

## President's Message Geology and Jobs

by  
Fred Beck

Of growing concern to more and more geologists and aspiring geologists in Maine is the uncertainty about job security and employment opportunities. Is there enough work "out there" to support all of Maine's geologists? Is the job market growing or shrinking? Will this year's graduates be able to find work in Maine? No one knows all the answers to these questions, but there seems little doubt that we are going through a readjustment period. There have been numerous layoffs in our profession and an informal poll of consulting firms suggests that the level of work in Maine involving geologists has declined markedly in the past year.

In 1990 I attended an AIPG conference at which one of the speakers, the president of a large geotechnical firm, predicted that the decade of the 90's would be one where the majority of the environmental work would involve remediation in contrast to the 80's where the bulk of the work was investigation. And where investigation requires many geologists, remediation requires mostly engineers. That prediction would appear to be right on target for Maine. From an environmental standpoint it's nice that many of the sites have been inves-

tigated and are on the way to remediation, but that doesn't help much with our employment outlook. If we had more Superfund sites in Maine or more contaminated industrial sites or simply more people with problem sites, the employment outlook would be brighter. Few of us would wish that on our state, however, so what's the answer? Governor King is urging Maine business to look outside the State's borders and to consider international markets. I suspect he is thinking more of goods than services, but that might be the only option for our profession. At least two Maine geotechnical companies are actively selling their services overseas and perhaps more will follow.

When asked by high school seniors and others what types of geology they should study and what other courses they should take, I urge them to become fluent in a second language as well as acquiring a strong geologic background. I feel that there will be a steadily increasing demand for overseas geologic work in the next decade or two, particularly in South and Central America, and fluency will be a very important job requirement.

Are all other states experiencing this slowdown? Apparently not. A number of individuals I spoke with feel there is plenty of work in Massachusetts and elsewhere

and the "geologic recession" is only in Maine. Perhaps our state is further along in its cleanup efforts. During my professional career in oil and mineral exploration I have seen numerous boom and bust periods in geologic employment opportunities. There was the uranium boom in the 50's (and bust in the 60's), the porphyry copper boom in the 60's (and bust in the 70's), the massive sulfide and oil boom in the 70's (and bust in the 80's) and the gold boom in the 80's. While gold is still "hot" the search areas have gone overseas to less explored countries. The boom periods are accompanied by increased geologic enrollments and job expectations, while the busts are usually accompanied by career changes, and a general thinning of the troops. The situation in Maine with "environmental investigation" is not much different. The 80's saw a massive leap in the numbers of geologists working in Maine, mostly in the environmental investigation area. Now we're on the downslope of the boom/bust bell curve. There are fewer and fewer projects to work on (a shrinking market) resulting in a scaling back by many consulting firms.

So what does the future hold for Maine geologists? There will probably be a steady demand for geologists in landfill investigations and closings (tied to bond issue funding in part), a more or less steady demand for geologists in groundwater searches and related issues, a declining demand for leaking underground storage tank site investigations, very little

demand for metallic mineral exploration geologists (in Maine), and an unknown but probably steady outlook for government and academic geologists. At least the academic and government sectors haven't been subject so far to the supply/demand extremes which have characterized our profession in the private sector (with the recent notable exception of the USGS and USBM cutbacks). What issue will fuel the next geologist employment boom? I don't see any booms on the horizon (although there probably will be one) but for the long haul, I think issues related to potable water supplies and to a lesser extent industrial minerals including aggregates will see slow but steady growth. Both are fairly location-sensitive essential components of our society and are less subject to the short term whims of governments, corporations and the world economy. Perhaps the bottom line is that, unlike doctors, lawyers, and undertakers, there is relatively little job security in our profession and those contemplating becoming geologists should be made aware of this at an early stage.

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#### EDITOR'S NOTE

Please note that there were only 2 issues of the Maine Geologist published in 1995: Volume 21, Numbers 1 and 2. There is no Volume 21, Number 3 due to the Society's not having a summer meeting this year.



**G.S.M. Spring Meeting  
Friday, April 5, 1995  
Colby College  
Waterville, Maine**

**Registration**

12:00-1:00 p.m.  
outside Lovejoy 100

**Oral Presentations**

1:00 p.m.  
Lovejoy 100

**Poster Presentations**

following orals  
Lovejoy 102

**Coffee and Donut Break**

approximately 2:30 p.m.  
outside Lovejoy 100

**Business Meeting**

5:00-5:30 p.m.  
Lovejoy 100

**Social Hour and Dinner**

5:30-7:30 p.m.

