THE MAINE GEOLOGIST

NEWSLETTER OF THE GEOLOGICAL SOCIETY OF MAINE

October, 2000

Volume 26
Number 3

The President's Message

As I write this message, it occurs to me that I'm in the twilight of my administration and this will be my last presidential message (a blessing for some). It has been my distinct pleasure and honor to serve the Geological Society of Maine (GSM) and I wish to convey my thanks and appreciation to the membership for electing and supporting me as president of GSM. Also I extend my gratitude for the help and advice of the officers of GSM, namely; Dave Gibson,V.P.; Liz Champeon, Treas.; Pat Seaward, Sect.; Dan Belknap, Editor; and Directors Fred Beck, Marty Yates, and Joe Kelley. I found it a unique and enjoyable experience to preside over a professional Maine organization, the members of which comprised of a variety of diverse geological interests and disciplines.

I am especially honored to have served during the GSM Jubilee 25'th aniversary during which our officers and membership contributed to many professionally successful educational, outreach and social activities and functions (see Newletters for '99 & '00).

Communications are important for our state-wide group and special recognition is directed to Dan Belknap for his important contribution as editor of the Newsletter (digital & hard copy) and to Wayne Power, our WEB master at UMF for designing and implementing our new WEB site (**www.gsmmaine.org**)

I note that Earth Science Week is upon us and Gov. Angus King has joined 49 other states by proclaiming Oct. 9-14 as Earth Science Week and Maine activities and participation are listed on the Maine Geological Survey's (MGS) Web page (www.state.me.us/doc/nrime/mgs/mgs.htm).

Congratulations to all GSM members who are participating! As described in our Newsletters our K-12 education and outreach continues in pace with the rapidly emerging efforts by AGI, GSA, AAPG, AIPG.etc. It is my understanding that our colleagues at University of Maine at Farmington plan to include a Maine K-12 page on our Web site to be managed by earth science teacher, Patty Millette of Mt. Blue High School.

Bob Marvinney and his colleagues at MGS continue to deliver support and resources to many of our activities. Also thanks to Bob and Tom Weddle for organizing and leading our successful and convivial summer meeting and field trip this past July at Bigelow/Flagstaff.

Kristin Tardiff, Regional Resource Manager, Poland Spring Bottling Co. has once again graciously offered to host our fall meeting on Nov. 3 at Poland Spring. We have a full agenda, including election of officers, plant tour & interesting speaker, social hour, dinner, etc. - Hope to see you all there!!!

Walter A. Anderson, President
<WAAGEO@maine.rr.com>

The Editor's Message:

As editor it is my duty to print the columns about the way they come in, so forgive the immodesty of not removing Walter's comments to the left. Seriously, I have enjoyed this position and look forward to trying to keep this one more ball juggled for at least another year. I am happy to run for election, but I will not debate with Al, George W., Ralph or Pat.

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

GSM Web Site

www.gsmmaine.org
Wayne A. Power, Webmaster, UMF
<wpower@maine.edu>

The State Geologist's Message:

Groundwater Quality Program

In recent years a number of well publicized problems with Maine groundwater have focused public attention on the quality of the resource. The gasoline additive MTBE found in wells in North Windham in 1998 prompted a statewide study of the problem and the ultimate decision to eliminate its use in the state. Arsenic in groundwater has been front-page news on several occasions, in the mid-90s in southern Maine and most recently in Northport and Ellsworth. Concerns about a cancer cluster in Fairfield prompted detailed scrutiny of groundwater quality there by the DEP. All of these situations point out that there is very little information available anywhere about ambient groundwater quality. We know little about the natural conditions of groundwater because, aside from the very limited information from real estate transactions, most data come from contamination sites.

