THE MAINE GEOLOGIST
NEWSLETTER OF THE GEOLOGICAL SOCIETY OF MAINE

October, 2008
Volume 34
Number 3

THE PRESIDENT'S MESSAGE

As my term as President comes to an end, I want to thank the other officers, directors and members of GSM for providing guidance and support for successful meetings and summer field trips during my tenure. It has been an interesting term. I look forward to working with Julia Daly, our in-coming president.

For those of you who missed it, the 2008 GSM summer field trip was one that may have set records for attendance even without great weather. Highlights included the stops to see active processes at Sand Beach and a modern boulder beach with a sea stack, a Pleistocene sea cave, and a truly world-class outcrop of the 'shatter zone' contact of the Bar Harbor Formation; a review of the geology of the Schoodic Peninsula; a visit to the Maine Granite Industry Historical Society with a demonstration of granite cutting and trips to the Hall Quarry on Sommes Sound, and demonstrations in an active granite quarry in Sullivan. I would like to extend special thanks to Martha Mixon for her efforts in organizing the trip; to Joe Kelley, Bon Marvinney, Tom Weddle and Chris Koteas for leading us on a great tour; and to Steve Haynes of the Maine Granite Industry Historical Society for his presentations at the Hall Quarry, the granite museum, and at the Sullivan quarry.

As usual, this column serves as a reminder for the members to pay their dues, and this year also includes a reminder that member dues increased to $20 per year in June of 2008. This increase is to support activities of our newly formed education committee.

The fall meeting will begin at 1:30 pm on Thursday October 2, 2008; and will hosted by Poland Springs, hosting the dinner and happy hour. Our afternoon technical program (see below) will start at 1:30 pm, to allow for six speakers. The election of officers is the primary agenda item for our business meeting. Please plan to attend, and note that the meeting is on Thursday this year.

In closing, bring your calendars to provide events to update the webpage. I hope that Colby College, the host of the spring meeting, will be able to provide us with a date for that meeting.

Thank you again for your support

Cliff Lippitt, President (2006-2008)
clippitt@swcole.com

GSM FALL MEETING

Poland Springs, *Thursday* October 2

1:30 p.m. to 8 p.m. Poland Spring Main Inn,
41 Ricker Road (off Rt. 26), Poland, ME

******If you are planning to attend, please contact Cliff Lippitt ASAP: clippitt@swcole.com (so we can get a head count for dinner)******

This year's meeting will be hosted by Tom Brennan of the Perrier Group/Poland Springs on Thursday October 2, 2008. The **Thursday** meeting represents a change in format from previous Friday meetings.

1:30 p.m. to 4:15 p.m. Mini-Symposium –
Technical Presentations (Subject to Change)

1:30 – Delivering Maine DEP's Environmental Data With Google Earth – Chris Halsted, GIS Programmer/ Analyst, MDEP

2:00 – Visualization of Geologic Data Through Dynamic 3D Visualizations – Assess, Understand, Communicate, Rod R. Rustad, Senior Hydrogeologist, and Scott F. Calkin, Senior Geophysicist; MACTEC,

2:30 – What Is and What Isn't Stream Restoration: Examples from Maine; Dr. John Field, President, Field Geology Services

3:00 – The MDEP Significant Groundwater Wells Program, John Hopeck, Bureau of Land and Water Quality, Maine Dept. of Environmental Protection.

3:25 – Maine's Bedrock Mapping Program – Robert Marvinney, State Geologist, Maine Geological Survey

3:50 – Carbon Sequestration a review/ overview of the NGWA – AGWSE committee activities regarding "Geological Storage as a Carbon Mitigation Option", Steven Pinette, Senior Geologist, S. W. COLE ENGINEERING, INC.

4:15 p.m. to 5 p.m. Business Meeting

5 p.m. to 6 p.m. Social Hour

6 p.m. to 7 p.m. Dinner – complimentary meal, provided by Poland Spring

7 p.m. to 8 p.m. Keynote Address – The Geology of Grand Canyon, A Photographic Perspective From the August 2008 Raft Trip; Joe Kelley University of Maine and Fred Beck

THE EDITOR'S MESSAGE:

Please send items of interest for the News from the Campuses and Member News columns, or other things you'd like to share.

