

March, 1999

Volume 25
Number 1

25'th Anniversary Volume

The President's Message

An action packed fall meeting hosted by the Geology Department, University of Southern Maine (USM) highlighted speakers on the topics of geophysics, hydrogeology, and geoarchaeology. A brief business meeting elected new Officers and Director and I assumed the reins of a new administration, which will usher in, with your help, the " Silver Jubilee" (25th anniversary) of the Geological Society of Maine(GSM). On behalf of GSM I thank our USM hosts for a fine fall meeting complete with a sumptuous repast of hors d'oeuvres, liquid refreshment and dinner. I wish also to acknowledge past President, Joe Kelley and his administration for the highly successful and remarkable accomplishments furthering GSM mission and purpose. His administration is especially recognized for the successful and productive workshops in education and geology to a wide variety of public/government interests-notably outreach to the secondary education teaching profession. With your help I intend to extend these accomplishments as part of our anniversary year and your suggestions and ideas are urgently solicited!

Our first initiative, an extension of Joe's recommendation, is to enter the next 25 years by designing, implementing and maintaining a GSM Web Site which as discussed in the following pages is now on line. Thanks to Dave Gibson, Vice Pres., Tom Eastler, and Wayne Power the server at the University of Maine at Farmington (UMF) hosts our web site. In addition, Tom, Dave and Wayne have acquired (at gun point?) \$1000 of UMF funding to help organize and implement our home page with a variety of geologic linkages. Your input is welcome - many thanks Tom, Dave, and Wayne!!

The Spring meeting originally scheduled to be at Bates College has been rescheduled due to calendar conflicts. The GSM Spring meeting will be held on Friday, April 23 at the University of Maine in Orono - mark your calendars. A call for student papers by Marty Yates and Dan Belknap is noted in the following pages of this newsletter. They are receptive to suggestions for an evening Silver Jubilee event and/or speaker.

Dee Caldwell, Boston University, has magnanimously offered to host and lead our summer field trip out of the BU field camp (Boom House) on Chesuncook Lake complete with cook and a traditional woods camp dinner. This event will take place July 23 (Fri.), 24 (Sat.), and 25 (Sun.). The plan: July 23- Arrive at Chesuncook Dam Boom House, T3-R12, with lodging in Boom House or tenting on grounds and pot luck supper. July 24 - An early breakfast and drive to Patten to begin field trip at Stop #1, at Top-of-the-World, about one mile south of Patten on Route 11 (for those who don't want to do much driving, tent at Shin Pond, etc. and meet at Stop #1). Stops proceed in and around Baxter Park ending Sat. evening at the Boom House for woods camp dinner and a Silver Jubilee evening event (suggestions?). July 25 - An early breakfast and on to Greenville-Monson area ending early afternoon at the Portland-Monson Slate Co. Mark your calendar and more to follow on web.

Joe Kelley and Bob Marvinney (MGS) will call on your help and input for a day-long Teachers Workshop (Geology of Maine?) during Earth Science Week, Oct.10-16, as a Fall GSM event.

After leaving a quart of blood and a pound of flesh, Bob Johnston (MGS) grudgingly allowed me to take, for home reading, a large binder with a complete collection of GSM newsletters, which he so dutifully and zealously archived and guarded

over the years. Browsing through the newsletters reveals 25 years of numerous interesting and intriguing historical events, anecdotes, personalities and dignitaries. This treasure-trove of the "Maine Geologist" reinforces the need for the continued "hard copy" format for our newsletter. After 25 years of documented history it seems proper to look back from time to time to recollect where we've been as we move into the future (uniformitarianism?). Therefore, I propose for your consideration the office of "Historian" to be added to our present compliment of officers and whose duty it will be to present brief historical notes, etc. to the newsletter and meetings as appropriate. I have informally appointed Art Hussey as Historian pro-tem until the next business meeting (UM) where the membership can deliberate on the position and duties. On the subject of GSM history I have been culling my collection of 35mm slides and have come across an assortment of various GSM functions (some worth saving) and it occurred to me that it is time to assemble and archive a selective reference slide collection of GSM functions. I propose, therefore, that as you review your slides and come across GSM events, you might wish to pick out and donate a few (there must be thousands out there) representative or unique slides. You may send them to me or Art labeled with date, place, event, persons/dignitaries, etc. We will archive them and show as appropriate.

