MICROMOUNTERS OF NEW ENGLAND
NEWSLETTER

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

No. 264 May, 2005

Next Meeting

Saturday, May 21, 2005
Elks Club, Hudson, MA
Doors open at 9AM
Map and directions are on the insert page

For information regarding **MEETING CANCELLATION** due to inclement weather, contact Jim Cahoon at (978) 897-8221 or cahooncj@aol.com

MAY MEETING, Saturday May 21, 2005

We are fast approaching our last meeting of the fiscal year. Without a quorum elections could not be held during the April meeting as is usual. A decision was made to hold the elections at the September meeting.

We need items for the sales table, silent auction, and give away table. Please label all sales items with either a priced sticker or price code dot (yellow = $1, red = $2, green = $3, blue or silver = $4, orange or gold = $5). Any item over $5 needs a price marked on it. Specimen material, books, hardware or anything else related to micromounting are all welcome.

Come early and help set up the room if possible. Bring microscopes and plenty of extension cords particularly three pronged type.

Remember that all reservations which include lunch must be in the secretary's hands before May 16th. Walk-ins can pay at the door, but no extra meals will be available (There might be one or two but no guarantees.)

NEWSLETTER NEWS

The issue brings to an end the text portion of a wonderful series of articles which Bob Janules has put together for the Newsletter. We have been promised at least one more article on "Verified mineral species of New Hampshire's Conway Granite." One the one hand we cannot expect anyone person to put together another magnum opus such as the Conway Granite articles, but on the other hand, we all have some small bits of information which we can share with the rest of the membership, be it a collecting site, a discussion of your favorite mineral, a photograph, etc. This Newsletter is a club production, so I need your input to make it continue the way it has been for the past two years. PLEASE consider contributing, even if you do it anonymously.

Thank you Bob for all the which you have done bringing the Conway Granite to life. And thanks also to Scott Whittemore for all the photographic contributions. You both have made my life as editor much easier over the past several years. Your Editor.

The ***Newsletter*** is the official publication of the Micromounters of New England (MMNE). The last by-laws revision was April 19, 2003. The MMNE is a member of the Eastern Federation of Mineralogical and Lapidary Societies (EFMLS) (<http://www.amfed.org/efmls>) and the American Federation of Mineralogical Societies (AFMS) (http://www.amfed.org). Material from the *Newsletter* may be copied in other rock and mineral publications if credit is given to the author and the *Newsletter* and permission has been obtained from the author. If there are questions regarding copying contact the editor. The club address is c/o the Secretary. Meetings are held monthly, September through May, except for December, and usually on an informal basis in July and August. Sites rotate and will be posted in the *Newsletter* as far in advance as possible. Visitors are welcome to attend all meetings. Bring a microscope and light source if you have one.

DUES are $10/year for a single person and $15/year for a family membership, levied on a calendar basis. The family membership includes two adults and all children under 18 living at the same address. One copy of the *Newsletter* will be sent on a family membership.

2004 CALENDAR OF UPCOMING EVENTS
MICROMINERAL RELATED CONFERENCES AND SYMPOSIUMS

June 2005

11 - 3rd Annual Rock Swap and Sale sponsored by the Danbury Mineralogical Society and the Conn. Museum of Mining and Mineral Science, Conn. Antique Machinery Assoc. Museum, Rte 7 Kent, CT

July 2005

9-10 – 44th Annual Western Maine Gem, Mineral and Jewelry Festival sponsored by the Oxford Co., Mineral and Gem Assoc. – Crescent Park School, Bethel, ME

September 2005

10-11 - Northern Berkshire Mineral Club Jewelry, Gem and Mineral Show. VFW Hall, Rte 2 (base of the Mohawk Trail, east of the center of North Adams, MA)

October 2005

8-9 - 42nd Annual Gem & Mineral Festival presented by the Capital Mineral Club. Sat. 9-5, Sun. 10-4. Sunapee Resort, Rte 103, Newbury, NH

TABLE OF CONTENTS

A MICROMOUNTER EXPLORES NEW HAMPSHIRE'S CONWAY GRANITE (PART 12)

MIDDLE MOAT MOUNTAIN (cont.)

BY Bob Janules
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OLIVER TRENCH, HALE'S LOCATION, NH (cont.)

