast, closed its Geology Department. I mention this as a cautionary note. With the current budget situation at the State level there might be hard times ahead for the Survey, the Universities and indeed the private sector. It may well take some concerted effort, perhaps orchestrated by this Society, to maintain our current level of geological expertise statewide.

In contrast the news from Farmington is very bright. Our new position has been filled and we are very pleased to have Julia Daly and Doug Reusch on board as the first "to be seated" in the Forrest P. Dexter Chair in Geology. We also have a further gift for analytical equipment and hope to purchase an X-ray fluorescence system along with other instruments for our Department. I would like to take this opportunity to thank our benefactor who through his very generous support has not only enhanced our program at UMF

but also, I believe, strengthened teaching and research throughout the state.

Finally I would like to say that it has been a huge pleasure to be the President of this society. It has been great fun and I thank you for your support. I think we are in a very healthy state and long may that continue. Don't forget the fall meeting here in Farmington (see details in this issue) – I look forward to seeing you here in November.

Cheers,

Dave Gibson, President, Geological Society of Maine
<dgibson@maine.edu>

The Editor's Message:

Please take a moment to scan the Treasurer's Report. Treasurer Liz Champeon reports that we just admitted our 600th member this summer, counting from the founding of the Society in 1974. Although we continue to grow in membership, we are experiencing a slow erosion in available funds. In terms of cash on hand, nothing has proven to be better for us than the short courses. Anyone with ideas along these lines, please come prepared for discussion at the fall meeting.

Please note the date listed on your mailing label. This is your paid-up dues date. We need to have continued member dues to maintain the mailing of this Newsletter, and to conduct the seasonal meetings. I'd like to take this opportunity to thank Liz Champeon, who conscientiously maintains the mailing list, and provides the electronically printed labels. We know that the list is imperfect – we receive nearly 10% returns for lack of a current address or forwarding address – but we are trying hard to keep up with an apparently very mobile group of members.

Also, we need to continue to make a concerted effort to engage students in the Society. This Newsletter is available for any and all news from student geology clubs, as well as other items from any member related to Maine geology. I am particularly interested in including short items of scientific interest, drawings or photos (electronic format), and history of the Society or of Maine geology in general.

Thanks,

Dan Belknap, Newsletter Editor <belknap@maine.edu>



Geological Society of Maine Fall Meeting

Friday, November 8, 2002

GSM Field Forum: Pleistocene Features and Holocene Fluvial Processes in Farmington, Maine - Mapping Programs of the Maine Geological Survey and the University of Maine, Farmington

Forum Leaders:

Tom Weddle (MGS) and Dave Gibson (UMF)

Location: UM Farmington

Date: Friday November 8, 2002

Meeting Time and Place: 12 Noon to 12:30PM at UMF Ricker Hall (more details to follow)

Departure: 12:30PM - UMF will provide vans; we may need some private vehicles, too.

Stop 1) Striated bedrock pavement, Granite Heights Road. Site of multiple striation sets on well preserved outcrop. A preview of this stop is found at the Maine Geological Survey August 2002 Geologic Site of the Month.
<http://www.state.me.us/doc/nrimc/mgs/sites-2002/aug02.htm>

Stop 2) Pismo Beach Gravel Pit, Route 4. Glaciomarine and Holocene deposits; discussion of deglacial history.

Stop 3) Tyler Gravel Bar, Route 4. Glaciomarine and Holocene deposits; discussion of Holocene erosion by Sandy River.

Return: 4:30PM - UMF Ricker Hall

5:00 – 5:45 Business Meeting:

6:00 – 7:00 Evening Speaker: Peter O. Koons,
University of Maine



GSM Web Site

www.gsmmaine.org

Webmaster, UMF

< Megan.Macdonald@MAINE.EDU >

If you have not yet done so, please visit the website. It is a great place to keep up with the happenings of the Society, but also has links to Maine geology resources, educational institutions and governmental agencies. With just a few clicks you can find anything posted on the web concerning Maine Geology.