To fill this gap in our information base, the Maine Geological Survey initiated an ambient groundwater quality program during the summer 2000. The goal of this program over several years is to develop a database of typical ambient groundwater quality in all the geological provinces of the state. The program is a partnership among MGS, the Bureau of Parks and Lands (some funds come from the agreement with Poland Spring for groundwater production at Range Pond State Park), the Maine DEP, the USGS, and the Water Research Institute at the University of Maine. With limited funding and resources we developed a modest program for 2000 in the drainage basins centered on Range Pond and Camden Hills State Parks. Within these areas MGS solicited participation from the home owners whose basic well information (well depth, yield) is in our existing database, with enthusiastic response. We sampled about 70 wells and will analyze the samples for a long list of metals and other compounds, and compare the results with local bedrock and surficial geology, and other factors. Over time a clear understanding of the relationship between geologic setting and water quality will emerge. Additionally, we may identify potential quality issues before they become large problems.

Earth Science Week

Earth Science Week 2000 is set for October 8-14. We are in the final stages of planning several events. MGS is working with the State Museum on a special day of activities that will include displaying some of the extensive collection of Maine minerals and fossils that are not currently on public display. As with past Earth Science Weeks, I trust that the geology departments at Maine colleges and universities will host special events. Earth Science Week is a great opportunity for all earth scientists (this means you!) to engage in some activity or event that helps the public better appreciate Maine's geology. MGS will post a schedule of events on its website (http://www.state.me.us/doc/nrimc/mgs/mgs.htm) as soon as it is developed.

Robert G. Marvinney, Maine State Geologist:
< Robert.G.Marvinney@state.me.us>

Tribute to Gene Boudette

A special tribute is planned for Gene Boudette on the evening of Thurs, Oct. 12th. The new State Geologist of New Hampshire will be introduced, and various delegates from USGS will be there. It is being held in conjunction with the Geological Society of NH meeting, in Manchester.

Woody Thompson, Maine Geological Survey
<Woodrow.B.Thompson@state.me.us>

Geological Society of Maine Fall Meeting

Friday, November 3, 2000

Poland Springs, ME

Host: Poland Spring Bottling Co., Inc., Poland Spring, Me.

Location: On Rt. #26 at Historic Spring House on Ricker Hill (see DeLorme Atlas Map #5)

Time: 3:00 PM

Agenda:

3:00-4:45: Poland Spring Bottling Co.-

5:00-5:45: Business Meeting- Important!!

6:00-7:00: DINNER -
Host - Poland Spring Bottling Co.

7:15-8:00: Evening Speaker

Geological Society of Maine Business Meeting:

Please be prepared to vote in regard to the following slate of officers

2000/2001 Slate of Officers

President: David Gibson

Vice-president: Lisa Churchill-Dickson

Secretary: Pat Seaward

Treasurer : Elizabeth Champeon

Director: Walter Anderson

Newsletter Editor: Dan Belknap

Summer with the Boy Scouts

Bob Johnston

Philmont Scout Ranch, Cimarron, New Mexico

VOLUNTEER GEOLOGISTS WANTED! This was the advertisement I read in the May 2000 issue of GSA Today, the monthly publication of the Geological Society of America. The Philmont Boy Scout Ranch in Cimarron, New Mexico was looking for volunteers to teach Boy Scouts about the geology of northeastern New Mexico. Volunteers were to spend a week at mountain camps talking about geomorphology, the local bedrock geology and mining history, assisting in gold mine tours and showing the scouts how to pan for gold.

I left Maine in late July and arrived in a very dry Albuquerque, New Mexico. Evidence of extensive fires were visible on the ride north to Cimarron. Once at Philmont it was a two hour ride from the