Roberts Union, Smith Room

**Paul Mayewski, Evening Speaker**

7:30 p.m.

Roberts Union, Smith Room

The cost for dinner will be approximately \$7.50. Tickets will be available for sale at registration. Those wishing to purchase dinner should go through the dining commons line downstairs in Roberts Union, and then take their tray up in the elevator to the second floor. The Smith Room is reserved for G.S.M. and a cash bar will also be available.

The evening presentation will begin at 7:30 p.m. in the Smith Room, Roberts Union. It will be given by Dr. Paul Mayewski, Director of the Glacier Research Group, Institute for the Study of Earth, Oceans and Space, University of New Hampshire. The title of his talk is *"The Ice Chronicles: Natural and Human Influences on Climate Revealed Through Ice Cores"*.

**Travel Directions to Colby**

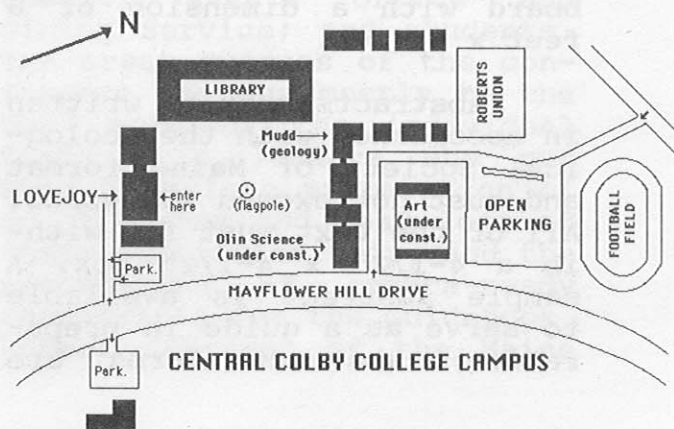
**From I-95 Southbound**

Take exit 34 from I-95. At end of offramp, turn left and pass beneath the highway overpass. Turn right at the second stoplight. At the end of this street, turn right. (Mid-Maine Medical Center, tan brick buildings, will be on your right.) Go up the steep hill after passing beneath a green railroad overpass. At the top go straight ahead. Beyond the football stadium, turn between the two buildings under construction. Up this drive, go around the 90-degree bend to the right and then turn right into the parking lot.

**From I-95 Northbound**

Take Exit 33; at end of the offramp, turn right. At the next stoplight, turn left in front of Dexter Shoe. In about a mile or so, follow the road around a pond to your right. Turn right just as you come to a chain-link fence on the right. Drive carefully up this curved drive and turn left into the parking lot and park wherever you can find an adequate space.

Two other parking lots with limited visitor space are also indicated on the map.



**Call for Abstracts  
Geological Society of Maine  
Spring Meeting  
Friday, April 5, 1996  
Colby College  
Waterville, Maine**

Students in Maine colleges and universities and students from other schools working on projects in Maine are encouraged to present papers in oral or poster form at the spring meeting of the Geological Society of Maine, Colby College, Waterville, on Friday, April 5, 1996.

This program gives students working on senior theses, independent studies or master's theses an opportunity to discuss their research before a professional audience. Abstracts will be published in the issue of the Maine Geologist following the meeting.

Oral presentations are 20 minutes in length which includes 5 minutes for questions. Slide and overhead projection facilities with multiple screens will be available. It is recommended that students choose to use one slide projector and an overhead projector, or two slide projectors. Those presenting in poster format will have available one poster board with a dimension of 8 feet x 4 feet.

Abstracts must be written in accordance with the Geological Society of Maine format and must not exceed 250 words. All of the text must fit within a 4-1/2" x 4-1/2" box. A sample abstract is available to serve as a guide in preparation; abstract forms are

also available. The original and two copies of the form must be mailed flat in camera-ready form. Mail abstracts as soon as possible to:

Dr. Robert Nelson  
Department of Geology  
Colby College  
Mayflower Hill Drive  
Waterville, ME 04901-8858

**Abstract deadline is March 29, 1996. Late abstracts will not be accepted. For more information, call 207-872-3247.**

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**Geological Society of Maine  
1996 Summer Field Trip and  
Meeting Announcement**

The GSM summer field trip and meeting will be held in Aroostook County on a weekend at the end of July. On Saturday, Fred Beck will lead a trip entitled "The Geology of the Maple-Hovey Iron-Manganese Deposit, Aroostook County". The Sunday trip will be led by Mike Scully, "The Geology of the Mount Chase Copper-Lead-Zinc-Silver Deposit near Patten, Maine". Arrangements for a group campsite for Saturday night will be made. More details in the next newsletter.

