



THE MAINE GEOLOGIST

THE NEWSLETTER OF THE GEOLOGICAL SOCIETY OF MAINE

SEPTEMBER
1980


VOL. 7 NO. 1

FALL MEETING ANNOUNCEMENT

TIME - 2 PM, FRIDAY, NOVEMBER 14, 1980

PLACE - GEOLOGY DEPT., BOARDMAN HALL
UNIVERSITY OF MAINE, ORONO, MAINE

SCHEDULE - 2 to 3 PM : IMPORTANT Business Meeting, to be followed by an update on UMO program developments.


4 to 5:30 : Selected presentations on current research in geology by UMO faculty & students, INCLUDING discussion of UMO's National Science Foundation grant program.

(Also, coffee break at a convenient mid-meeting point, and Social Hour post-meeting. For those who desire Dinner, a space has been reserved at a Bangor restaurant to be named at the meeting.)

ANNUAL GSM MEETING - 1980

The Annual Meeting of the Society was convened at 7:30 PM on July 18, 1980. It was held in the "Passion Pit" of Park Hall at the University of Maine, Presque Isle with about 40 people in attendance. After a welcome by Bill Forbes and the distribution of liquid refreshments, the business meeting convened.

A Treasurer's Report by Tom Stone reassured us of our financial stability. The next order of business was the election of officers for the 1980-1981 GSM year, with the following results:

President:	Robert G. Gerber
Vice-President:	Florence G. Hoar
Secretary:	Archie W. Berry, Jr.
Treasurer:	Frederick M. Beck
Director:	Walter A. Anderson

Having received no notification to the contrary, the members unanimously approved the following reappointments: J.R. Rand, Newsletter Editor; R.G. Gerber, Assistant Newsletter Editor; A.M. Hussey, II, Postal Chairman; F.M. Beck, Membership Chairman.

It was pointed out during the process of electing our officers that annual meetings coupled with field trips in relatively remote areas resulted in low attendance. This use of the word "low" was in contrast to the attendance of our more centrally located meetings. It was suggested that we consider changing our annual meeting to either the fall or the spring, or have separate meetings in the summer for field trips and business. This issue should be addressed at the fall meeting to be held at the University of Maine in Orono on the 14th of November.

The business meeting was rounded out by a discussion of the logistical details for the next two days of field trips, and announcements of coming events.

GROUND WATER MODELLING FOR FUN AND PROFIT, and OTHER NOTES FROM YOUR NEW PRESIDENT

Robert G. Gerber
Consulting Geologist & Civil Engineer
Ash Point Road, So. Harpswell, Maine 04079

1. Along with the cursing and misery that my computer terminal has generated, it has also brought some new insights into the way ground water flows. Now I can prove to myself why the water table in a dense lodgment till is close to the ground surface, even on top of a mountain. I can also prove that ground water does indeed flow along bedrock foliation more readily than across foliation. In a recent study in which I had 13 piezometers sealed into the bedrock of the Cape Elizabeth Formation, I simulated the bedrock ground water regime until I reproduced the piezometer readings to an average difference of only a few feet. Joints and faults were not major controlling factors in ground water movement, based upon field observations of outcrop. The modelling confirmed that the transmissivity along foliation was 5 to 10 times greater than that in the direction normal to foliation. Modelling has also assisted in interpreting the presence of geologic features which I might otherwise have missed. I have found great benefit in attempting to simulate a ground water regime at the very early stages of an investigation: the model shows what parameters are most sensitive, and where subsurface investigation will be most useful in calibrating a model.

2. My term as Chairman of the State Board of Certification for Geologists and Soil Scientists ends this fall. In next year's legislative session, the Board will attempt to amend the Certification statute to make it clear that people who practice geology or soil science for the public must be Certified or work under a Certified individual.

3. As your new GSM President, I am pleased to see that our next meeting will be held at UMO. There is a lot of geologic information and talent there, and I hope that this meeting will open new lines of communication between the Society and the faculty and students of that school.

4. In my term as GSM President, I would like to revive interest in the "Bulletin", and obtain more articles from the membership for publication in this Newsletter. Finally, I'd like to see the GSM take a more active role in instigating or channeling public geologic research in Maine. Oh, yes--- I also pledge to cut taxes.