Please check the date on your address label – members more than two years in arrears will be dropped from the mailing list. Send dues to Rob Peale (see address on the last page).

Dan Belknap, Newsletter Editor (1998 – present)
<belknap@maine.edu> (207) 581-2159, FAX: -2202

GSM WEBSITE: www.gsmmaine.org

The GSM website contains copies of present and archived Newsletters, a calendar of events, and other items of interest to the Society, including the updated Bylaws. There are many important links to geology items in Maine and elsewhere. There is a page on Maine geology and the Photo of the Month. Let us know what you think.

Webmaster, Mike Lerley mike@rentageekme.com

2008 New England Intercollegiate Geological Conference [NEIGC]
October 10-12, 2008
Westfield State College, Westfield, Massachusetts

http://w3.salemstate.edu/~lhanson/NEIGC/

FRIDAY, OCTOBER 10

A1 Marble Karst of the Stockbridge Formation, Berkshire Region, Western Massachusetts. Trip leader Ernst H. Kastning, New Hampshire Geological Survey Ernst.Kastning@des.nh.gov

A2 Deep Crustal Partitioned Transpression and Ductile Extrusion of the Monson Orthogneiss, Bronson Hill-Central Maine Boundary Zone, South-Central Massachusetts. Trip leaders Matt Massey and David Moecher, University of Kentucky mamass1@uky.edu, moker@uky.edu

A4 Field Evidence for Flow of Basaltic Magma through Fractures and Porous Media. Trip leaders Anthony R. Philpotts and Doreen E. Philpotts, Yale University, Philpotts@charter.net

A5 Southern New England's Future Thirst – a Highlands Odyssey. Trip leader Thomas S. Baron, PE/CE, Former Director of Operations, Massachusetts Water Resources Authority Water System thomas.s.baron@verizon.net

A6 Archaeology and Geology in the Connecticut River Valley, Massachusetts. Trip leader Christopher Donta, University of Massachusetts, CDonta@Anthro.Umass.edu, 413-577-0777. (Starting location, time, and trip details TBA).

SATURDAY, OCTOBER 11

B1 Classic Helderberg and Onondaga Sections in Eastern New York: Birthplace of American Geology and Early Karst Studies. Trip leader Ernst H. Kastning, New Hampshire **B2 Strain in the Day Mountain Thrust Sheet, Berkshire Massif.** Trip leaders Paul Karabinos and Elizabeth Pierce, Williams College Paul.M.Karabinos@williams.edu

B4 Late Ordovician to Early Silurian thrust faults in the Berkshire massif allochthon: Evaluation of $^{40}Ar/^{39}Ar$ hornblende ages and evolution of syntectonic granites in thrust zones. Trip Leaders Nicholas M. Ratcliffe, U.S. Geological Survey nratclif@usgs.gov and Willis E. Hames, Auburn University

B5 A Geology Cross Section Tour of the Connecticut Valley. Trip leaders Mike Young and Tarin Weiss, Westfield State College, myoung@wsc.edu; tweiss@wsc.edu; Richard Little, Greenfield Community College (retired), rdlittle2000@aol.com

B6 Glacial Geology of the Westfield River and tributary valleys in Massachusetts. Trip leaders Janet R. Stone jrstone@usgs.gov , Byron D. Stone, U.S. Geological Survey, and Julie Brigham-Grette, University of Massachusetts

SUNDAY, OCTOBER 12

C1 The Terraces of the Westfield River, Massachusetts: William Morris Davis revisited. Trip

leaders Byron Stone, U.S. Geological Survey bdstone@usgs.gov, Janet Stone, U.S. Geological Survey