Again, I call on you all for suggestions and ideas for our Silver Jubilee. Check our Web as it develops for information and updates.

Walt Anderson <WAAGEO@aol.com>

The Editor's Message:

Welcome to our 25'th Anniversary edition. Please heed President Anderson's call for input on special events through the year to make this anniversary memorable.

As some of you realize, we have had a tough time keepng up with address changes, in the transition to new officers, but primarily due to changes in the job situations of many recipients. Please e-mail me <belknap@maine.edu> or Treasurer Liz Champeon <Lchampeon@aol.com>

with any comments, complaints, and most especially **address changes**.

Last time we also put out a call for those who might like to receive the newsletter electronically. We will implement that change with the next newsletter - this one will be an experimental double subscription, snail mail as well as e-mail, to make sure that the bases are covered. PLEASE e-mail me with any problems, and if you would like your name added to the list of e-mail recipients, let me know.

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

GSM Web Site !

I have the pleasure of announcing that the GSM Page can now be accessed by going to the the URL:

www.gsmmaine.org

The page has a permanent location now but the information on the page will be evolving. We still need suggestions, comments, opinions. Current things in the works for the page are:

A page for the Bylaws.

A page for Geo. facts of the Earth, with pictures etc..

A section for the newsletter, with an archive section..

A picture section.

Thank you all for your patience, and help so far.

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

Spring Meeting

The Spring Meeting of the GSM will be held at the University of Maine, in Orono on Friday, April 23. Following our long-standing tradition, this meeting will involve student presentations and posters in the afternoon, and a key-note speaker in the evening. All advisors of undergraduate and graduate students are urged to encourage their students to participate, to present their work in a verbal or poster format. Please submit your abstracts as soon as possible by mail or e-mail to:

Daniel F. Belknap
Dept. Geological Sciences
University of Maine
Orono, ME 04469-5790
belknap@maine.maine.edu

Abstracts will be compiled and handed out as a Program and Abstracts supplement to the newsletter at the meeting.

The evening speaker has yet to be determined. Your ideas are welcome.

For those of you unfamiliar with the new Bryand Global Sciences Center, the following are directions:

Driving north on I-95, take Exit 50, turn right (east) on Kelly Road. At T intersection with Main St. (Rt. 2), turn left (N), proceed 2 mi. through Orono, through first traffic lights, and over Stillwater River. At top of hill turn left at traffic lights onto College Avenue. Continue approx. 3/4 mi to N to first University of Maine entrance (large brown sign). Stop at Public Safety in white clapboard building on that corner for a visitors parking permit (you can get a campus map there if necessary). Go NE on Munson Road to the top of the hill and take the first road to the right (Sebago Road, at Merrill Hall). Take your next right, heading south on Grove Street Extension, past the greenhouses and parking lot. Bryand Global Sciences Center is the 3-story brick building with arched atrium windows, on the left (East). Park either in front or behind the building. Call 581-2152 if you get lost.

Heading South on I-95, take exit 51 onto Stillwater Avenue. Continue approximately 1 mile on Stillwater Avenue, cross the Stillwater River, and take a right at the light (McDonalds and Kentucky Fried Chicken) onto College Avenue. Proceed approximately 1 mile south on College Avenue past the first entrance (hockey arena), the steam plant and second entrance (Sebec Rd.) to the third entrance (Munson Road) on your left, at Public Safety. Continue as above.

