



THE MAINE GEOLOGIST

THE NEWSLETTER OF THE GEOLOGICAL SOCIETY OF MAINE

SEPTEMBER
1983

VOL.10 NO.1

PRESIDENT'S MESSAGE

Andy Tolman

John Tewhey, our past president, has set a high standard for both meeting quality and hospitality. Not only did he organize an excellent pair of field trips, but he hosted the annual meeting at his house and cooked dinner for thirty-odd geologists himself. He also pressed his family into service both for the spring and summer meetings. I thank him for his hard work and dedication to the Society. It's a tough act to follow.

Thanks are also due to John Creasey and Kris Crossen for leading the summer field trips. John gave us a fascinating tour of the Androscoggin Lake body, including a boat trip to an island in the Lake. Good logistical support, John. Kris toured glacial deltas and associated features in southwestern Maine and included some excellent exposures indicating genetic relationships and ice flow patterns.

Those of us who stayed at USM Saturday night had the opportunity to view the Blue Knights, a motorcycle club with very impressive mounts and uniforms. Overflow from the National Governor's Association meeting was also present. A mixed bag, indeed.

This year's officers are all in "applied" geology, particularly in water. There will be some repercussions from this in the form of an applied topic or two during the year, but we will include "real" topics as well. The fall meeting is an example of this: an afternoon presentation on the new State bedrock and surficial maps will be coupled with an evening meeting on geologic computer applications.

Suggestions for winter meetings, spring meetings and field trips are now in order. If you don't ask, you may not receive! Tentative plans include a marine/coastal research meeting and coastal/ground water field trip. Submissions to the newsletter on any geologic subject are also solicited.

MAINE MINERAL RESOURCES ASSOCIATION 1983 Fall Field Trip and Meeting

The 1983 M.M.R.A. fall field trip is scheduled for Friday, October 7th. The field trip will consist of a morning field excursion onto the Sunkhaze and/or Chemo peat bog(s) led by the grande dame of North American peat, Cornelia Cameron, then lunch in Bangor, and an afternoon session highlighted by a presentation by John Rohrer, Wheelabrator Frye's Main man in Maine. A brief business meeting will conclude the afternoon's schedule. A mid September flyer will be sent out listing the time schedule, meeting place, and luncheon location for the trip. MMRA P.O. Box 3098, Brewer, Maine 04412

GSM Fall Meeting Announcement

November 10, 1983
Jewett Hall, University of Maine, Augusta

AGENDA

- | | |
|-----------|---|
| 2:00-4:00 | The New State Bedrock and Surficial Maps
Featuring: presentations by compilers and editors of each and an opportunity to inspect the final draft |
| 4:00-4:45 | Business Meeting |
| 4:45-5:30 | Social Hour (cash bar) |
| 5:30-6:30 | Dinner |
| 7:00-9:00 | Computer Applications in Geosciences
Featuring:
Geotechnical Applications - Jordan-Gorrill Assoc.
Ground-Water Modeling - R. G. Gerber, Inc.
Database Management - M.G.S. |

Short presentations will be followed by a discussion

STUDENT PAPERS

ATTENTION ATTENTION ATTENTION

Alert all students! Present the results of your research at the GSM Annual Student Paper Presentation in March. Plan now to send in your abstract for review in February for this most important event. These abstracts are printed in the newsletter and hence give you a publication to include in your resumé!

Help to make this a meaningful experience, support your GSM programs. The Society was disappointed in student participation last Spring. If faculty and students start working together NOW in anticipation of this program, it can be even more of an overwhelming success.

REMEMBER: ABSTRACTS IN EARLY FEBRUARY FOR THE MEETING IN EARLY MARCH

FINANCIAL STATEMENT FOR 1982-83 FISCAL YEAR

By Robert G. Gerber, Treasurer

INCOME AND EXPENSES:

Sales

Dues and Application Fees	\$1016.00
Bulletin Sales	123.95
Program Fee Income	1.93
NOW Acct. Interest	73.35
Sub-total	\$1215.23
Cash Refunds	- 7.00
NET SALES	\$1208.23

Expenses

Postage and mail fees	\$ 41.74
Newsletter Printing	453.50
Copying	12.00
Meeting Fee Expense	76.50
Honorarium	100.00
Reimb. Member Expense	71.54
TOTAL EXPENSES	\$ 755.28
NET GAIN	\$ 452.95

BALANCE SHEET:

Assets

Cash in Bank	\$1599.18
TOTAL ASSETS	\$1599.18

Liabilities

Sales Tax Payable	\$.75
Prepaid Bulletin Sales	\$ 7.00

Capital

Retained Earnings	\$1591.43
TOTAL LIABILITIES & CAPITAL	\$1599.18

USGS Notes

The study of the Little Androscoggin River Valley Aquifer has been completed. This study was done in cooperation with the Maine Geological Survey, the Maine Department of Human Services, and the Androscoggin Valley Regional Planning Commission. A limited number of copies of the report "Hydrology of the Little Androscoggin River Valley Aquifer, Oxford County, Maine", by Dan Morrissey, are available from the USGS office in Augusta.

The significant sand and gravel aquifers study has completed seismic exploration work in the 1983 field area, which includes 1500 square miles in parts of Cumberland, Androscoggin, and Oxford counties. Drilling in the area will be completed by the end of September. Potential contamination site investigations and water quality work will be completed by November.

Minutes of the Spring 1983 Meeting of the
Geological Society of Maine

The meeting was called to order by President John Tewhey at 3:45 pm on Friday, March 11, 1983 in Chase Hall on the campus of Bates College, Lewiston, Maine.

John announced that registrations for the symposium on Monday, March 14, "Ground Water Investigation and Policy in Maine", co-sponsored by the Maine Geological Survey and U.S. Geological Survey, were available at the door for \$5.00. This would not include the luncheon.

Roy Farnsworth, editor of "The Maine Geologist", expressed thanks to those who have supplied him with materials to include in the newsletter. The next issue is planned for mid-May and will include the abstracts of the papers presented today and summer fieldtrip plans for the last week-end in July.

Bob Gerber reported that as of February 28, 1983 our treasury contained \$1522.32.

Art Hussey reported that Bulletin #3 (the guidebooks of all our summer fieldtrips) would go to press early this summer. Only two articles have been received for Bulletin #4, Art requested that anyone with an article in progress see him.

Old Business

Vote: To change election of officers to the fall meeting Did Not Pass.

Buried Valleys - Bob Gerber reported that little progress had been made.

Computerization of Geological Information of Maine: Walter Anderson reported that Marc Loiselles had designed the software and that about half of the Bibliography of Maine had been entered. A volunteer committee was organized to develop utilization of the computerized data.

Marc Loiselles, Chairman
Gene Clough
Tom Eastler
Bob Gerber
John Tewhey

New Business

Nominations Committee:
Steve Pollock
Don Newburg
Walter Anderson

Their slate of officers to be included in May Newsletter.

Summer Field trip - Last weekend in July -
Leaders: John Creesy - Androscoggin Pluton
Chris Crossen - Glacial Geology

Several meetings and talks of interest were announced.

The meeting was adjourned.

Respectfully submitted,

Archie W. Berry Jr.

Archie W. Berry Jr.
Secretary

DUES

DUES

DUES

(MAN AND NATURE-continued)

Your society needs your financial support as well as your geological support to be an effective organization. Check the dates on your address label to see where you stand with your dues. We send out no renewal forms. If it states 82-83 you should send in your dues for the 83-84 year. If it states 83-84 you are up to date. Our financial year goes from July 1 to June 30th. you are urged to pay several years in advance.

If you are responsible for acquiring publications for your library be aware that the library should maintain an Associate Membership status to receive our Newsletter. At the present time this is \$8.00/yr..

Refer to the back page of this Newsletter for full information regards all classes of membership and fees.

REQUESTS FOR MATERIAL

Your Newsletter Editor requests that you submit news of, announcements about or statements concerning your organizations activities for publication in this paper. We will gladly accept short articles on your research. Colleges and universities should submit the names, kinds of research and other activities of their geology students.

We would gladly publish announcements of lecture series, important speakers as well as reporting of the contents of such meetings.

This is your publication and the editor needs your support in order to make a meaningful Newsletter to serve the geologists of Maine and adjacent areas.

Please send suggestions you have to make the Newsletter the kind of instrument which serves our profession.

MAN AND NATURE

The following excerpts are made from a commencement address by Dr. William T. Pecora, then Director of the U.S. Geological Survey. This was 1970, but the remarks he made need to be heeded to keep our perspective on an even keel. The theme was "Natural earth processes are by far the principal agents in modifying our environment." The following are all quotes from that speech.