C2 Age and Style of Thrusting in the Berkshire Massif, Massachusetts. Trip leaders Paul Karabinos, David Morris and Ryan Gordon, Williams College; Michael Hamilton, University of Toronto; Nicole Rayner, Geological Survey of Canada, and Joseph Pyle, Rensselaer Polytechnic Institute. Paul.M.Karabinos@williams.edu

C3 Traprock Ridgelands: The environmental geography of threatened landscapes of the Connecticut Valley. Trip leader Peter Letourneau, Wesleyan University letour@ldeo.columbia.edu

C4 Pre-Ottawan (1100 Ma) rocks and tectonic infrastructure of the Hudson Highlands and Manhattan prong. Trip leaders Nicholas M.Ratcliffe and John N. Aleinikoff, U.S. Geological Survey nratclif@usgs.gov

THE STATE GEOLOGIST'S MESSAGE

Energy - What's out there?

Only July 14th, President Bush revoked most provisions of an executive order supporting moratoria on leasing of many areas of the outer continental shelf (OCS) for oil and gas production, as one part of a strategy to reduce our nation's reliance on foreign oil. This was followed shortly by declarations from our Congressional Delegation and Governor supporting a continuation of the moratorium on drilling in Maine's OCS. A few days later, my phone rang. Governor Baldacci was on the line and wanted to know what potential Maine's OCS held for oil and gas reserves. I hadn't really dabbled in petroleum geology since my three years at Exxon in the mid 1980s, and even there I did not focus on the exploration side of the work, but I plunged into this task anyhow.

The New England OCS was the subject of a substantial exploration effort as recently as the 1970s and 80s, when the Department of Interior sold leases on numerous blocks on the Georges Bank and other areas of the OCS to exploration companies. The Georges Bank held promise due to its thick accumulation of Jurassic and younger carbonate and clastic units, as confirmed by two Continental Offshore Stratigraphic Test (COST) wells drilled during this period. (Former State Geologist Walter Anderson visited one of these drill sites when it was active.) By this time, reasonable reserves of natural gas had been discovered near Sable Island offshore Nova Scotia in a similar geologic setting. The exploration holes in the Georges Bank, however, all came up dry. Importantly, the holes demonstrated that the organic carbon content of the sedimentary rocks was below the minimum necessary for hydrocarbon generation, and further, the units had not been heated sufficiently to generate hydrocarbons if there was enough organic carbon.

Still, 8 dry holes leave much wanting in terms of information on the area's potential for oil and gas. Using standardized techniques, geoscientists and statisticians at the Minerals Management Service (MMS) have conducted assessments of undiscovered reserves in the nation's OCS periodically, most recently in 2006. This assessment estimates oil reserves of 1.9 billion barrels and gas reserves of 18 trillion cubic feet (Tcf) in the entire Northern Atlantic Planning Area, which extends from New Jersey to Maine. For comparison undiscovered reserves in the Gulf of Mexico are set at 45 billion barrels of oil and 230 Tcf gas.

In discussing the hydrocarbon potential in Maine's OCS with geoscientists at MMS, a few points became clear. First, Maine's OCS includes but a tiny sliver of Georges Bank, most of which goes to Massachusetts, as determined by politically negotiated boundaries. So, the discoveries at Sable Island are irrelevant as analogs for potential plays in our OCS. (Note that in 40+ years of exploration since its discovery, no additional reserves have been added to Sable Island.) Second, Maine's OCS contains some older Triassic basins, but similar onshore and offshore basins elsewhere along the Atlantic seaboard have not produced oil and gas. There may, however, be some potential in Triassic basins of the Bay of Fundy, where maturation temperatures have been higher.

As you have heard through numerous outlets in the last months, Maine's OCS does contain a significant energy resource - wind. Perhaps it makes sense to pursue the development of wind power here where that potential is great, and to focus oil and gas exploration at this time in places like the Gulf of Mexico, where the potential is great and supporting infrastructure is already in place.