**Geological Society of Maine
Spring Meeting**

Friday, April 24

University of Maine, Orono

1:00-4:30 p.m. Student talks and posters

4:30-5:30 p.m. Social Hour and Business Meeting

5:30-6:45 p.m. Dinner

7:00-8:00 p.m. Keynote Speech

Message from the State Geologist

Robert G. Marvinney, State Geologist

The National Cooperative Geologic Mapping Program and Maine

In 1992 the Congress overwhelmingly approved and the President signed legislation establishing the National Cooperative Geologic Mapping Program within the USGS. The program was initiated as the result of many years of determined effort by the Association of American State Geologists (AASG) and formalizes a cooperative program that has existed informally between the USGS and state geological surveys for many years. The program has three components: FEDMAP, which addresses federal mapping needs; STATEMAP, which funds state survey mapping projects; and EDMAP which provides funding for student mappers at universities and colleges. With the support of many of you, this program was reauthorized in 1998 with a modest increase to about \$4 million in the STATEMAP component nationwide, and about \$350,000 in EDMAP.

What does this program mean to Maine? Through the 50:50 match of funds in the program we have been able to greatly expand our mapping budget without requiring additional resources from the state. To a limited degree this has offset the drastic state budget cuts of the early 90s. Since 1992, the Maine Geological Survey has conducted 5 STATEMAP projects resulting in the release of 28 new quadrangle maps. In these years we have

focused both bedrock and surficial mapping in the more populous southwestern part of the state. Most notably, in 1998 Spike Berry and Art Hussey completed an outstanding compilation of the bedrock geology of the Portland 1:100,000 quadrangle. Woody Thompson and Tom Weddle, along with a company of dedicated contract mappers (both professionals and students), have completed new surficial quadrangles in the Sebago Lake and Lewiston areas. In the 1998 field season the bedrock focus shifted to Rockland with the goal over the next several years to fill in critical areas between the coast and Augusta. All the maps produced through this program are playing significant roles in issues such as aggregate resource, groundwater quality, and slope stability as well as contributing to our understanding of the timing of deglaciation and Siluro-Devonian tectonic history. The bottom line: new geologic maps, the foundation of much that we do in the geological profession, are being produced in a timely fashion to address important issues.

The EDMAP component, while currently funded at only the most basic level, is providing an important opportunity for student mapping in Maine. This program is open to all qualified graduate and undergraduate students to support mapping projects. In the past several years, students from Queens College and Ohio State had their Maine projects funded. In January of this year I had the pleasure of serving as one of AASG's representatives to the EDMAP review panel. Of the 45 proposals we reviewed, most were rated from good to excellent and received at least partial funding; only three received no funding. Two Maine projects by non-Maine universities were among those funded, along with one Maine undergraduate institution for a non-Maine project. I believe there is a very good and as-yet unrealized potential for Maine students to receive funding for Maine mapping projects through this program. When I review proposals in January, 2000, I hope to see proposals from every Maine college and university.

Shortly the AASG will begin a campaign to again reauthorize the program for the next 5 years, with funding for STATEMAP to reach \$12 million

and \$1.2 million for EDMAP by 2005. I hope everyone who reads this will express support to their elected representatives for this important program.

**10th ANNIVERSARY
MAINE MINERAL SYMPOSIUM
May 7, 8, 9, 1999**

Mineral and gem enthusiasts are invited to attend the 10th Maine Mineral Symposium, which will again be held at the Senator Inn and Conference Center in Augusta, Maine. This annual meeting has gained a large following among hobbyists throughout the Northeast, with over 300 people now attending. For our 10th anniversary, we have put together the special program described below.

The core of the symposium is a series of informative and enjoyable talks by persons who are knowledgeable about the mineral hobby and collecting sites. There are always talks on Maine, and the 1999 program features four well-known authorities on this part of New England: Frank and Jane Perham, who have many years of experience in mining and selling gems in Oxford County; Vandall King ("the expert" on Maine minerals); and John Raymond, who will describe recent discoveries of well crystallized minerals in metamorphic rocks.