PRELIMINARY ANNOUNCEMENT AND CALL FOR PAPERS

NORTHEASTERN SECTION, GSA, 16th ANNUAL MEETING Bangor, Maine, April 9-11, 1981

The Northeastern Section of the Geological Society of America will meet April 9 to 11, 1981, at the Bangor Civic Center in Bangor, together with the Northeastern Section of the Paleontological Society and the Eastern Section of SEPM. The meeting is sponsored by the Maine Geological Survey and the University of Maine at Orono.

TECHNICAL SESSIONS will be held Thursday, Friday, and Saturday, April 9, 10, and 11, 1981.

SYMPOSIA. Several symposia have been arranged or are in the planning stages. These include: (1) Geochronology of Northern Appalachians: New England and Maritime Canada (Henri Gaudette, University of New Hampshire; and William Poole, Geological Survey of Canada); (2) Economic Geology of the Northern Appalachians (Bruce Bouley, Callahan Mining Co., 6245 No. 24th St., Phoenix, AZ 85016; and Richard Potter, New Brunswick Department of Mines); (3) Geological Framework of the New England and Maritime Canada Continental Margin (John Schlee, U.S. Geological Survey, Woods Hole); (4) Tectonics of the Northern Appalachians: Maine and Maritime Canada; sponsored jointly by the Geological Society of Maine and the Atlantic Geoscience Society (David Westerman, University of Maine, Orono; and Howard Donohoe, Nova Scotia Department of Mines); (5) Neotectonics of Maine (Patrick Barosh, Weston Observatory, Weston, Massachusetts; and Harold Borns, University of Maine, Orono); (6) New England Seismotectonic Studies (Patrick Barosh, Weston Observatory, Weston, Massachusetts); (7) Sediment Transport in Sand-dominated Estuaries; sponsored by the Eastern Section, SEPM (Barry Timson, 145 State Street, Augusta, Maine 04330; and Jon Boothroyd, University of Rhode Island); (8) Late Wisconsinan Deglaciation of Maine, Quebec, and New Brunswick (Harold Borns, University of Maine, Orono; Woodrow Thompson, Maine Geological Survey, Augusta; and Pierre La Salle, Ministère des Richesses Naturelles, Quebec, P.Q.); (9) The Adaptive Potential of Bivalved Shells: Comparative Assessments of Brachiopods, Molluscs, and Ostracodes, sponsored by the Northeastern Section, Paleontological Society (Roger Thomas, Franklin and Marshall College); (10) Problems of Waste Disposal; sponsored by the Engineering Geology Division (Alan Hatheway, Haley & Aldrich, Inc., 238 Main St., Cambridge, Massachusetts 02143).

CALL FOR PAPERS. Papers are invited for presentation at the technical sessions, poster sessions, and symposia. Fifteen minutes for presentation and five minutes for discussion will be allowed in the technical sessions and symposia. Papers of general geologic interest as well as those of regional scope will be considered. Deadline for receipt of abstracts for technical sessions is October 31, 1980; **this deadline is firm and will be strictly adhered to.** All persons planning a presentation for one of the symposia must submit their abstracts to the convener by October 15, 1980.*

*SEPM Symposium abstracts should be submitted to Barry Timson by October 1, 1980.

Early preparation and submission of abstracts would be appreciated.

ABSTRACTS, which are limited to 250 words, must be submitted camera ready, on official 1981 abstract forms available from

Abstracts Coordinator	OR	Arthur M. Hussey II
Geological Society of America		Program Committee Chairman
P.O. Box 9140		Department of Geology
Boulder, CO 80301		Bowdoin College
(303) 447-8850		Brunswick, ME 04011
		(207) 725-8731, Ext. 219

ABSTRACTS ARE DUE October 31, 1980.

Send one original and four copies to Arthur M. Hussey II
Department of Geology
Bowdoin College
Brunswick, Maine 04011

Acceptance or rejection of an abstract will be based on review by the Technical Program Committee. Abstracts will be judged on informative content, readability, originality, and northeastern section geographic coverage.

STUDENT PAPERS. Three awards (\$100, \$50, and \$25) will be made for the best student papers presented on a research problem. To be eligible, the abstracts must be by a single author and must be designated on the abstract form as a student paper.

PROJECTION EQUIPMENT will be available for 2" x 2" slides in carousels. Only one projector will be used in each room. Please bring your own loaded carousel trays, if possible.

EXHIBIT SPACE will be available adjacent to the session area. Individual booths will be a standard size, but double booths will be available. The cost of a booth for educational institutions will be reduced. For additional information, contact Irwin Novak, 112 B Bailey Hall, University of Southern Maine, Gorham, ME 04038; Tel. (207) 780-5350.