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

GSM MEMBER NEWS

Please send member news to:

Carolyn Lepage, Member News Correspondent (1996-present) <calepage@adelphia.net> or
PO Box 1195, Auburn, ME 04211-1195 or
Fax: (207)-777-1370; Phone: (207)-777-1049

GSM SECRETARY'S REPORT

GSM Summer Field Trip, July 25-27, 2008

Schoodic Point, courtesy of Walter Anderson

The GSM summer meeting consisted of a field trip to **Acadia National Park**, the **Maine Granite Industry Historical Society Museum** (Granite Museum) in Somesville and a nearby historic granite quarry (**Hall Quarry**) on Somes Sound, an active granite **quarry in Sullivan**, and stops on **Schoodic Point** in the **Gouldsboro pluton**. The trip was led by Joe Kelley (University of Maine, Orono), Bob Marvinney (State Geologist), Tom Weddle (Maine Geological Survey), Steven Haynes (Granite Museum proprietor) and Chris Koteas (Geosciences doctoral student at UMass Amherst). Accommodations (July 25 & 26, 2008) were at the Schoodic Education and Recreation Center (SERC) which is located within the Schoodic portion of Acadia National Park. The field trip was attended by 40+ GSM members, family and friends. We were transported by a 30-passenger bus and two 7-passenger vans on Saturday, to and around Acadia and Mt. Desert Island. We caravanned with personal vehicles on Sunday (16 automobiles) around Schoodic Point, and to the quarry in Sullivan. No official business was conducted during the field trip. The fog along the coast limited our views of the dramatically beautiful MDI coastal scenery, but perhaps focused our attention all the more closely on the geology before us. A GREAT time was had by me and, I believe, many of those in attendance.

The Field Trip started Saturday morning at on the Park Loop Road at Acadia National Park on Mount Desert Island, where we viewed surficial geology, marine coastal processes, and bedrock geology interpreted by Joe Kelley, Bob Marvinney and Tom Weddle. Stops included **Sand Beach** (a pocket beach with up to 70% carbonate shell fragments), **Monument Cove** (granite sourced boulder beach with 7-meter high sea stacks), **Gorham Mountain** (where we viewed paleo-seacliffs and sea stacks at 70 m asl), **Little Hunters Cove** (a till sourced pocket beach, with spectacular exposures of the "shatter zone" where centimeter- to meter-sized blocks of bedded siltstones and sandstones of the Bar Harbor formation once floated in and were partially melted by Cadillac granite near the boundary of the pluton), and **Hunters Brook** (where a small slump exposes marine clay which is overlain by a coarse glacial sand outwash deposit).

Bob Marvinney, Tom Weddle and Joe Kelley, courtesy of Walter Anderson

After finishing the Park Loop, we were met at the **Duck Brook Bridge** by Steven Haynes of the Granite Museum. This bridge is one of 16 of 17 stone-faced bridges that span roads and streams in the park built by local stone cutters using native stone for the facing. Steve had with him an assortment of tools to demonstrate some of the cutting skills and techniques used in cutting and surfacing the stones for these bridges. From the bridge, Steve led us to the 1880s **Hall Quarry** on the west side of Somes

Sound, where "Somes Sound Pink" granite was quarried and supplied for buildings in major U.S. cities including Philadelphia (the Philadelphia Mint), New York, Washington DC, Boston, Hartford, Indianapolis and many others. This quarry, now a boatyard, employed 800 men for 18 months at a time during its peak. According to Steve, Maine granite was valuable because it contained "rifts" or planar horizontal gritty layers, which reduced the amount of cutting labor.