base camp to French Henry Camp, where I was assigned. The camp is a restored fifty-year-old mining camp at almost 10,000 feet in elevation. The actual French Henry mine was a 1000 foot climb almost straight up from the camp. I stayed in a bunk house with the summer counselors who worked the forge and led mine tours. Over one-hundred-and-fifty scouts a day came through French Henry camp each day to go through the various programs. The tour of the service tunnel of the Aztec/Ponil gold mine was a 500 foot walk back into the mine with a description of the hand drilling techniques and bedrock geology. Once at the back end of the mine all flashlights would be turned off and the scouts would find their way out in the dark. Gold panning in the Middle Fork of the Ponil Creek was also a popular activity. Some scouts would spend most of the day sifting through the sand and gravel looking for "color." In six days of hard panning I found about five flakes of gold (not enough to pay for my trip!). On two of the days, a four hour hike to the top of Mt. Baldy (12,441 feet) provided the opportunity to discuss the region's geomorphology. Mt. Baldy is the second highest peak at Philmont, has spectacular scenery, and is a popular hike for the scouts. The geologist badge I wore opened me up to all kinds of questions from both scouts and troop leaders.

Boy Scouts (and Explorer girls) come to Philmont from all over the country (and world). Three hundred and fifty scouts arrive each day all summer and the same number leave each day. Some scouts spend their week at Philmont on horseback, while others have mules haul their gear. Most spend the week carrying their own food and water, walking at least fifty miles in the rugged terrain. The Sangre de Christo Mountain range is a great location for the scout camp. The volunteer geologist program at Philmont provided me with a nice opportunity to learn about the geology of northeastern New Mexico.

Bob Johnston, Maine Geological Survey
<Robert.A.Johnston@state.me.us>

New Book Available

The Geological Story of Ogunquit, Maine, Arthur M. Hussey II, 2000, The Village Press, Freeport, ME. 33 pp., Illustrated.

Art Hussey has published a new booklet on the rocks and geologic history, a map of the Marginal Way, and Quaternary geology of Ogunquit. The booklet is accessible to the interested layperson, or useful for geology students. The booklet is available directly from Art for $8.00 at:

Arthur M. Hussey II, Dept. Geology, Bowdoin College, College Station 6800, Brunswick, ME 04011

GSM Member News

Camille Parrish (Maine Department of Environmental Protection) will be on leave until September 1 to take a part-time position in the Environmental Studies Program at Bates College.

This past summer, **Bob Johnston** (Maine Geological Survey) was a volunteer geologist at Philmont Boy Scout Camp in northeastern New Mexico (see story above).

Lois Ongley has established the Androscoggin Valley Environmental Center to provide educational outreach with a high technology focus for residents to work on environmental or planning projects in the Androscoggin Valley.

Nick Sabatine (of Jacques Whitford) got married September 9th to Cathy Ouellette at Wolf's Neck Farm in Freeport.

In his spare time, **Mike Abbott** (Seevee & Mahar Engineering) writes music for and plays in a band, ecue. The group is currently working on their fourth CD.

Andy Tolman (Department of Human Services) was in two plays this summer at Lakewood Summer Theater, and is currently rehearsing for "Monty by the Sea" at the Theater at Monmouth.

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

Request from UMPI

I am greatly expanding our rock/mineral sets prior to teaching the Physical Geology and lab course by statewide Interactive Television (ITV). We are especially in need of a supply of good teaching quality garnets. It is too early to say what-all else we will be needing, but if anybody has teaching quality rock and minerals in quanities of about 100 circa 1 1/2" specimens I am very interested in hearing what they might have.

Also, the Northern Maine Museum of Science is interested in expanding its very modest collection of Maine mineral and rock materials. If anybody has material to donate they should contact me. Our collections are meager enough that there is a strong liklihood that any good materials donated to the museum will go on immediate display.

Kevin McCartney, Professor of Geology and
Director, Northern Maine Museum of Science
University of Maine at Presque Isle
Presque Isle, ME 04769
(207) 768-9482 (fax: 768-9608)
< mccartney@polaris.umpi.maine.edu>

SECRETARY'S REPORT

GSM SUMMER MEETING - July 29 -30, 2000

A very brief business meeting was held, mainly in the form of reminders that Earth Science Week activities for the week of October 8-14 will include a field workshop for teacher, paleontology session(s), museum minerals on display, etc. NEIGC will immediately precede Earth Science week October 6-7-8, hosted by UM, with field trips throughout central and eastern Maine.