DETAILED INFORMATION concerning registration, accommodations, and other activities will appear in a later issue of *GSA News & Information* and as part of the *Abstracts with Programs* for 1981.

ADDITIONAL INFORMATION, REQUESTS, OR SUGGESTIONS should be directed to the General Co-Chairmen:

Walter A. Anderson
Maine Geological Survey
State House Station No. 22
Augusta, Maine 04333

Philip H. Osberg
Department of Geological Sciences
110 Boardman Hall
University of Maine at Orono
Orono, Maine 04469

GSM FIELD TRIP 1980
THE DICKEY-LINCOLN REGION

By Archie W. Berry, Jr.
Department of Geology
UM-Farmington
Farmington, Maine 04938

July 19th and 20th were perfect field trip days for the 39(?) participants, many of whom were making their first trip into "Allagash Country". Dave Roy, our bedrock guide, did an excellent job of piecing together sparse outcrops into a logical interpretation of the region. Beginning with the slate-rich upper phase of the Seboomook Formation, Dave showed us a variety of units including the Depot Mountain Formation (a lithic graywacke), the Estcourt Road Sequence (thinly interlayered grey & black sulfidic slate and light grey micaceous siltstones and sandstones), the Fivemile Brook Formation (argillaceous limestones, intrusive and extrusive andesites and minor interlayered sediments), and the Rocky Mountain Quartz Latite. From the limited outcrop it was difficult to get a feel for the regional structure, but we were presented an excellent picture of the units present.

Steve Kite substituted for Tom Lowell in the

presentation of the surficial geology. The character of the surface till varied noticeably from place to place. A major subject which was discussed at various stops of the trip was the significance of two tills, one brown, the other gray. Time, origin, depositional environment and weathering were all suggested as possible causes for the color difference. In the preface of the field log, it is stated that one of the objectives of the surficial stops was to show evidence of ice movement in a northerly direction. This was well demonstrated but the proposed sequence of 1) Eastward flow, 2) Northward flow, 3) Northeastward flow, could not be conclusively demonstrated at the field trip stops.

On Saturday evening, most of the group camped out in a little clearing in the study region. Bill Forbes, our local "North Country" expert, informed us that there was a zero chance of rain that evening and that the cloud bank to the west would just pass over. He then left the group to return to civilization. To make a long story short, the light rain after dinner gave way to three separate mid-western style gully-washers with enough meteorological fireworks to satisfy any pyromaniac. The moral to this story -- Meteorology is not in the realm of Paleontology.

WE'VE BEGUN A NEW SOCIETY YEAR - PLEASE SEND YOUR DUES

MEMBERSHIP DUES STATEMENT

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

The Society holds three meetings each year, in the late fall, early spring and (with the Annual Meeting and sometimes field trips) in mid-summer. A newsletter, THE MAINE GEOLOGIST, is published for all members four times a year (more or less), approximately on a quarterly basis starting in September. The Society year runs from August 1st to July 31st. Annual dues and gift contributions to the Society are tax deductible. There are three classes of annual memberships:

- \$5 REGULAR MEMBER - Graduate geologists, or equivalent, with 1 year of practice in geology, or with an advanced academic degree in geology
- \$4 ASSOCIATE MEMBER- Any person or organization desirous of association with the Society
- \$2 STUDENT MEMBER - Persons currently enrolled as students in college who are interested in geology
- \$2 APPLICATION FEE - A one-time fee to all new members, payable when applying for membership

ANNUAL RENEWAL or APPLICATION FOR MEMBERSHIP - THE GEOLOGICAL SOCIETY OF MAINE

NAME _____
(Please print or type)

ADDRESS _____
(Permanent Mailing Address)

Zip Code _____

Regular Member \$5 per year \$ _____

Associate Member \$4 per year \$ _____

Student Member \$2 per year \$ _____

Application Fee \$2 One-time \$ _____

TOTAL ENCLOSED : \$ _____

MAIL TO: FREDERICK M. BECK, TREASURER
140 Main Street
Yarmouth, Maine 04096

Please make checks payable to:

THE GEOLOGICAL SOCIETY OF MAINE, INC.

