
# MICROMOUNTERS OF NEW ENGLAND

The MMNE was organized on November 5 1966 for the purpose of promoting the study of minerals that require a microscope

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Dues are $6.00 per year and are due on January 1st, payable to the Treasurer.

Contributions of news items for the Bulletin are welcome and should be sent to the Editor



**NEXT MONTH:**
Our next meeting will be our annual Northeast Meeting on **Saturday, May 8, 1993 at the Northeast Conference Center**

April 1993 Newsletter 167

The next meeting of the MMNE will take place on Saturday, April 10, 1993 at the Northborough Public Library. Because last month's meeting was canceled (twice) due to winter storms, this month's meeting will feature the previously scheduled program (to be presented by Pat Barker) and the swap/flea market.

Please add the following to your membership list:

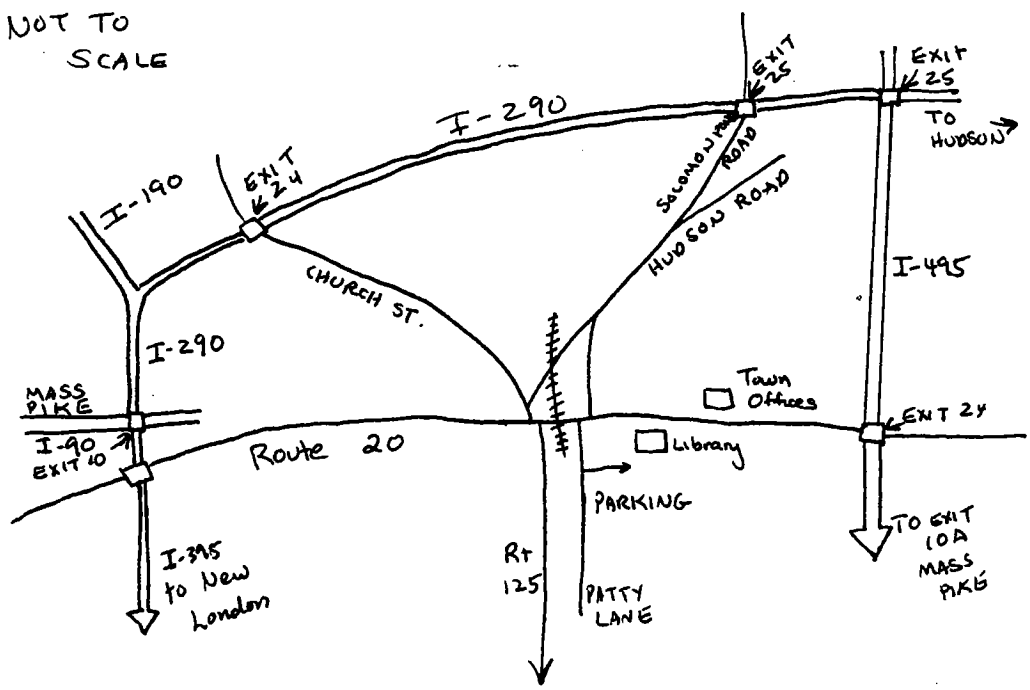
William Grohskopf
41 Calvert Avenue
Ronkonkoma, NY 11779

James Grandy
524 Brooksvale Avenue
Haddam, CT 06518
(203) 248-0440

Please note that Les & Marge Hitching's phone # is:(617) 233-4968

**Quintin Wight's Book on Micromounting**

The club is still planning on doing a group order of this recently published book. Although we have a few details to still work out regarding the order, we will have a sign-up sheet available at the next meeting. Deadlines for orders has been tentatively set for April 17th, in hopes that we may have the books in time for our May meeting (and perhaps in time for an autograph session with the author).



For those of you who haven't yet tired of winter:

## Let It Snow, Let It Snow, Let It Snow

One of the most delicate of crystals is that wintertime specialty, the snowflake. Clouds are made of microscopic droplets of water, thousands upon thousands concentrated in one area. Rain starts when the droplets get so concentrated they join together into larger droplets, becoming so heavy they fall to earth. Sleet starts as rain, then passes through a very cold layer of air on its way to the earth, freezing into solid raindrops. Snow starts as a nucleus of dust or other particles that attracts the molecules of water from the cloud droplets, and as the molecules accumulate, they form ice crystals which get larger as more droplets adhere.

The basic structure is one oxygen atom at the center of two hydrogen atoms, and a single snow crystal may have a hundred million such molecules. A snow flake is an assemblage of individual crystals, both whole land broken, that have joined together in falling. Six sides are basically inherent in the atomic structure of snow crystals. The form and the growth rate are the results of environmental conditions.