The final stop on Saturday was the **Maine Granite Industry Historical Society Museum** (Granite Museum, http://www.mainegraniteindustry.org/). The museum building is disguised as a lawn mower repair shop, but its true identity is apparent both inside and outside. Most of the indoor space is devoted to the museum, which includes a collection of granite samples from all over the state, a collection of historic stone cutting tools, historic documents, and artifacts of Maine's granite quarrying industry, all laboriously preserved and interpreted with passion and humility by Steven Haynes, the proprietor. The museum tells the story of Maine's granite quarries and stonecutters and their role in the history of our state and nation. The displays included a photo collection donated by the late Jack Rand. Beyond the indoor collections, the museum is a "living museum". Outdoors we were treated to a stone cutting demonstration in which a 10-foot long granite "sheet" was "split with the rift" using hand tools (wedges and half-rounds pounded into a line of drilled holes with a hammer). As we watched and listened a hairline crack developed along the line of wedges, splitting the granite along a clean line. Steve also demonstrated how to square and surface a stone by hand, and used a turn of the century pneumatic surfacer to smooth and impart a texture to a slab of granite. Beyond these tools and skills, Steve shared anecdotes and bits of history that bring the lives and times of these quarries and their people alive for us. Steve's knowledge comes from many interviews he has conducted with old-time stonecutters, some now deceased, and to whom he dedicates his museum and his work preserving the knowledge of their trade.

We arrived back at SERC only an hour late for our taco dinner, served in the Schooner Club.

Sunday morning the field trip continued at Schoodic Point with stops in the bimodal **Gouldsboro Pluton** (~419Ma), and a visit to the active **Sullivan Antique Gray Granite Quarry**. The Gouldsboro Pluton was interpreted for us by Chris Koteas, who described a layered south-dipping Pluton that covers most of the Schoodic Peninsula. The surface exposures we visited revealed a cross section of the Pluton with more felsic, volatile-rich granites exposed to the south, the most mafic layers exposed to the northeast, and mechanically and chemically mingled mafic and felsic magmas in between. Two generations of mafic dikes as well as rhyolitic dikes cross-cut the granite. The two generations of mafic dikes were distinguished by straight versus anastomosing margins. Dikes with anastomosing margins suggest intrusion prior to solidification of the Pluton. The last stop led by Chris was to a small roadside quarry in the Flanders Bay greenstone with bulk rock chemistry characteristic of island arc systems. The protoliths (basalt-andesite) were metamorphosed and deformed by both the Gouldsboro pluton, to the south, and the Tunk Lake pluton (to the north).

Just up Route 1 in Sullivan we were met again by Steve Haynes and led along Track Road to a recently activated granite quarry, the Antique Gray Quarry. The proprietor, Conrad Smith, is quarrying granite blocks for repairs to the historic landmark cribstone bridge in Harpswell (Figure 1). The quarrying is being done the old way, largely "by hand", using foot wedges and a 30-lb sledge hammer. Conrad, Steve, and friend and "hammer-man" Paul Kozak spent days preparing for our visit by drilling the line of holes for the foot wedges and beginning the process of pounding the wedges with the hammer. After each wedge in the line hit with the hammer, there is a

http://community.curtislibrary.com/harpswells/events/cribstoneb/crib_pages/11-cribstone_030818022.htm

waiting period before another round of hammering can take place. The split had been perfectly prepared for our field trip, so that the final blows were delivered in our presence and a ~20-foot long, ~8-foot deep vertical crack developed in the granite on which we were standing.

Martha Mixon at the Sullivan Quarry – courtesy of Walter Anderson

It was particularly fun to listen to the stone cutters (Steve, Conrad and Paul), who talk about the grain of the rock as if it were a piece of wood, and the geologists (especially Chris Koteas) matching up their vocabularies and preferred cutting directions with structural features and tectonic stress patterns. Wow! That was fun. Special thanks to all of the leaders.

Secretary, Martha N. Mixon, 2006 - present
mmixon@acadiaenvironmental.com

GSM TREASURER'S REPORT

The Society currently has 344 members; unfortunately only 50.6% are up to date with their dues. In keeping with previously decided policy, we will drop any members more than two years in arrears at the end of this calendar year. The present membership is distributed as follows:

Students:	50	Associates:	30
Regular:	257	Institutional:	7
TOTAL:	344	Total Paid Up:	185

Balance on Hand April 30, 2008

Anderson Fund Savings	$ 1,568.85
Anderson Fund CD	$ 5,710.20
General Fund Money Market	$ 4,440.49
General Fund Savings	$ 40.28
General Fund CD	$ 5,464.70
General Fund Checking	$ 0.00
Total	$ 17,224.25