Prominent among the species found at the Oliver Trench are the minerals I refer to as the "calcium suite". All have essential calcium in their composition and are largely absent from most of Conway granite. They are found in a few localities within the White Mountain Batholith most notably the Government Pit and now the Oliver Trench. These minerals include titanite, epidote, milarite, bavenite and calcite. Titanite in many habits and colors was quite abundant in the lower corner of the Oliver Trench. Epidote was once rather common there as well, often forming as a druse of short prismatic crystals on microcline and quartz. A number of fine specimens of milarite were found from this locality. The water clear colorless milarite formed as hexagonal prismatic crystals. Larger crystals tended to be opaque white, often with smaller clear milarite crystals growing from the prism surface. One habit of bavenite at this locality is as silky white fibers. Some matted patches were found exceeding 2cm across. The best bavenite from here, however, are bavenite clusters, lovely aggregates of sharp bladed crystals. Calcite is known from one specimen as crude rhombs associated with pyrite.

Besides the pyrite occurrence other sulfide minerals at the Oliver trench include molybdenite, arsenopyrite, and sphalerite. Sphalerite is especially rare from this environment. Examination of a thin crust on arsenopyrite by SEM EDS unearthed a surprise. The crust was composed of sharply formed cubes of pharmacosiderite, another species to be added to the Conway granite list.

In addition to the allanite-epidote mentioned earlier, the Oliver Trench produced other rare earth bearing minerals. Gadolinite-(Y) was found usually as crystals heavily altered to an earthy consistency. A few crystals exhibited fresher material with the gadolinite as brown to copper-brown prismatic crystals that are rectangular in habit.
Fergusonite –(Y) was most often found as small prismatic crystals with a square cross section embedded in microcline at the outer margin of a miarolitic cavity. The interiors of these crystals are usually a glassy brown or yellow brown, the mineral likely being metamict. One fine specimen of fergusonite-(Y) features a cluster of free standing orange brown crystals as tapering prisms. Another REE- bearing mineral is found at the Oliver Trench in the form of bladed brown crystals with a "picket fence" termination. SEM EDS analysis strongly suggests samarskite-(Y) for this mineral. EDS analysis, however, is not accurate enough quantitatively to nail down many of the chemically complex niobium- tantalum oxides such as samarskite. The same is true of the aechynite group of minerals. Several analyses suggest members of that group are found at the Oliver trench, the best specimen being a gorgeous spray of black needles as an inclusion in quartz.

One crystal was found that resembled the suspected samarskite, except that it's form was more prismatic in habit. Analysis showed that the mineral is likely wodginite. Another surprising find was one specimen that had beige colored wulfenite on microcline. The wulfenite formed as compound crystals in a dipyramidal habit. There is no evidence that this wulfenite formed as a secondary mineral after galena.

A number of specimens of danalite as fine red octahedral crystals have been collected from the Oliver Trench. Topaz has been found as well, but unfortunately not by me.

(continued on page 4)

(Conway Granite continued from page 3)

BROOK LOCALITY, MIDDLE MOAT MT., ALBANY, NH

As one walks the trail from the parking area to the Oliver Trench one will cross two dry (usually) stream beds. If one follows the largest one upstream, one arrives at a spot that has seen some recent collecting activity. Here bertrandite can be found. A number of specimens show bertrandite in an odd habit. It forms as tabular crystals clustered together into a hemisphere. The hemispheres form selectively upon a green chlorite or mica giving them a greenish appearance, looking very much like prehnite. Bastnasite in hexagonal tabular form can be found here as well, usually associated with now- earthy gadolinite. Gene Bearss found at this spot a specimen that has a terminated milarite crystal right next to a sharp euhedral cherry- red danalite crystal. Gene's specimen is the best I have seen from Moat Mountain.

EASTMAN TOPAZ SPOT, ALBANY, NH

At a higher elevation above the Oliver Trench is a spot that had been worked for topaz by Bob Eastman many years ago. Here I found unusual bertrandite – bertrandite scepters. The bertrandite crystals show a long prismatic habit, with a second growth of bertrandite in a flat "spade like" habit growing on the terminations. From this spot I also have in my collection micro specimens of colorless topaz.

From finds that I have not personally taken part in, I also have acquired specimens of stolzite and stilbite from separate areas on the mountain farther to the North. Middle Moat Mountain clearly offers quite a diverse suite of minerals to the diligent micromounter.