Snow crystals form in clouds with temperature of from $32^0$F to $-39^0$F. As the crystals become larger, they begin to fall, often hitting one another. The resulting part that breaks off becomes the nucleus for another crystal, a chain reaction that makes more crystals, and causes a sudden burst of heavy snowfall.

There are seven common snow shapes, determined by the temperature and humidity of the air in which they form..

Stellar or Dendrite Crystals - are shaped, with six points radiating from the center. The points may be simple or very elaborate in design. These are the ones we picture when we think of snowflakes. They develop about $10^0$ to $3^0$F, and the larger are about ½" across. They also are only a small percentage of flakes in a storm, forming in low clouds with plenty of moisture. Because of the fancy designs and points, they often interlock when falling and end up as large conglomerate flakes up to 2" across, drifting slowly to the ground.. These flakes, which hold together so readily, are the ones that stack up on branches and street signs.

Columnar Crystals - are six-sides column with flat or pointed ends, the largest being only about ¼" in diameter or length. They often have a hollow air space in them and are not common. They form in clouds with little moisture, at temperatures of $23^0$ to $18^0$F and again at $-13^0$ F and lower. When clouds of these crystals pass in front of the moon, they create a halo of color around it.

Needle Crystals - are long, slender, six-sided columns with fine points on either end. They are common and account for much of a storm's accumulation. Ranging in size from ¼" to 3/8" long, they freeze together to form conglomerate flakes that seem to break into splinters of ice when they hit the ground. They develop at $27^0$ to $23^0$F.

Asymmetrical Crystals - are groups of plate-like crystals joined together in an irregular shape, Common in our snows, they join to form conglomerates that look like stellar crystals at a distance. The largest of these is about 3/8" across.

Graupel - are small snow pellets, really small stellar or hexagonal plates that became coated with frozen droplets as they fell through moisture-laden clouds, which obscures the shape of the original crystal. they fall in short, concentrate snow showers within a longer storm, and bounce when they hit the ground.

Powder Crystals - are minute granules, best known to skiers. They don't pack and make for good skiing. They look like small grains, but are really tiny columns and plates joined to one another in irregular formations.

Then there are all kinds of combination crystals that start in one atmospheric condition and travel through another before they land. There are column crystals with hexagonal plate crystals at either end. Stellar crystals with hexagonal plate crystals on the points (some of the most spectacular of the snow shapes). Bullet crystals are columns with pyramids at the ends where they are joined together, and spatial dendrites, which are feathery stellar crystals with other points projecting off the six original points.

So the next time it snows (Enough already! --Ed.), don't just watch it from inside - get out and take a good look at these wintertime-only crystals. The best way to see them is to catch them on the arm of a dark jacket or sweater. You need a small magnifying glass to appreciate some, but many are visible to the naked eye. Just remember when you bend to look at them, don't breath on them and make them melt.

by Diane Dare in *The Glacial Drifter*, 1/91 via the *Triassic Valley Bulletin* 3/91

# Micromounters of New England
# 12th Annual Northeast Meeting
# Saturday, May 8, 1993
# 4-H Conference Center
# Chestnut Street, Ashland, Massachusetts

**SCHEDULE:**

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

**PROGRAM**
**Quintin Wight will speak on the Mont Saint-Hilaire**

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 includes light refreshment and lunch, and a souvenir program . Registration is $16 per person.

Lodging is available on Friday, May 7th in the building where the meeting will be held. Each room has four twin beds and private bath (no TV or maid service). Arrangements may be made for those who wish to stay Saturday, if desired. (Please indicate below.)

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MEETING REGISTRATION FORM

MAKE CHECKS PAYABLE TO: MICROMOUNTERS OF NEW ENGLAND. RETURN TO:
VIOLET ROBINSON
15 WALNUT AVENUE
E. ROCHESTER, NH 03868

Meeting Registration: $16 per person including lunch

NAME: _____ @ $16 _____

ADDRESS: _____

_____

| Persons Per Room | Cost Per Person | Multiplied by Number of Persons/Rooms | Total |
|---|---|---|---|
| 1 | $32 | | $_____ |
| 2 | $30 | | $_____ |
| 3 | $25 | | $_____ |
| 4 | $20 | | $_____ |
| | | TOTAL (MEETING & ROOM) | $_____ |

RETURN BEFORE APRIL 23rd AS SPACE IS LIMITED. 24 HOURS NOTICE REQUIRED FOR REFUND. Room registration will be acknowledged.