



MICROMOUNTERS OF NEW ENGLAND

The MMNE was organized on November 8, 1966, for the purpose of promoting the study of minerals that require a microscope.

April/May 1995

Newsletter #183

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Dues are \$6.00/year and due on January 1st, payable to the treasurer.

News items for the Bulletin are welcome and should be submitted to the Editor. The Bulletin may quoted if credit is given. The Club address is c/o Editor

Upcoming Meetings

July 15, 1995 @ John Reiner's Center Harbor, NH

August 19, 1995 @ Sunapee State Park, NH (Capitol Mineral Club)

The next regular meeting of the MMNE will take place on Saturday, April 8, 1995 at the Northborough Public Library. The doors open at 9AM. There is a map in the March 1995 newsletter.

The annual May meeting is scheduled for May 13, 1995 at the Ashland 4-H Center. A schedule of events and registration form are enclosed. There is a map on the back side of the registration form. Please return the registration form to Margaret Stewart promptly. There will be registration forms at the April meeting.

The following slate of officers has been submitted for our next fiscal year. The slate will be voted on at the May meeting.

President	Ralph Carr
Vice president	Jim Clark
Secretary	Pat Barker
Treasurer	Janet Cares
Editor	Mike Swanson

Mont Saint-Hilaire will be open for collecting on the following dates: May 27 & 28, July 1 & 2, July 29, September 9, and October 7. All dates are either just Saturday, or Saturday/Sunday. Remember, July 1 is Canada Day so make your room reservations early.

The current issue of Rocks and Minerals (March/April 1995) contains "Mont Saint-Hilaire Revisited, Part 2" by Quintin Wight and George Chao. Among the dozens of newly identified species described in the article are two minerals, formerly of the UK 58 group, which have been named after members of the MMNE. Caresite-3T is named for Janet and Stephen Cares, and charmarite-2H and charmarite-3T are named for Charles and Marcelle Weber. The third member of the group, quintinite-3T, also a member of the UK-58 group, is named for Quintin Wight, one of the authors of the article and an avid micromounter who has previously spoken at our May meeting.

A cleaning tip from the "International Micromounter's Journal" Vol.3 #4, December 1994. "The first time I tried to clean the black bits of basalt out of mesolite from Spray, Oregon, I found that washing matted the crystals, and blowing redistributed the basalt. In desperation I tried the tube of an Electrolux Vacuum cleaner. The result was spectacular, clean, beautiful, white sprays of mesolite. After that I tried vacuuming other minerals, and with only one exception, cyanotrichite, every specimen was better. In most cases this eliminated any other cleaning. Hang on tight and avoid minerals with a crumbly matrix; always check first on poor sections of the specimen. Now I use even stronger suction than an Electrolux. A built-in vacuum works faster and still doesn't destroy crystals; they all survived." Violet Frazier, Shingle Springs, CA.

S. E. M. ADVENTURE

While thumbing through the New England Wild Flower Society's Programs and Events brochure last summer and thinking that in my "next life" I would love to take their certificate course of studies, I noticed a course on "Understanding and Using the Scanning Electron Microscope." I decided then and there that I wouldn't wait until my next life, after all. I got a check in the mail immediately.

The course was held at the Boston Museum of Science on the 29th of October, a Saturday. If I thought that this was going to be a superficial overview of the instrument, I was rapidly disabused of that idea. Course instructor Don Salvadore is a no-nonsense guy and determined to impart his information as thoroughly as possible. He only accepts six people at a time because, as he explains, there isn't time enough or room enough for more. We started at 8:00 a.m. and didn't finish up until after 5:00 p.m. Lunch was only hurriedly permitted between steps in the operation.

Because the course was being run for the Wildflower Society, it was expected that we would be bringing in plant material. Four of my classmates were indeed preparing pollen grains, tiny flowerlets, plant stems, etc. However, two of us were not. I had several micromounts with me the size that our Micromount Club member Larry Pitman recommended, and another fellow student, an archeologist, had some fossilized (carbonized) pollen grains. Although the step-by-step preparing of the plant matter was certainly interesting, it took from 8:00 to 1:30 to get these materials dried out by a series of delicate, painstaking steps. Mineral collectors and fossil people are more fortunate; we could have arrived later and carried out all the steps necessary to take pictures of our specimens in a couple of hours.