**Summer Field Studies by the  
Sea Environmental Education**

The College of the Atlantic offers workshops for teachers and a Field Studies Family Week during the summer. Details are available by calling (207) 288-5015 or (800) 636-6600. Space is limited, so apply by April 15 if possible.



## 87th NEIGC at Bowdoin

by

Arthur M. Hussey II

Bowdoin College and the Maine Geological Survey hosted a successful NEIGC in early October. About 350 geologists, students and interested friends came to southern Maine on October 6, 7, and 8, 1995 to participate in 20 field trips in southwestern Maine and southeastern New Hampshire. The field trips offered a varied menu appealing to the many different types of geologists. Bedrock trips emphasized new interpretations of the tectonic and thermal history (time of volcanism, intrusion, and metamorphism) of the rocks of southern Maine and New Hampshire, and the latest ideas on the nature of faulting in the area, particularly along the Norumbega Fault system. Surficial trips provided the latest information on glacial retreat from the land, the marine limit, influence of the latest Holocene transgression beginning about 8,500 years ago on human occupation of the central and southern Maine coast, and the relationships of sandy barrier island complexes along the Maine coast in relationship to Quaternary sea level changes. Two trips dealt with contemporary hydrogeology. One emphasized the impact of upland development on the hydrogeologic and ecologic systems of Great Bog in the Belgrade Lakes area, and the other demonstrated the groundwater flow system in the Gray Delta Complex.

Although the weather failed to cooperate completely with us for the Friday and

Saturday trips, the spirits of participants remained high, and lively discussions and debate over points of interpretation developed at the outcrops, continuing at the gatherings on Friday night at the icebreaker reception, and Saturday night at the banquet. The weather for the last day, Sunday, more than made up for the gloom and rain of the first two days. A three-hundred plus page guidebook was prepared and is a valued addition to the literature on the geology of the area. Several of the bedrock trip descriptions presented the results of new age determinations that are forcing us to reevaluate, and in some instances to abandon previously held notions on the tectonic evolution and timing of metamorphic and plutonic events in the area.

The conference was organized by Professor Arthur Hussey of the Bowdoin College Geology Department faculty. Able assistance in various aspects of the conference planning and execution were given by Peter Lea, Associate Professor of Geology; Ed Laine, Associate Professor of Geology and Director of Environmental Studies; Midge Nowasacki, Academic Department Coordinator for Geology; people of the Bowdoin College Special Events Office and Dining Service; and students. The great success of the conference was due mostly to the hard work of the individual field trip leaders who put much time into preparation of descriptions and road logs of their particular trip, and the preparation of camera-ready manuscripts for the Guidebook. Robert Johnston of the Maine

Geological Survey, in addition to his involvement with field trips of his own, rendered extremely welcomed advice and help in editing and putting together the Guidebook for the conference (which, by the way, for those of you who haven't yet added it to your library, but want to, is available from the Department of Geology, Bowdoin College, or from the Geological Survey of Maine for the sum of \$18.00 post paid.) Call for details on how to order and pay: Bowdoin College (207) 725-3628 or Maine Geological Survey (207) 287-2801.

**GSM Fall Meeting Minutes  
Smith Union, Bowdoin College,  
Brunswick, Maine  
October 6, 1995  
by  
Rebecca Hewett**

The Fall meeting began after a group of GSM members assembled in the Smith Union, following field trips for the annual New England Intercollegiate Geological Conference. GSM President Fred Beck conducted the meeting. The following items were discussed.

1. Minutes from the last meeting were accepted.

2. GSM Treasurer, Marty Yates gave his report - \$8,197.99 and 318 members. A discussion regarding the addition to the mailing labels of the year a members dues are paid through followed. This date will be added. If the dues are overdue, the date on the mailing label will be highlighted. E-mail addresses were mentioned, no action to be taken. The money for the Anderson account

will be moved to another account to get better interest.

3. Dr. Bill Berry noted his position at Farmington is up for grabs as he is retiring at the end of this academic year. Also, UM Farmington needs a hydrogeologist for the 1996 Spring Semester. The Portland School of Art is looking for a geologist to teach courses this Spring Semester 1996. Fred Beck said he would contact Portland area firms with geologists to see if anyone is interested.

4. GSM Nominating Committee. Bob Johnston read off the nominated officers (same as last year). The officers listed below were elected for 1995-1996. Addresses and phone numbers are available in the October 1994 newsletter.