"Environmental degradation is a natural process on earth; with the intellectual development now achieved by man, it is inexcusable that we should fail to predict responses of nature consequent to our own actions. Better 'housekeeping' of the earth must be practiced as man continues to take from the earth the things he needs and uses."

"From a humble beginning in which ancient man lived in harmony with nature, evolved our present society which indicts man for all environmental ills and assumes that nature can be shaped to meet his every need. If we must take from the earth to provide for ourselves, we must employ value judgement and trade-off concepts in deciding how much to take from our environment, where to take it, and how to leave it in the taking and using. Take and use we must, or we cannot survive as a species on earth."

There is an "environmental myth" he stated. "The belief by many people that man alone is degrading and polluting his environment by our modern society. Some myths, need to be destroyed, because if man is to tackle the many complex problems of environmental degradation effectively, he must first understand its forces. This is not to excuse or put aside what man has done, but rather to put man's actions in proper natural perspective. Those who speak about restoring our inherited environment to pristine states, often ignore the inevitability of nature."

KINDS OF EVIDENCE

"It has been estimated that more than 100 million tons of fixed nitrogen in the form of ammonia and nitrates is annually deposited from the atmosphere to the earth as part of a natural precipitation process. In the United States alone, more than 4 million tons of table salt; 2½ million tons of sodium sulphate; and 36 million tons of calcium compounds, fall upon the land surface- all in rain water."

"Many have long believed that water issuing from natural springs is pure and beneficial to health because of its purity. The springs issuing into the Arkansas and Red Rivers carry 17 tons of salt per minute. In the lower Colorado River, salt springs carry 1500 tons of salt per day. The Lemonade Springs in New Mexico carry 900 pounds of sulphuric acid per million pounds of water, which is 10 times the acid concentration of most acid mine streams in the nation. Hot Springs in Yellowstone Park is likewise many times more acidic than the typical acid stream in a coal-mining district. The Azure Yampah spring in Colorado contains 8 times the radium that Public Health Service sets as a safe limit."

"Lakes and ponds throughout geologic history have gone through a life cycle of birth, maturity, old age, and disappearance. No lake is truly permanent. Some of our inland lakes during their mature stage become more salty than the ocean itself. The Great Salt Lake is nearing its dying stages. Once 20,000 square miles in area (Lake Bonneville), it is now only 950 square miles. Many thousands of years ago, it was essentially a fresh water lake, fed during the Great Ice Age, and now it is about 10 times as salty as sea water."

"Lake Erie is not 'dead', as is heard frequently. It's the shallowest of the Great Lakes, and was created about 10,000 to 20,000 years ago. Barring another Ice Age, it has several thousands of years yet to go before senility. The western part of the lake is extremely shallow, and receives a large amount of natural organic material transported from the surrounding terrain. This is where algae growth has always been present. Lake Erie has continually produce about 50% of the fish catch of the entire Great Lakes system, consistently over the past 100 years. This is not the mark of a dead lake. Green Bay, Michigan, so named by the first settlers because of the green color of the algae so prevalent in the bay is, like the western part of Lake Erie, the source of a large amount of organic matter. The food supply for aquatic life is high in these environments. The oxygen supply, unfortunately, diminishes as algae growth increases, as this portion of the lake becomes more and more shallow and as organic material is swept into the water, whether from natural or human sources. Every lake or pond, whether natural or man-made faces a similar life history."

"In looking to the future, we find ourselves in the midst of a conflict between the need to develop the earth's resources, and the desire to preserve the earth's environment - both, presumably, for the salvation of mankind."

He concluded, "Must one choose between the two concepts or can one seek balance as we move into the future? The first judgment must distinguish between danger and aesthetics; because change is inevitable in any developing society. The pace of change is a function of the choice of the people, as it should be."

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 : \$ _____

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Ash Point Road
South Harpswell, Maine 04079

Please make checks payable to:

THE GEOLOGICAL SOCIETY OF MAINE, INC.

83 - 84 SOCIETY YEAR STARTS - AUGUST 1st - PLEASE SEND IN YOUR DUES

THE GEOLOGICAL SOCIETY OF MAINE
c/o Arthur M. Hussey, Dept. of Geology,
Bowdoin College, Brunswick, Maine 04011

THE MAINE GEOLOGIST is published four times a year, more-or-less, in early Fall, 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 Robert G. Gerber, Ash Point Rd., South Harpswell, 04079. Items for inclusion in the newsletter may be directed to Roy L. Farnsworth, Dept. of Geology, Bates College, Lewiston 04240.

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