Income

Dues	$ 773.00
Interest	$ 107.62
Anderson Fund Donations	$ 15.00
Other Donations	$ -
Publication Sales	$ 0.00
Subtotal	$ 895.62

Expenses

Newsletters	$ 0.00
Honoraria	$ 300.00
Anderson Awards	$ 0.00
Other Awards	$ 0.00
Meeting Expenses	-
Donations	-
Postage	$ 1357.00
Web Site	-
Refunds	-
Miscellaneous	-
Subtotal	$ 1,657.00

Balance On Hand April 30, 2008

Anderson Fund Savings	$ 1,795.62
Anderson Fund CD	$ 5,758.68
General Fund Money Market	$ 3,361.28
General Fund Savings	$ 40.37
General Fund CD	$ 5,506.92
General Fund Checking	$ 0.00
Total	$ 16,462.87
Net gain [or loss]	[$ 761.38]

Respectfully submitted,
Rob N. Peale, Treasurer (2004 -present)
<Rob.N.Peale@maine.gov>

24th International Applied Geochemistry Symposium (IAGS)

June 1 to 4, 2009

Fredericton, New Brunswick (Canada)

The Association of Applied Geochemists (AAG) will be hosting the 24th International Applied Geochemical Exploration Symposium (IAGS) in Fredericton, New Brunswick, Canada on the UNB campus in 2009. The meeting is being jointly organised by geoscientists from

the University of New Brunswick (UNB), New Brunswick Department of Natural Resources (NBDNR-Minerals), New Brunswick Research and Productivity Council (RPC), New Brunswick Department of the Environment (DOE), and professionals drawn from the consulting engineering and mineral exploration industry here in New Brunswick and the maritimes, in conjunction with a professional conference organiser from UNB. The International Association of GeoChemistry (**IAGC**) and the International Association of Geoanalysts (**IAG**) will be actively participating in this meeting as well. *Proposals are invited for the technical program. Please send Dave Lentz the proposed preliminary special session title, and the 3 co-chairs, with their affiliations and contact information, ASAP.*

For more information, please contact;
Prof. David Lentz – IAGS 2009 Chairman
Tel: (506) 447-3190 FAX: (506) 453-5055
email: dlentz@unb.ca

NEWS FROM THE CAMPUSES

COLBY COLLEGE: The Colby College Department of Geology welcomes two new tenure-track faculty beginning this academic year. Dr. Walter "Bill" Sullivan joins the campus after having been appointed as a one-year Visiting Assistant Professor during the 07/08 academic year. Bill, whose expertise is Structural Geology, received his Ph.D. from the University of Wyoming in 2007 and taught Earth & Environment, Structural Geology, and a Tectonics seminar this past year. He is a field-oriented geoscientist whose interests are in the partitioning of plastic strain in the middle and lower crust. He has worked in the Laramie Mountains (WY), Klamath Mountains (CA), and the southern margin of the Archean Wyoming Province. This summer, Margosia Jadkowski '10 began reconnaissance of field areas in Maine where Bill wants to undertake future research, and accompanied him to Wyoming for a short field season.

Dr. Valerie Reynolds joins the faculty after teaching as a Visiting Assistant Professor at the University of the South. Valerie received her Ph.D. from the University of Tennessee where she focused on extraterrestrial geology, with an emphasis on meteorite mineralogy and geochemistry. Following the completion of her degree, she spent two years as a postdoc at the Smithsonian working on the petrology and geochemistry of iron and pallasite meteorites. These data have allowed her to test hypotheses on planetary accretion and core formation. While teaching at Suwanee, she mentored undergraduate research projects and plans to expand her focus to Earth-bound analogs in Maine. Valerie brings industrial experience to the department, having worked a an environmental consultant. Upon nomination by the President, 'Bro Adams, she has been appointed to a Clare Boothe Luce Assistant Professorship in Geology.

