

NHGS LOGO

The Granite State Geologist



Newsletter of the New Hampshire Geological Society

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In-Coming President's Message

Joanne McLaughlin

The NHGS has entered into its fourth year as an incorporated entity and I am looking forward to another successful year. In the next twelve months I hope to see the Society grow in membership, anticipate increased attendance at Society meetings, and hope for more participation on committees to promote the Society's goals.

One popular feature of our meetings has been the presentation of mineral collections by our members. I hope to make this a regular event at all of our meetings. In that vein, and in conjunction with our featured speaker's presentation, "Grand Canyon Perspectives," the next meeting will feature a collection of "western" minerals. I hope that at future meetings more of you will decide to share your collections with the membership, whether it be a fossil collection, a rock collection, or even a favorite or unique specimen.

Another goal I propose for the Society is to establish a scholarship for a New Hampshire science teacher to attend a national science convention. In this way, the Society will be promoting earth science studies by disseminating science education through a teacher, touching "more than a few" of New Hampshire's next generation of aspiring scientists.

In conclusion, I am soliciting your active participation in the Society by joining our Membership, Finance, Program, and Education committees. "The broad purpose of the NHGS is to advance the science of geology in New Hampshire," and you can help us all achieve this goal by giving some of your time and talent to the Society.

The committee chairpersons have been set up as follows: Membership--Joanne McLaughlin; Finance--Dorothy Richter; Program--Greg Kirby; Education--to be announced. In addition, our less formal Legislative Watch will be headed by John Cotton, and Tim Allen can always use material for our newsletter, The Granite State Geologist.

I hope to see you all at the next Society meeting!

Earth-Space Science Teacher's Tour and Workshop at the Palermo Mine

Lee Wilder

Over sixty New Hampshire Earth-Space Science teachers recently spent a pleasant Saturday in November at the Palermo Mine. This world-famous pegmatite mine is located in the heart of New Hampshire's pegmatite mining

region. Operated for over 150 years by various owners, this igneous body had yielded over 100 different minerals. Some of them are found in only a few other localities on planet Earth. In fact, Palermo is the type locality for nearly a dozen of the more than 3000 known minerals.

Originally operated for its Muscovite Mica, the Palermo mine has yielded large quantities of Feldspars and Quartz. Both golden and green Beryl occur here as well as the rare phosphate mineral--Triphylite. Gem quality crystals of Beryl and Quartz are also found.

We began our visit with a brief surface tour, led by the mine's current owner--NHGS member Bob Whitmore. Bob explained the mine's history as well as the geology of this pegmatite. Then all participated in an on-site workshop in mineral identification using simple physical properties techniques. A break for lunch and mineral collection was followed by a below-ground tour of the mine's labyrinth of underground tunnels and rooms. We even got the opportunity to closely observe hibernating bats, some hanging by themselves, others in clusters of five or six.

Trip leaders Paul Williams (NHSTA) and Lee Wilder (NESTA, NHSTA, and NHGS) reported that most trip participants were able to collect examples of at least 20 different minerals. In addition they all earned six hours of staff development credit toward their New Hampshire Earth-Space Science teaching certification.

Charles H. Hitchcock and the Geological Survey of New Hampshire (part 1)

Laura and Guy Waterman

Editor's Note: The following is excerpted (and slightly condensed) from Forest and Crag by Laura and Guy Waterman (with permission of the authors), a definitive 888 page History of Hiking, Trail Blazing, and Adventure in the Northeast Mountains published in 1989 by the Appalachian Mountain Club, 5 Joy Street, Boston, MA 02108

Few events changed Northeastern climbing history as rapidly and radically as two post-Civil War scientific surveys. In 1868 the state of New Hampshire authorized a geological survey and appointed Charles H. Hitchcock as state geologist. Four years later New York State authorized a topographical survey, with Verplank Colvin as superintendent.

Before Hitchcock and Colvin, the two principal Northeastern ranges (the White Mountains and the Adirondacks) were known and used but superficially. A few leading peaks were climbed (considerably more in the White Mountains than in the Adirondacks), but in both ranges the majority of interesting mountains were essentially untouched and untraveled.

After the surveys were completed, nearly every corner of the two ranges was known, explored, and publicized. Within a few years, large numbers of trampers came to climb them, trails were built, guidebooks published, accurate maps distributed and the second wave of recreational climbers washed over the whole of both ranges. It has never receded.

Charles Henry Hitchcock was born on August 23, 1836, son of the distinguished Edward Hitchcock of Amherst College. Birth, training, and his own talent and temperament all combined to assign him a leading place in American science. He graduated Phi Beta Kappa from Amherst in 1856 and spent the next five years partly as assistant to his father in the Vermont geological survey and partly in teaching at Amherst, Yale, and Andover Theological Seminary. In 1861 the younger Hitchcock struck out on his own as state geologist for Maine. In the mid-1860s he spent a year of study in London and was appointed professor at Lafayette College. In 1868 the New Hampshire geological survey was authorized, and on September 8, 1868, the governor appointed the thirty-two-year-old Hitchcock state geologist of New Hampshire. Simultaneously it was arranged with Dartmouth College to name him professor of geology and mineralogy, a post he held for forty years. Upon retirement, he went to Honolulu and undertook extensive investigations of the volcanic islands and mountains of Hawaii,

publishing his findings in 1909. This closed his distinguished career as one of the country's leading scientists of the late nineteenth century. He returned to New Hampshire and lived on in comfortable retirement until his death in 1919 at age eighty-three.