Doug Reusch's Field Guide is still being reviewed.

Fall meeting will be scheduled (Nov.3rd) to avoid all other geologically-related activities.

Present during the weekend were:

Walter Anderson - GSM President
John Beane - MDEP
Rachel Beane - Bowdoin College
Fred and Suzanna Beck - F.M. Beck and GSM/Professional runner
Gary Boone and Alice Sheppard - /MGS mapping
George Bouchard - ret. Scripps Inst.
Dee Caldwell w/ Poke - B.U./MGS mapping
Lisa Churchill-Dickson - self employed paleonologist
Julia Daly - UM
Roy Farnsworth - ret. Bates College
Michael Field and Camilla Cai - Kenyon College
Dave Gibson - UM Farmington/GSM VP
Roger Hooke - UM
Art Hussey - ret. Bowdoin College/MGS mapping
Joe Kelley - UM/MGS/GSM
Doria Kutrubes - Bates '83, Radar Solutions Int., Waltham, MA
Peter Lyttle - USGS Reston
Michelle Markle - Mt. Holyoke, Assist. Professor
Bob and Cheryl Marvinney, w/Kyle, Claire, and Andy - State Geologist, trip leader, and family
Laura McGrath - Bates' 81, Infrasense, Wellesley, MA
Ollie and Jasper Muff - Maine Medical Center
Harold Nilsson - Acheron, Falmouth
Chris Olson - MDOT
Rob and Deb Peale, w/Richard, Ian, and Pepper - MDEP and family
Rudy Rawcliffe w/Kimble, Rylee, and Davis - Northeast Geophysical
Doug Reusch - UM
Jill Richard - Mt. Holyoke undergrad.
Mike Roland and Martha Mixon (GSM nom.comm.) w/Elin Roland
Pat Seaward - MDEP/GSM secretary
Harriet Van Vleck - Bowdoin College undergrad.
Tom Weddle -MGS/trip leader

Respectfully submitted,
Patricia O. Seaward, Secretary
<Patricia.O.Seaward@STATE.ME.US>

GSM TREASURER'S REPORT

The Society currently has 368 members: They are distributed as follows:

Associates:	34
Institutions:	13
Regular:	278
Students:	43

Of these 118 are paid up only until 1997. Unfortunately it is easy to let your dues lapse. The dues date is shown on your mailing label.

Anderson Fund (Total)	$ 4,798.00
Education Fund (Total)	$ 735.70
Checking Account (other)	$ 6,373.75
Receipts	
Dues	$ 1,172.00
Anderson fund (intr. + contr.)	$ 183.77
Education fund	$ -
Publications	$ 30.00
Subtotal	$ 1,385.77
Expenses	
Printing, mailing, stamps	$ 303.90
Anderson Awards (Plaques etc.)	$ 314.77
Bank Charges	$ -
Conference/Meeting Expenses	$ 1818.64
Website	$ 0.00
Taxes	$ 2.75
Subtotal	$ 1,448.75
Balance on Hand 09/23/00	**$ 11,907.45**

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

Did you know that the longest single-word place name in the United States is:
Mooselookmeguntic Lake
Perhaps the most widely mispronounced geologic term in the state is the:
Passagassawakeag block.

****

KEYNOTE ADDRESS FROM THE HUSSEY APPALACHIAN SYMPOSIUM

Bowdoin College, April 7, 2000

The evening speaker, Allan Ludman, piqued our interest in the Norumbega Fault system, to be visited on the Friday trip of NEIGC this October.