Five Geology majors will be presenting results of their original research at the national meetings in Houston. Alyssa Charsky '09 reports on an independent project she began along the Burdekin River, Australia, while studying abroad at James Cook University with Raphael Wust. Rachel Guest '09 has continued her research on predator-prey relationships and escalation as expressed in shell morphology of Macrostrombus in Florida and the Caribbean. Rachel began this project last summer when participating in an REU sponsored by the University of South Florida. Amanda Smith '09, Stephanie Grocke '09, and Caroline Hunt '10 are representing the Fall 07's GE251 class project on the systematic diversity and paleoecology of the Tarrantine Formation invertebrate assemblages near Jackman, ME.
Bob Gastaldo, Chair - ragastal@colby.edu

UNIVERSITY OF MAINE: The Department of Earth Sciences at the University of Maine is going through some changes this fall. Drs. Stephen Norton, Joseph Chernosky and Thomas Kellogg each retired as of the end of August. Each seeks emeritus status, and Steve Norton appears daily and is as busy as ever. Steve's position was refilled by Amanda Olsen, a low-temperature, aqueous geochemist from Virginia Tech. Joe's position was filled by Dr. Alice Kelley, who was a part time instructor and is now full time. Tom's announcement of retirement did not allow time to seek a replacement this summer, but the Department will be looking to replace Tom's position next year. – Joe Kelley, Chair – jtkelley@maine.edu

Thank you note from a **Waterville High Science Olympiad** team member addressed to the Geological Society of Maine:

Dear Geological Society of Maine Members,

Thank you for supporting the Waterville High School's Science Olympiad team! We recently returned from a great trip to Washington D. C., where we got to compete in over 20 math and science events with other students from around the country. Our team learned a lot from the experience, and had three top-20 finishes. Thanks again for supporting Science Olympiad!

Sincerely, A S.O. Team Member

MEMBERSHIP DUES STATEMENT

The GEOLOGICAL SOCIETY OF MAINE, INC. (often referred to as **GSM**) 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:

$20.00	REGULAR MEMBER	Graduate geologists, or equivalent, with one year of practice in geology, or with an advanced degree.	***PLEASE NOTE NEW FEE SCHEDULE AS OF February, 2008***
$20.00	INSTITUTIONAL MEMBER	Libraries, societies, agencies, businesses with interests in or practicing geology and related disciplines.	
$10.00	ASSOCIATE MEMBER	Any person or organization desirous of association with the Society.	
$ 5.00	STUDENT MEMBER	Persons currently enrolled as college or university students.	

THE GEOLOGICAL SOCIETY OF MAINE ANNUAL RENEWAL / APPLICATION FOR MEMBERSHIP

Regular Member	$20.00	$__________	Name ____________________________________	**Make checks payable to:**
Institutional Members	$20.00	$__________		Geological Society of Maine
Associate Member	$10.00	$__________	Address ____________________________________	Rob Peale, Treasurer
Student Member	$ 5.00	$__________		Maine Dept. Enviromental
Contributions to GSM		$__________	____________________________________	Protection,
(please write gift or fund on check)				State House Station 17
TOTAL ENCLOSED		$__________	____________________________________	Augusta, ME 04333-0017

Email Address ____________________________________

(GSM funds include the Walter Anderson Fund___, the Education Fund___, and discretionary gifts as noted by contributor)

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2008/2009 SOCIETY YEAR BEGINS AUGUST 1 - PLEASE SEND DUES TO TREASURER.
The DATE on your mailing address refers to PAID UP DUES DATE

THE GEOLOGICAL SOCIETY OF MAINE
c/o Daniel F. Belknap, Newsletter Editor
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THE MAINE GEOLOGIST is the Newsletter of the Geological Society of Maine, published three times a year, in mid-winter, summer, and early fall, for members and associates.

Return Service Requested

Correspondence about **membership** in the Society, **publications** and **dues** should be mailed to:
Rob Peale, Department of Environmental Protection
State House Station 17, Augusta, ME 04333-0017 <rob.n.peale@maine.gov>

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