President: Fred Beck  
Vice President: Joseph Kelley  
Secretary: Rebecca Hewett  
Treasurer: Martin Yates  
Newsletter Editor: Susan Weddle  
Director: Steve Pinette

5. GSM Spring Meeting will be held on April 5, 1996, at Colby College. Student presentations in the afternoon and a talk in the evening.

The meeting adjourned and the GSM members dispersed to talk and socialize amongst themselves and with people attending the New England Intercollegiate Geological Conference.



**GSM Treasurer's Report**

Balance on hand 7/19/95  
\$7960.08

Receipts Subtotal      \$948.00

Dues  
    \$488.00  
Anderson Fund  
    \$460.00  
Education Fund  
    \$ 20.00

Expenses Subtotal      \$195.84

Bank Charges  
    \$ 2.25  
Printing Charges  
    \$136.00  
Postage  
    \$ 57.59

Balance on hand 2/26/96  
    \$8732.24

**Balance Summary as of 2/26/96**

General Fund      \$4206.54  
Education Fund    \$ 610.70  
Anderson Fund    \$3915.00  
Total              \$8732.24

**Membership Summary as of 10/95**

Regular            255  
Associate          26  
Student            23  
Institutions      14  
Total              318

**Status of Paid Memberships as of 10/95**

Through 1996      66  
Through 1995      113  
Through 1994      76  
Through 1993      63  
Total              318

Respectfully submitted,

Martin Yates  
GSM Treasurer

Derrill Cowing,  
USGS Maine WRD District Chief  
to Transfer to Idaho

by  
Tom Weddle

Derrill Cowing, the USGS District Chief of the Water Resources Division Office in Maine for the past 15 years will transfer to take the District Chief position in Boise, Idaho in March. Bill Bartlett will serve as acting chief of the Maine office in the interim.

Derrill, who is a native son of Lagrange, Maine, began his career with the USGS in Boston in 1968 directly after his graduation from the University of Maine. Between stints working in Boston and an earlier term in Maine, he served in the Army. In 1977, he completed his Master's degree in civil engineering from the University of Maine. He has held several positions in the USGS, including Civil Engineer, Hydraulic Engineer, Hydrologist, as well as District Chief. Also, Derrill spent 4 years in the USGS office in Anchorage, Alaska, where he was the water-quality specialist before he returned to Maine in 1981.

Over his long term in Maine as District Chief, Derrill's career spanned many water related activities and projects, including State and Federal cooperative efforts such as the significant sand and gravel aquifer mapping program, and guided the elevation of the WRD office to District status in 1991. He coordinated the USGS response to the April 1987 flood, and served as a member on numerous

State committees, including the Land and Water Resources Council.

Derrill's management of the USGS office in Maine, and his leadership in the State and the Northeast region's water resources certainly will be missed. On February 15, nearly 100 of his colleagues, friends, and family celebrated his career at a banquet at the Senator Inn in Augusta, where many awards and presents were bestowed, and good stories told. Also, a letter of thanks from Governor King, and an official expression of sentiment from the Maine State Legislature for recognition of his work in the State of Maine were presented. The Maine geological community wishes Derrill all the best in his new position, and hopes to see him back in his home state of Maine in the future.

**DEP Task Force Update**  
by  
Carolyn Lepage

The Task Force recently met with the new DEP Deputy Commissioner, Erika Morgan, providing the group with an opportunity to hear more about the changes the department has already undergone and what changes are likely for the future. The meeting gave the Task Force the chance to describe the group's historical direction and accomplishments (such as organizing technology transfer and educational events), and current focus on issues such as development, communication and revision of DEP guidelines. We also said that, in addition to addressing topics suggested by mem-

bers of the groups participating on the Task Force, we were looking to the Commissioner's Office for suggestions for technical issues the Task Force could address. Ms. Morgan said she valued the Task Force as a forum and pipeline for communication and would relay the Task Force's request for ideas to the Commissioner.

Following the discussion of the changes at the DEP, we decided to revisit the Task Force's mission, goals, and objectives at our next meeting. We will also identify topics for the group to pursue in the future now that issues such as technical guideline development/communication are well underway. Your suggestions are always welcome; please give me a call at 777-1049.

On the education and technology transfer front, the Task Force is assisting with organizing a one-day conference and subsequent demonstration sessions concerning the latest developments in low-flow ground water sampling. The conference will be held on May 29, 1996 at the Sheraton Tara Hotel in South Portland, Maine. Details are printed elsewhere in the newsletter. The field demonstrations will be held during the summer at several locations throughout the state. We anticipate sponsorship by and speakers from the DEP and the EPA, as well as exhibits by a variety of vendors. The fourth session of the *Ethics and Professional Practice* course was completed in October 1995. The Task Force anticipates the course being offered once a year, most likely in the fall.