The State Geologist's Message:

Drought continues in Maine

Over the past year and a half, Marc Loiselle and I have spent much time in meetings of the Drought Task Force. This group is jointly chaired by the Chief of the USGS Water Resources Division in Augusta and the Director of the Maine Emergency Management Agency. Task Force members include state agencies, federal agencies, the National Weather Service, farm agencies, water utilities, reservoir managers, and others. While Maine has experienced a number of dry years in the past five, our current drought began in earnest in April of 2001. As you will recall, the winter of 2001 closed with a number of substantial snowstorms that increased water content in the snowpack statewide during March, a time when the water content is usually decreasing. Emergency managers were very concerned about the threat of flooding. But precipitation in April was 2-3 inches below normal around the state which led to an orderly snowmelt. Precipitation remained below normal for the rest of the year, so much so that 2001 became Maine's driest in over 100 years of record.

In some parts of the state, groundwater levels reached record lows during the fall of 2001. After the growing season is over, groundwater levels usually recover to some degree, but last year the groundwater levels kept dropping throughout the fall and winter. Recovery during the spring was close to normal for northern and eastern Maine. In southern Maine, however, the recovery was only half of normal. (Check the Sanford well at the USGS website - <http://me.water.usgs.gov/gwmap.html>.)

In 2001 thousands of people around the state experienced problems with mostly dug wells that went dry. This year many more experienced problems. Through this entire period, there have been numerous reports of replacement bedrock wells going to 500 feet or more without finding water. Certainly, a few drillers have discovered that the distribution of water-bearing fractures in Maine is unpredictable, but the vast majority of new wells encountered water at reasonable depths.

After a disappointing winter season (at least for skiers), 2002 got off to a reasonable start with spring rain that was close to normal around the state. Farmers had a good start to the season. At the Drought Task Force we were warned that conditions could shift back into drought with just a few dry weeks. July and August were great for outdoor activities, but the lack of rain forced the state decidedly back into drought. In August we had just over an inch of rain – among the driest on record.

As we enter autumn, the northern part of the state has fallen into severe drought, and the central and southern parts of the state are in moderate drought. Coastal areas are a bit better off. Groundwater levels in southern Maine index wells are poised to reach all-time lows. The precipitation outlook for the next few

months gives equal probabilities to normal, below normal, and above normal conditions. We'll need substantial rain this fall and a good New England winter to turn around the groundwater situation.

Robert G. Marvinney, Maine State Geologist:

<Robert.G.Marvinney@state.me.us>

GSM MEMBER NEWS

Hank Andolsek, formerly of Harding Lawson Associates, and **Paul Higgins**, formerly EA Engineering, Science, and Technology, were hired in January 2002 to fill certified geologist positions in the Bureau of Waste Management at the Maine DEP.

Rachel Beane (Bowdoin College) recently received a three-year NSF grant to support research in the Casco Bay region. The proposal is titled "Integrating research with undergraduate education through a petroectonic study of Casco Bay, Maine", and supports petrology, structural geology, and geochronology research in undergraduate courses, as well as summer research. She and her students are looking forward to sharing results at future GSM meetings.

Tom Eastler (University of Maine at Farmington) has been selected for the second time in three years to coach the U.S. National Racewalk Team. Tom was elected as a GSA Fellow at the Spring 2002 meeting, and awarded the E.B. Burwell, Jr. Award by the GSA's Engineering Geology Division.

Jim Hillier and his staff at Hillier and Associates received the Annual Business Award from EPA and the Northeast Water Supplies Association. They received the award for the work they did with the Town of Readfield to survey the Maranacook Lake Watershed and construct a demonstration project.

Clifford R. Lippitt, C. G. is practicing as a solo consultanting/ contract geologist based out of Bangor, d.b.a. Lippitt Geological Services

Kevin McCartney/University of Maine at Presque Isle's solar system project was featured in the April 2002 issue of "Science" and in the May/June 2002 issue of "Northern New England Journal", AAA's regional magazine.

Andy Tolman (Department of Human Services) will be acting in "Joseph and the Technicolor Dream Coat" at the Theatre at Monmouth the last two weekends in October.

Woody Thompson is the new secretary of the Northeastern Friends of the Pleistocene, having inherited this position from Ernie Muller of Syracuse University. Woody's principal responsibility is to make sure that the annual conference is held every spring in

an interesting field area. He will be polling the Friends (anyone with an interest in the Quaternary of the Northeast) to recruit leaders for the 2003 reunion.