NORUMBEGA FAULT SYTEM: THE EASTERN END

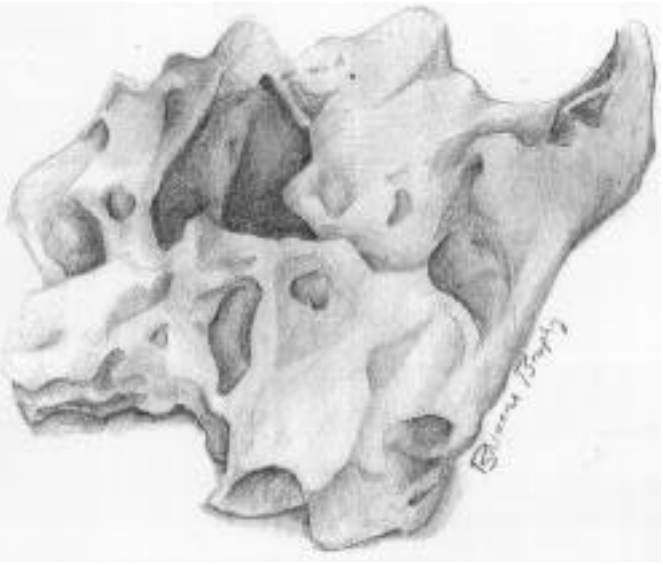
BY: Allan Ludman,
Queens College (CUNY), Flushing, NY

Norumbega was not on the map in 1967. Evolution of the knowledge about the Norumbega fault system has exploded since the early 1970's, with the bulk of the work being conducted in southwestern Maine. It was recognized in Canada as connecting to the Fredricton fault in New Brunswick as early as 1978. Geologists of that era did not recognize the Norumbega as a fault system partitioning the strain "into three major fault strands... separated by only slightly sheared rocks." The three faults zones comprising the Norumbega, the Codyville, Waite, and Kellyland, (collectively at least 40 km wide) exist mainly in the Flume Ridge Formation (Fredricton belt) and the Bottle Lake and Deblois batholiths.

Seismic reflection work in the Bottle Lake pluton supports the existence of Norumbega by identifying two steeply dipping fault surfaces which coincide quite nicely with surface features of the Norumbega fault system in the area.

The major effects of regional metamorphic intensity increasing "along the strike of the system from southwest to northeast" manifest themselves as brittle faults with "course cataclasite and slickenlines on fault-polished surfaces", dike swarms offset by brittle faults; as well as "evidence for ductile shear strain...largely in pelitic interbeds...also preserved in sandstones as...pressure solution cleavage...shales converted to phyllonites and protomylonites,...and enough strain heating to generate biotite in some protomylonites." Most of the features support the interpretation of dextral strike-slip motion throughout the system.

Come to the NEIGC in October for THE REST OF THE STORY.



Eroded Sandstone from southwestern Colorado. Original pencil sketch on paper by: Brianne Brophy, Earth Science Student, Mt Blue High School, Farmington, ME, 3/1/200

Submitted by Patti Millette.

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 modem 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:**
Regular Member	$7.00	$__________		Geological Society of Maine
Associate Member	$6.00	$__________	Address ______________________________	Elizabeth Champeon, Treasurer
Student Member	$4.00	$__________		Six Liberty Drive
Contributions to GSM		$__________	______________________________	Bangor, ME 04401
(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)

- -

1999/2000 SOCIETY YEAR BEGINS AUGUST 1 - PLEASE SEND DUES TO TREASURER

THE GEOLOGICAL SOCIETY OF MAINE
c/o Daniel F. Belknap, Newsletter Editor
Department of Geological Sciences
111 Bryand Global Sciences Center
University of Maine
Orono, ME 04469-5790

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

Return Service Requested

Correspondence about membership in the Society should be mailed to:
Elizabeth Champeon, 6 Liberty Drive, Bangor, ME 04401

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

President	Walter Anderson
Vice President	Dave Gibson
Secretary	Pat Seaward
Treasurer	Elizabeth Champeon
Newsletter Editor	Dan Belknap
Directors	Fred Beck (97-00)
	MartyYates (97-01)
	Joe Kelley (98-02)