When appointed state geologist, Hitchcock, even at thirty-two years old, was an eminent geologist, well travelled, had studied abroad and had participated in geological surveys in Vermont and Maine as well as New Hampshire. Hitchcock participated in professional societies and was the fledgling Appalachian Mountain Club's first councillor of topography. Hitchcock was an erudite man with a gentle sense of humor, an able and popular manager of the many men who worked harmoniously together on the New Hampshire survey. One can imagine Hitchcock enjoying an occasional sociable cocktail with his colleagues, always in moderation. Hitchcock presided over a buoyant staff and, while not absent from the field himself, left many of the more adventurous explorations to his younger colleagues and college students. The story of the New Hampshire survey is studded with illustrious names of resourceful young men: Huntington, Vose, Clough, Upham, Morse, and many more.

As top assistant on the New Hampshire Survey, Joshua H. Huntington was flamboyant, imaginative, always proposing--and executing brilliantly--the daring stroke; he it was who conceived of the spectacular plan for wintering over on the summit of Mount Washington, and of course was among those who did it.

They all shared one common trait: a burning desire to climb mountains, ill-concealed under motives of science. They were intensely interested in scientific observation, to be sure, but strongly intermingled with that quest for knowledge was a sheer love of adventure and getting to the top.

Look for more exploits of the New Hampshire Geological Survey in the next issue of the Granite State Geologist.

NHGS Treasurer's Report--1993 Year to Date (or 11/12's of an Annual Report for FY 1993)

For the period January 1, 1993 - December 1, 1993

Starting Balance - January 1, 1993		1908.30
Income		
	Dues	2740.00
	Meeting Fees	3204.00
	Interest Income	37.50
Total		5981.50
Expenses		
	Meeting Expenses	3321.31
	Newsletter Expenses	654.88
	Membership Directory	199.55
	Postage	445.74
	Insurance	227.00
	P.O. Box Rent	90.00
	Office Supplies	22.44
	Professional Services (Tax Prep)	150.00
	Bank Fees	78.58
	Total	5189.50
Ending Balance		2700.30
Net Income Year to Date		792.00
Bank Account Balances		
	Savings Account, First NH Bank	2295.67
	Checking Account, First NH Bank	404.63
	Total Balance Forward	2700.30

Respectfully submitted,
Dorothy Richter, Treasurer

Membership Report

Tim Allen

At time of publication, the NHGS had 122 members, paid through August 1994, and two Honorary Fellows. This is up from the previous membership count of 96 members prior to the Annual Meeting of the Society in October. We anticipate that a new 1994 New Hampshire Geological Society Membership Directory may be published in time for distribution at the January meeting. The 1993 Directory has proven to be quite popular and useful, so for this reason it is very important that (1) you have renewed your membership as only paid-up members are included, and (2) that you keep us updated of any changes in your address. The Society does continue to attract new members, but as a volunteer, membership organization, the NHGS needs you, as current members, to help recruit additional new members. If you are interested in serving on the membership committee, please contact Joanne McLaughlin at (603) 224-7979.

Thank You Letter

I'd like to acknowledge and thank an anonymous NHGS Member for his generous contribution to and investment in the education and advancement of several University of New Hampshire students. He made it possible for 16 UNH students to attend the 1993 National Geological Society of America meeting that was recently held in Boston. Through his thoughtful donation, he provided the opportunity for us to grow academically, individually and as geo-scientists. We were able to attend talks and poster sessions and meet some people who are on the "leading edge" of research. At the conference, we were introduced to new concepts, approaches and perspectives. Thank you for your generosity and your commitment to education and to the geosciences.

Sincerely,
Carol Johnson

AEG Meetings

Jutta Hager

The New England Section of the Association of Engineering Geologists has several upcoming programs of probable interest to NHGS Members. In particular, we'd like to make everyone aware of the March 12 (Saturday) symposium, for which we're inviting abstracts.

- January 20, 1993 "Remediating Highway Deicing Salt Contamination of Public and Private Water Supplies in Massachusetts" by Samuel J. Pollock, Massachusetts Highway Department.
- February 17, 1993 "Engineering Properties of the Boston Blue Clay" by Debra Berman, Stone & Webster Engineering Corporation.
- March 12, 1993 Annual Symposium, "Determining and Predicting Contaminant Migration" Abstracts are invited and due January 20, 1993.

For more information, or to be put on the mailing list, contact Jutta Hager at Hager GeoScience, Inc., 63 Gregory Street, Waltham, MA 02154. Telephone: (617) 893-9700, FAX: (--617) 893-8465.

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