Please send member news to:

Carolyn Lepage <clepagegeo@aol.com> or
PO Box 1195, Auburn, ME 04211-1195 or
by fax to 207-777-1370 or just call 207-777-1049

PROPOSED STATE MINERAL COLLECTING PARK

Bob Marvinney and Woody Thompson are working on establishing a State mineral collecting park that will encompass the world-famous pegmatite quarries in Newry, Maine. Bob's proposal was initiated through Land for Maine's Future and has been favorably received by planning groups in western Maine. A fundraising drive will be started to purchase the property, so it can be available to the public for mineral collecting and other forms of recreation. A committee including representatives from the Maine Mineral Symposium Association and the Federation of Maine Mineral Clubs is assisting with this task and developing a management plan for the proposed park. For more information, contact Woody at the Maine Geological Survey:

<Woodrow.B.Thompson@state.me.us>

DEP-CEM task force

The DEP-CEM task force met on June 7 and September 6. During both meetings, there was much discussion of the upcoming revisions to the Stormwater regulations resulting from Maine's assumption of primacy for NPDES permits. The Federally driven regulations, still under review, are likely to change the pattern of development and requirements for permitting. The September meeting focused on nitrates, and a pending grant to the George Mitchell Center to study leaching from biosolids stockpiles. The proposal was reviewed, and there was discussion about nitrate evaluations required from septic systems in subdivisions reviewed by DEP. The GMC will be looking for funding to expand its biosolids leaching study to include additional evaluations of septic system influence on ground water quality.

Andy Tolman is assisting Carolyn Lepage in covering the Task Force for GSM, as Carolyn's schedule has made it difficult for her to attend meetings. For more details about the meetings, please contact Andy at <Andrews.L.Tolman@state.me.us>

New Hampshire Council of Professional Geologists: News from New Hampshire

This past July 1st, the one-year grandfather period for NH Professional Geologist license applications closed and we saw the full degree of the success of the geologist licensing effort which began more than three years ago. The NH Joint Board reported that as of September 1st, 754 applications had been received and 331 licenses had been issued. With this milestone behind us, the New Hampshire Council of Professional Geologists Board of Directors focused in earnest on the rejoining of our organization with the NH Geological Society. The rejoining of the two organizations is driven by the benefits of having one unified geologic organization ("strength in numbers") in a relatively small state and the efficiency of operating one organization instead of two where there is significant membership overlap. Both the NHCPG and NHGS Boards believe that together, the organizations will be even more successful in achieving their education, advocacy, social, and professional missions. For more information, visit the NHCPG web site at www.nhcpg.org.

Timothy Stone, PG, LSP
tstone@stonehillenvironmental.com

SECRETARY'S REPORT

Informal Summer Meeting Notes August 3, 2002

After an outdoor buffet dinner at Lamoine State Park we gathered around the campfire to relax and enjoy the cool of the evening - when all of a sudden, a meeting broke out!

Walter started it by talking about several resources available for students of geologic history:

The Last Billion Years, A Geological History of the Maritime Provinces of Canada, compiled by Atlantic Geoscience; available from Nimbus Publishing, P.O. Box 9166, Halifax, Nova Scotia, B3K 5M8. Cost: #35.00

The Ice Chronicles, The Quest to Understanding Global Climate Change, edited by Paul Mayewski, UM, and Frank White, UNH.

Poland Spring has available two posters: the 'Ice Age in Maine' compiled by several folk at UM, and a work-in-progress by Doug Reusch and Meg Coleman, 'A Tectonics Poster of Maine', due out this fall.