The Internet is becoming an important marketplace for purchasing gems and minerals, as well as obtaining hobby information. John Betts will discuss this subject in the context of a live on-line demonstration! We always have an "exotic talk" on some exciting area outside the Northeast, and this year Ted Johnson returns to show us a tour of the tourmaline mines and other localities in southern California.

The Maine Mineral Symposium will also include exhibits as part of the Saturday program. Saturday night features an auction of fine minerals and related collectibles to benefit future symposia. Dealers will have a large selection of minerals and gems for sale at The Senator, beginning on Friday afternoon. They will be open both evenings and other times when talks are not in progress. The Sunday field trips are a popular part of the symposium. The 1999 program will include trips

to quarries where you can find your own specimens.

The registration fee for the Maine Mineral Symposium is \$10.00 per person, and includes all indoor activities and access to the field trips. Pre-registration before April 23 is strongly encouraged. Please send payment (check payable to "Maine Mineral Symposium") to:

Woodrow Thompson
Maine Geological Survey
22 State House Station
Augusta, ME 04333-0022

NE Geological Society of America

From Tom Weddle:

The new slate of NE Geological Society of America officers is as follows:

Robert D. Jacobi - Chair
Walter A. Anderson - Vice-chair
Kenneth N. Weaver - Secretary-Treasurer
Allan Ludman - Past Chair
Duncan M. FitzGerald - Member-at-large
George C. Stephens - Member-at-large

Geologists and Soil Scientists Certification Board Activities

The Board for Certification of Geologists and Soil Scientists has been busy over the last year. We revised our rules to allow both geologists and soil scientists to use national examinations developed by a group of states. The Board has joined the National Association of State Boards of Geology (ASBOG), and we administered the National Exam to two candidates in September, 1998. Several more candidates are signed up for the spring administration. Board members are participating in exam development for both geologists and soil scientists at the national level.

The Board and several professional geologists updated our local knowledge examination and converted it to a multiple choice exam. This makes it more compatible with modern professional testing standards, and also reduces our overhead in exam correction. Thanks to the individuals who helped put together and review questions for the local knowledge exam.

On other fronts, the news is more difficult. The Bureau of Professional and Financial Regulation, which administers and staffs the Board, has developed a new formula for allocating their overhead and support costs. This formula increases the Board's overhead such that our current income is less than our fixed costs, even before we hold a meeting! Since we have just increased our dues for geologists to cover the costs of affiliation with ASBOG, we are not currently in a position to increase them further. There are a few other relatively small boards in similar positions, and discussions with the Bureau continue. Some possible options include revisiting the formula, moving the Board to another, less expensive, home, affiliating with other similar boards to spread the overhead, or finding new revenues. The Board is currently solvent, and we have a year or two to resolve this issue. Your comments and suggestions are welcome (Andrews.L.Tolman@state.me.us).

On yet another front, a group of New Hampshire geologists has joined together to form the New Hampshire Council of Professional Geologists. They have put together draft legislation that would create Geologist Registration in New Hampshire, and are currently discussing this bill with the New Hampshire Legislature and with affiliated professions in New Hampshire. More information about this effort is available from Dorothy Richter at Hager-Richter Geosciences. (dorothy@hager-richter.com). In the Northeast, Maine, Pennsylvania, and Delaware have geologist certification. Nationally, 27 states have some sort of geologist registration or certification. Over the last several years, there have been a couple of states a year adopting registration of geologists.

Andy Tolman <Andrews.L.Tolman@state.me.us>

GSM Member News

Walter Anderson has just been elected Vice Chair of the Northeastern Section of GSA for 1999 and will be Chair in 2000. He has been appointed by Senate President Marc Lawrence as a public member to the Maine Oil Spill Advisory Committee (MOSAC). Walter has also been designated by the AAPG as "Regional Coordinator" for north-

hern New England earth science institutions. He will be the coordinator for the AAPG Visiting Geologist Program (career and technical speakers) for student AAPG chapters.