THE GEOLOGICAL SOCIETY OF MAINE

TREASURER'S REPORT

FOR THE YEAR ENDED JULY 31, 1980

The paid-up Membership at July 31st included 137 members:

Regular	104	
Associate	17	
Student	16	
(Paid-up Memberships 1980-81	13)	
(Paid-up Memberships 1981-82	3)	

YEAR-END BALANCE STATEMENT

RECEIPTS - Balance over from July 31, 1979		\$ 592.20
Dues & Application Fees		748.00
Bulletin No. 1 Sales (Net) (48 Copies)		136.80
Bulletin No. 1 - Maine Sales Tax		1.05
Anonymous Gift		150.00
Interest on NOW Account		3.76
Total Receipts		\$1631.81
EXPENSES - Newsletters, Society Notices		
Printing	\$438.10	
Postage	126.45	
Address Labels, Supplies	19.78	\$ 584.33
Bulletin No. 1 - MAINE GEOLOGY		
Postage	\$21.11	
Maine Sales Tax Paid	11.10	\$ 32.21
Annual Meeting, Colby College, 1979		\$ 27.00
Agent Fee: Archie W. Berry, Jr.		\$ 5.00
Total Expenses		\$ 648.54
BANK BALANCE, Canal Bank @ July 31, 1980		\$ 983.27

RECORD OF DISBURSEMENTS - 1979-1980 YEAR

DATE	CHECK #	PAID TO, FOR..	AMOUNT
08/10/79	116	Frost Mimeograph: Xerox address labels	\$ 5.78
08/12/79	117	Color-Ad: PMT Treasurer's Report	6.93
08/25/79	118	Colby College: Annual Meeting coffee	27.00
10/15/79	119	J.H. French: Print 300 Newsletters	112.09
12/11/79	120	J.R. Rand: Expenses, 10/1 to 11/3	12.16
12/11/79	121	J.R. Rand: Expenses, 11/5 to 11/26	6.29
12/12/79	122	NE Direct Mail: Xerox address labels	4.26
12/18/79	123	J.H. French: Print 300 Newsletters	126.30
01/10/80	124	Treasurer, State of Maine: Sales Tax	11.10

02/29/80	125	Postmaster, Brunswick: Mailing Permit	40.00
03/24/80	126	J.R. Rand: Expenses, 11/28 to 3/18	30.45
04/01/80	127	A.M. Hussey II: Expenses, Postage	17.57
04/01/80	128	A.W. Berry, Jr.: Agent Fee	5.00
04/08/80	129	NE Direct Mail: Xerox address labels	9.74
04/14/80	130	J.H. French: Print 300 Newsletters	137.84
07/17/80	131	J.R. Rand: Expenses, Postage: to 6/27	61.38
07/17/80	132	J.H. French: Print 350 Newsletters	34.65
TOTAL DISBURSEMENTS			\$648.54

August 1, 1980

Frederick M. Beck, Treasurer

ATLANTIC GEOSCIENCE SOCIETY

As noted in the GSA announcement on Page 2, the AGS and the GSM will co-sponsor a symposium on "Tectonics of the Northern Appalachians: Maine and Maritime Canada" at the GSA Northeastern Section Meeting in Bangor, Maine on April 9-11, 1981. Papers dealing with the tectonic interpretation of sedimentation and plutonic activity as well as structural work are invited.

The AGS has now established an annual membership fee of \$2, now due for the coming year. Membership applications should be addressed to Norman Lyttle, Nova Scotia Department of Mines & Energy, P.O. Box 1087, Halifax, Nova Scotia, B3J 2X1. Membership cards will be mailed upon receipt of fees.

Future AGS meetings include: in late November, Dr. Charlotte Keen, BIO, the GAC Distinguished Lecturer for 1980, speaking on "Evolution of Sedimentary Basins on Rifted Continental Margins: Implication for Petroleum Generation"; and, in Fredericton on January 23-24, 1981, a symposium on mineral and energy resources of the Atlantic Provinces, with Dr. Brian Skinner, editor of Economic Geology, as keynote speaker.

THE GEOLOGICAL SOCIETY OF MAINE
c/o John R. Rand, Cundy's Harbor
RD2 - 210A, Brunswick, Maine 04011

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Address Correction Requested

THE MAINE GEOLOGIST is published four times a year, more-or-less, in September, late Fall, late Winter, and maybe June or July, for members of the Geological Society of Maine, a non-profit educational Maine corporation interested in all aspects of the geology of the State of Maine.

Correspondence about membership in the Society should be mailed to Frederick M. Beck, 140 Main St., Yarmouth 04096. Items for inclusion in this Newsletter may be directed to J. R. Rand, Cundy's Harbor, RD2-Box 210A, Brunswick 04011.

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