Bob Marvinney informed us of an effort to purchase property in Newry including the Dunton, Nevel, Bell, Kinglet, Crooker, and Scotty quarry localities and surrounding "waste" rock piles to establish a mineral collecting park. The Land for

Maine's Future Board has provided \$50,000 toward the purchase price, leaving approximately \$250,000 to raise. "Potential involvement for GSM includes promoting the project, financial contributions from members, and possibly a repository for donations." Not only is the mineral collecting superb, the area can be enjoyed by hikers and naturalists of all kinds, to enjoy the views of the Ellis River Valley and Whitecap Mountain. The area is well known to geology students and others interested in earth science. Respectfully submitted,

Patricia O. Seaward, Secretary
<Patricia.O.Seaward@state.me.us>

GSM TREASURER'S REPORT

The Society currently has 394 members: They are distributed as follows:

Associates:	33
Institutions:	15
Regular:	294
Students:	52

Balance on Hand 06/19/02 **\$ 10,101.73**

Anderson Fund (Total)	\$ 5,085.68
Education Fund (Total)	\$ 872.70
Checking Account (other)	\$ 4234.35

Receipts

Dues	\$ 478.00
Anderson fund (interest)	\$ 61.00
Anderson fund (contributions)	\$ 30.00
Education fund	\$ 0.00
Publications	\$ -

Subtotal **\$ 569.00**

Expenses

Printing, mailing, stamps	\$ 449.49
Field Trip	\$ 912.85

Subtotal **\$ 1,362.34**

Balance on Hand 10/14/02 **\$ 9,308.39**

Note: We responded to a request for information from the IRS, relative to the amount of money we take in. We are still considered non-profit and exempt from filing.

Respectfully submitted,
Elizabeth A. Champeon, Treasurer
<Lchampeon@aol.com>

GEOLOGY DEPARTMENTS' NEWS

Colby College

Contrary to what might have been perceived from last Fall's GSM Newsletter, there is a wide diversity of

both faculty and student activities that are ongoing in the Colby Geology Department. The departments of Geology (Bob Gastaldo/Jen Shosa) and Chemistry (Whitney King) received an NSF-MRI (Major Research Instrumentation) grant to purchase and equip an integrated sampling boat for research focused on Maine's lakes. This 24' pontoon boat has differential GPS and Lowrance sonar, along with a variety of instrumentation that allows for real-time acquisition of temperature, pressure, dissolved oxygen, conductivity, pH, Eh, fluorescence (a proxy for biomass), etc. Additionally, instrumentation has been developed (King) for real-time on-board analyses of reactive phosphate, iron, H₂O₂, and nitrate using chemoluminescence techniques. Bottom grab sampling and vibracoring of shallow-water sediments are facilitated from the platform, using an industrial crane and winch to extract cores. Efforts this summer have focused on the Belgrade Lakes region, where Snow Pond, Great Pond, and East Pond were surveyed bathymetrically. Bottom sediment samples were collected in Snow Pond. As part of this effort, groundwater monitoring well fields have been installed in conterminous bogs to assess the ionic influx into the lakes. A team of 3 faculty and 10 students (2 geology – J. Ossolinski '03, A. Burrows '04, 2 environmental studies, 6 chemistry) worked throughout the summer on data acquisition; students in Sedimentology & Stratigraphy, Hydrogeology, and Chemical Methods of Analysis are continuing lake studies this Fall Semester, with results to be presented at NE GSA in Halifax.

Students (M. Severs '02 and C. Becker '03) and faculty (Bruce Rueger, Shosa, Gastaldo) continued studies on the Holocene history, sedimentology and hydrology of Spittal Pond and Warwick Pond in Bermuda. Results of were presented at GSA in Boston (Severs & Becker) and the 11th Conference on the Geology of the Bahamas in June 02 (W. Tackaberry '01, Rueger, Shosa, & Gastaldo). Funding for these studies was provided, in part, by the Petroleum Research Fund, the Claire Boothe Luce Foundation, and Colby College.

Jon Allen '03 spent his second summer completing field work associated with an NSF grant obtained by Gastaldo and Nelson to investigate early Devonian ecosystems in the Trout Brook Fm. A sedimentological model for the stratigraphic sequence was presented at GSA in Boston, and this summer's field work was focused on refining the model and acquiring and incorporating plant taphonomic data under the direction of Bob Gastaldo. Rob Selover '03 and Ivan Mihajlov '05, under the supervision of Bob Nelson, continued disaggregation of fossil-bearing intervals and picking dispersed organic remains in the search for early terrestrial arthropods. The group discovered the first invertebrate-bearing lithology in the Trout Valley sequence, from which Maine's first complete eurypterid was collected (Nelson). Results of these research

efforts will be presented at GSA in Denver this October.