Fred Beck offers the following: "I have a lot of journals and periodicals which I would be willing to donate to any institution or individual who would like them. Libraries would be best as the publications would then be available to anyone, including me. I just don't have shelf space anymore. I'll get a list to you soon for inclusion in the next newsletter if you think that is an appropriate place to do it."

Kathy Bither taught Introductory Geology at St. Joseph's College this past fall, and will be teaching Environmental Geology there next fall.

Todd Coffin was the second-fastest Maine runner (out of over 3,000 participants) to finish in last summer's Beach to Beacon 10K.

Tom Eastler is recovering from knee replacement surgery. With his new bionic knee, he'll be able to leap outcrops with a single bound.

Dyke Eusden is spending his sabbatical in New Zealand.

Art Hussey will be doing the Geological Society of America's Lewis and Clark Geoadventure trip this summer. The trip follows the footsteps of the explorers through southern Montana and Idaho and includes rafting on the Salmon River. Art is also continuing to organize Bowdoin's mineral and rock collections, and is working with the Computing Information Services staff to develop a database for others to use. **Bill Forbes** has been helping out with curating the fossils and acquiring specimens to fill gaps in the collection.

Ellen O'Brien is coaching the nordic ski team (new this year) for Winthrop High School.

Steve Pinette sends greetings from North Carolina. He is working in Durham as a program manager for a two-year drug rehabilitation program that serves hard-core addicts. The career change has been both enlightening and gratifying as he works to procure and renovate buildings for

program housing and to secure grants for the growing program (currently 190 residents).

Nick Sabatine is back at Jacques Whitford in their new office on Pear Street in Portland.

Please send member news to Carolyn Lepage at <clepagegeo@aol.com> or PO Box 1195, Auburn, ME 04211-1195 or by fax to 207-777-1370 or just call 207-777-1049.

GSM Treasurer's Report

March 03, 1999

The Society currently has 352 members:

They are distributed as follows:

Associates:	24
Institutions:	12
Regular:	287
Students:	29

Unfortunately it is easy to let your dues lapse. The dues date is shown on your mailing label.

Balance on Hand 04/24/98 \$ 9169.05

Receipts Subtotal	\$ 2,874.35
Dues	\$ 1,080.00
Anderson fund (intr. + contr.)	\$ 285.00
Education fund	\$ 90.00
Publications	\$ 0.00
Short Course	\$ 1,419.00

Expenses subtotal	\$ 1,355.64
Printing, mailing, stamps	\$ 386.41
Anderson Awards	\$ 200.00
Bank Charges	\$ 13.58
Bulk Mailing Charges	\$ 85.00
Spring Meeting Expenses	\$ 342.59
Catering for Short Course	\$ 402.50
Miscellaneous	\$ 10.56
Taxes	\$ 0.00

Balance on Hand 03/03/99 \$ 10,687.76

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

GSM Secretary's Report

GEOLOGICAL SOCIETY OF MAINE

Business Meeting

Date: November 12, 1998

Time: 4:20 PM

Location: University of Southern Maine at Gorham,
Gorham, Maine

Joe Kelley, President conducted the meeting.

1. Spring 1998 Meeting Minutes: accept as is.
2. Treasurer's Report: None.

3. Election of officers: Officers listed below were voted in.

- Treasurer: Liz Champeon
- Newsletter: Dan Belknap
- Secretary: Pat Seaward
- President: Walter Anderson
- Vice President: Dave Gibson
- Postal Chairman: Reverted to Newsletter editor (Dan Belknap).
- New Director: Joe Kelley (98-02)

4. Short Course: Environmental Geology Short Course was held October 14, 1998. 57 participants, \$1410 income and \$530 in expenses.

5. No old business.

6. New business: To receive GSM Newsletters via e-mail, send a notice to Dan Belknap at his e-mail address (belknap@maine.edu). You can still get a paper copy of the newsletter if you like.