In between steps Don handed out leaflets explaining the S.E.M, and he elaborated: The same things you can do with glass lenses and light (microscope) a person can do with magnets (and a few other things!) with the S.E.M. The S.E.M. uses a focused beam of electrons, and it is these reflective electrons which we see. The electron beam is reflected from the sample specimen as light would be in an ordinary microscope and is collected on a TV screen or on a photographic plate where it is seen as a black and white picture. While an ordinary microscope can magnify up to 1,000 times, that day we could go up to 5,000 times with the S.E.M. By the way, the museum has a cheap model of the S.E.M. set-up for about \$80,000.

When we had our plant, fossil, and mineral specimens mounted on a post or "stub" and coated with a fine layer of gold to get rid of excess electrons, we were ready to get started. That meant going upstairs to the public room where the S.E.M. equipment is housed. We were impressed. I was very impressed. People, especially those that know me, don't usually let me loose with \$80,000 pieces of equipment! But Don made certain that we did every step of the way all by ourselves. Imagine our awe when those first pictures came up on the TV screen, and we could turn our specimen this way and that, back and forth, and magnify up and down. Talk about thrills! The depth of field of these magnified pictures is stunning.

Each of Don's students that day was allowed about 20 or 30 minutes to decide exactly what angle and magnification we wished to have photographed. (I took pictures of a dawsonite in a nest of "artichoke" quartz from Francon Quarry.)

Members of the N.E. M.M. could take this day long course some Saturday or weekday. I found out that of the \$60.00 I paid to take the course, \$10.00 went to the Wildflower Society, so that means, I assume, \$50.00 to take the course. If six of us worked on a group project for a May Meeting booklet, perhaps the club could absorb some of the cost, but even if that isn't possible, the price is certainly a bargain.

Oh yes, and if all that isn't incentive enough, Mr. Salvadore has an aquarium in his office-classroom containing some life 2" long live trilobite look-alikes, actually Australian hissing cockroaches. Now there is a treat that no one should pass up.

Pat Berry Barker
January 7, 1995

**Micromounters of New England
14th Annual Northeast Meeting
Saturday, May 13, 1995
4-H Conference Center
Chestnut Street, Ashland, Massachusetts**

SCHEDULE:

9:00 - 12:00	Registration, informal session
12:00 - 1:00	Lunch
1:00 - 2:00	Speaker
2:00 - 4:00	Informal session

PROGRAM

Dr. Jeffrey Post, curator of the Smithsonian Institution Gem and Mineral Collection will speak on:
"MINERAL HABITS: WHY DO CRYSTALS GROW THE WAY THEY DO?"

Bring your microscopes, lights, extension cords, and micromounts (for discussion, possible identification, sharing or swapping).

Giveaways will be available, as well as some choice micromounts for sale. Door prizes will be awarded.

Registration fee of \$16 includes light refreshment and lunch, and a program souvenir.
Overnight accommodations available. Reserve with the lodging of your choice:

4-H Center (508) 881-1234*	Single	Double
Second floor, no elevator, no air conditioning, no phone, no TV, no maid service	\$32.00	\$60.00
Red Roof Inn (800) 843-7663/(508) 481-3904	\$36.99 plus tax	\$48.99 plus tax
Southboro. I-495 & Rte. 9. Air conditioning, TV, coffee, no restaurant		
Holiday Inn (800) 465-4329/(508) 481-3000	\$69 plus tax	\$69 plus tax
Marlboro. I-495 & Rte. 20. Air conditioning, TV, restaurant		(weekend rates)

*Campers (self-contained only) may park in rear of building. Please notify the 4-H at the above number.
Charge is \$8.75 per vehicle.

**MEETING REGISTRATION FORM
MAKE CHECKS PAYABLE TO: "MICROMOUNTERS OF NEW ENGLAND"
RETURN TO: Margaret Stewart, 244 Mill Street, Burlington, MA 01803-1838**

Meeting Registration: \$16 per person, including light refreshments, lunch and souvenir program

NAME(S) _____ @ \$16 = \$ _____

ADDRESS: _____

Return before May 1, 1995 as space is limited. 24 hour notice required for refund.