Bob Gastaldo continues to be a participant in NSF's funded Paleodatabase Project (<http://www.pbdb.org>), administered through the National Center for Ecological Analysis and Synthesis (NCEAS) in Santa Barbara. He is a member of both the Paleobotany Working Group and the Taphonomy Working Group. Several students in the department have been funded as data enterers over the past year; the project has another 3 years of funding. In addition, Gastaldo has been funded recently by NSF in a collaborative project with Hermann Pfefferkorn, Univ. Pennsylvania, to investigate ecosystem stability across the Mississippian-Pennsylvanian boundary section in the Silesian coal field, Poland and the Czech Republic.

This coming 03/04 academic year, Bob Nelson is scheduled to teach two courses – Geomorphology and Volcanoes – originating out of the CBB Facility in Quito, Ecuador. Both courses will be given in the Fall Semester 03 and involve laboratories, many of which will be field based; students will be given 4 credits per course. Students interested in participating in this international experience should contact him at renelson@colby.edu. Students must indicate an interest for the program to their off-campus studies office by 11/15/02, and register with their appropriate colleges for the program before 01/03/03.

Robert A. Gastaldo, Chairman
<ragastal@colby.edu>

University of Maine

UMaine Geological Society

The University of Maine Geological Society, originally founded as the Rock and Hammer Club in 1947, focuses on promoting a community in the geological sciences. The society brings together students from all aspects of geology, such as air and water quality, petrology, sedimentology and students from the Quaternary sciences department. We try to encourage all students by sponsoring field trips, providing access to professional conferences and promoting research/field work opportunities within the Department of Geological Sciences. The society's main goal is to advocate excitement and support to those University of Maine students that have interest in Global sciences. Recent activities include a van-load of students who went to NEIGC in New York September 20-24, a day-trip to Tumbledown Mountain, October 6, and preliminary planning for an extended March Break fieldtrip to the Caribbean.

Alex Roy, President, UMGS
<Alex_Roy@umit.maine.edu>

MEMBERSHIP DUES STATEMENT

The GEOLOGICAL SOCIETY OF MAINE, INC. 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 field trips). A newsletter, *The Maine Geologist*, is published for all members three times a year. The Society year runs from August 1 to July 31. Annual dues and gift or fund contributions to the Society are tax deductible. There are three classes of memberships:

\$7.00	REGULAR MEMBER	Graduate geologists, or equivalent, with one year of practice in geology, or with an advanced degree.
\$6.00	ASSOCIATE MEMBER	Any person or organization desirous of association with the Society.
\$4.00	STUDENT MEMBER	Persons currently enrolled as college students.

A \$2.00 APPLICATION FEE is a one-time fee for all new members, payable when applying for membership.

THE GEOLOGICAL SOCIETY OF MAINE ANNUAL RENEWAL / APPLICATION FOR MEMBERSHIP

Application Fee	\$2.00	\$ _____	Name _____	Make checks payable to: Geological Society of Maine Elizabeth Champeon, Treasurer S.W. Cole Engineering, Inc. 37 Liberty Drive Bangor, ME 04401
Regular Member	\$7.00	\$ _____		
Associate Member	\$6.00	\$ _____	Address _____	
Student Member	\$4.00	\$ _____		
Contributions to GSM (please write gift or fund on check)		\$ _____		
TOTAL ENCLOSED		\$ _____	_____	

(Geological Society of Maine funds include the Walter Anderson Fund, the Education Fund, and discretionary gifts as noted by contributor)

2002/2003 SOCIETY YEAR BEGINS AUGUST 1 - PLEASE SEND DUES TO TREASURER

THE GEOLOGICAL SOCIETY OF MAINE

c/o Daniel F. Belknap, Newsletter Editor
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Return Service Requested

Correspondence about membership in the Society should be mailed to:
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37 Liberty Drive, Bangor, ME 04401

Items for inclusion in the newsletter may be directed to:
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Vice President	Lisa Churchill-Dickson
Secretary	Pat Seaward
Treasurer	Liz Champeon
Newsletter Editor	Dan Belknap
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