## UPCOMING EVENTS

**1996 Maine Section ASCE  
Technical Seminar**  
Wednesday, March 20, 1996  
Ramada Inn Conference Center  
Portland, Maine

"Innovation in Civil and  
Environmental Engineering: An  
Inventory of Innovative Design  
and Construction Practices in  
New England"

Registration cost is \$80  
prior to 3/13/96; \$90 after  
3/13/96. Registrations should  
be sent to Janis Piper, Morris-  
son Geotechnical Engineering,  
P.O. Box 399, Waterville, ME  
04903-0399. Telephone is (207)  
873-4283 and FAX is (207) 873-  
4977.

**American Institute of  
Hydrology Conference**  
April 21-24, 1996  
57 Park Plaza Hotel  
Boston, Massachusetts

"Hydrology and Hydrogeology of  
Urban and Urbanizing Areas"

GSM is co-sponsoring this  
conference along with the USGS  
and 12 other groups. Addition-  
al information is available by  
calling AIH at (612) 484-8169.

**Low Flow Sampling Workshop**  
May 29, 1996

A workshop on Low Flow  
Sampling Techniques for Ground  
Water Sampling has been devel-  
oped by the Maine DEP with  
participation from the EPA-New  
England Region. The workshop  
will consist of two parts - a  
one-day technical presentation  
and a subsequent series of  
half-day field demonstrations

in several regions of the  
state. The scope of the tech-  
nical session will be aimed at  
disseminating technical infor-  
mation on recent developments  
in research and guidance on  
low flow sampling methods. The  
technical presenters will be  
Robert W. Puls from EPA's R.S.  
Kerr Research Lab in Ada,  
Oklahoma and Mike Barcelona  
from the University of Michi-  
gan at Ann Arbor. Robert Puls  
has been involved in much of  
the research that has lead to  
the development of low flow  
sampling and is the principal  
author of the recent EPA  
Ground Water Issue Paper enti-  
tled *Low Flow (Minimal  
Drawdown Ground-Water Sampling  
Procedures*. Mike Barcelona has  
been involved in research  
relating to ground water sam-  
pling issues for several years  
and is co-author with Bob on  
the EPA Ground Water Issue  
Paper. Representatives from  
the Maine DEP and EPA are also  
expected to make brief presen-  
tations on their expectations  
for the impletmentation of  
this new technique.

The technical workshop  
has been scheduled for Wednes-  
day, May 29, 1996 from 8 a.m.  
to 5 p.m. at the Sheraton Tara  
Hotel in South Portland,  
Maine. The registration fee is  
expected to be approximately  
\$50 per person. The fee will  
cover all course materials,  
lunch, and parking. A confer-  
ence brochure with details on  
the technical program and  
registration will be mailed  
out in late March or early  
April. If you have any ques-  
tions about the program,  
please contact either Rob Hoey  
or Troy Smith at the Maine DEP  
at (207) 287-2651.

## 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 _____	<b>Checks payable to:</b>
Regular Member	\$7.00	\$ _____	Address _____	Geological Society of Maine
Associate Member	\$6.00	\$ _____		Martin Yates, Treasurer
Student Member	\$4.00	\$ _____		c/o Dept. Geological Sciences
Contributions to GSM		\$ _____ (gift or fund on check)		5711 Boardman Hall
<b>TOTAL ENCLOSED</b>		\$ _____		University of Maine
				Orono, Maine 04469

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

### 1995/96 SOCIETY YEAR BEGINS AUGUST 1 - PLEASE SEND DUES TO TREASURER

#### THE GEOLOGICAL SOCIETY OF MAINE

c/o Arthur M. Hussey, II, Postal Chairman  
 Department of Geology  
 Bowdoin College  
 Brunswick, ME 04011

*THE MAINE GEOLOGIST* is published three times a year, in early fall, mid-winter, and summer, for members of the Geological Society of Maine.

Correspondence about membership in the Society should be mailed to Martin Yates, Department of Geological Sciences, 5711 Boardman Hall, University of Maine, Orono, Maine 04469.

Items for inclusion in the newsletter may be directed to Susan Weddle, 11 Beech Drive, Brunswick, ME 04011.

- President Fred Beck
- Vice President Joseph Kelley
- Secretary Rebecca Hewett
- Treasurer Martin Yates
- Newsletter Editor Susan Weddle
- Postal Chairman Arthur Hussey
- Directors Olcott Gates (92-95)
- Robert Johnston (93-96)
- Marc Loiselle (94-97)

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