7. New business: GSM Web page. Discussion regarding a GSM web page took place. Who will set it up? Photos? Summer field trip information, etc.? Hire a student to create it? Resource or active web page? Frequency of updates (monthly maybe)? Relationship of the newsletter editor and the web-page guru? Newsletter editor would send a copy of newsletter to web page guru to be posted on the web page. Decision made for Marty Yates, Walter Anderson & Dave Gibson to continue the discussion regarding the GSM web-page and plan to get something going by the end of the year.

8. Next meeting: Spring 1999 Meeting: Walter Anderson will discuss with Bates College about hosting it.

9. Summer Field Trip: Walter met with Dee Caldwell. Dee Caldwell has a camp around Katahdin at Boom House and has offered to run a summer field trip or hold it later in Fall of 1999 at Bald Mountain with John Slack.

Adjourn to social hour and dinner from 5:00 to 6:30.

GEOLOGICAL SOCIETY OF MAINE

Evening speaker:

Steve Pollock, University of Southern Maine

Dr. Pollock presented the work he has been conducting on the Munsungun cherts over the past twenty years. Much of the fieldwork was completed in the early 1980's, and lay dormant for five or six years. In 1987 Dr. Pollock published a

technical article in The Journal of Sedimentary Petrology.

During the past ten years, Dr. Pollock has been invited to look at various archaeological collections to determine the source area for Paleo-Indian artifacts. Six basic types of cherts have been identified from 25 separate collections. Many of these are thought to be from sites in Maine, New Hampshire, and Vermont.

To determine the origins of many of the artifacts, Dr. Pollock suggests using a hierarchy of methods from simple to complex (i.e. hand specimens, thin sections, x-ray diffraction, chemistry [REE], and neutron activation). Many comparisons can be achieved using hand samples or thin sections when looking at color variations, laminations, burrow structures, and weathering characteristics.

Early archaeologists classified all the red cherts as Munsungun, and the black ones from the Normanskill area of New York. More complicated than that, several varieties have been described in a range of colors, textures, and lithologies. We now understand that Munsungun cherts are derived from sedimentary deposition influenced by volcanic activity to form silt/sand laminated cherts, lithic arenites, and fine-grained laminates in a variety of colors.

Munsungun material, primarily from Norway Bluff, has been found at many of the Paleo-Indian sites throughout northern New England, probably transported by seasonal migrations, or through an exchange network between 1,000 and 4,000 years before present. The Paleo-Indians, it seems, quarried at a finite number of sites where the materials were easiest to collect. There is evidence that the migration took place along river drainages (Androscoggin and Dead) toward the sea, taking into consideration where sea level was at the time.

Other quarry sites discussed were in the Hudson River and Champlain valleys of New York state; Berlin, New Hampshire; Nova Scotia; Concord, Massachusetts; and Munsungun, Searsport, North Haven and Vinalhaven, Maine.

Pat Seaward, Secretary
<pat.o.seaward@state.me.us>

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.

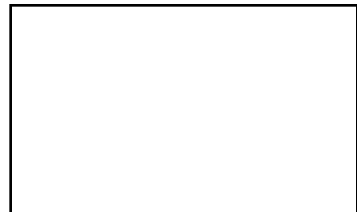
THE GEOLOGICAL SOCIETY OF MAINE ANNUAL RENEWAL / APPLICATION FOR MEMBERSHIP

Application Fee	\$2.00	\$ _____	Name _____	Make checks payable to: Geological Society of Maine Elizabeth Champeon, Treasurer Six Liberty Drive Bangor, ME 04401
Regular Member	\$7.00	\$ _____		
Associate Member	\$6.00	\$ _____	Address _____	
Student Member	\$4.00	\$ _____		
Contributions to GSM		\$ _____		
	(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
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THE MAINE GEOLOGIST is published three times a year, in early fall, mid-winter, and summer, for members of the Geological Society of Maine.

Address Correction 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.maine.edu

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