With this writing I have now arrived at the present. My collecting in Conway granite the last several years has been at the Oliver Trench and also at the Brook Locality. I have not been finding much in my most recent trips and I have to locate another spot that offers me the diversity of species that other productive areas have provided in the past. With my advancing age, I hope it is not at the top of a tall mountain. I would be interested to hear about any interesting finds in the Conway granite environment. I can be easily reached by email.

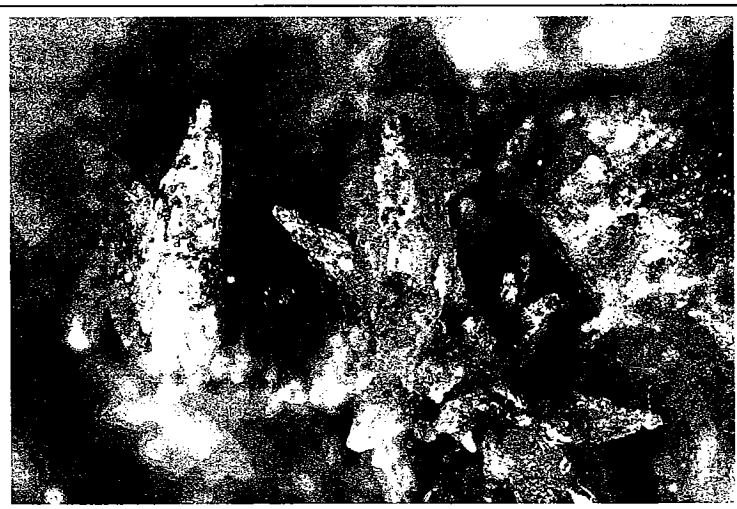
NEXT: VERIFIED MINERAL SPECIES OF NEW HAMPSHIRE'S CONWAY GRANITE

CAPTIONS FOR PICTURES ON PAGE 5

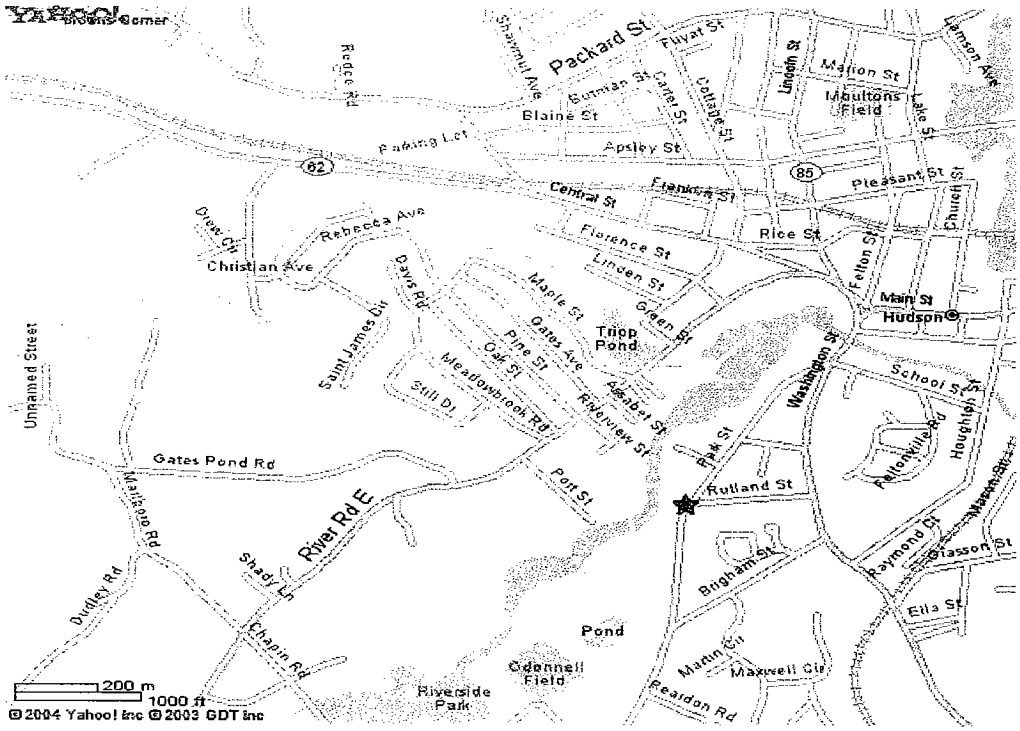
Top Row: Brook Locality, Middle Moat Mountain
Left: Bertrandite - Scott Whittemore photo
Right: Bastnasite on Gadolinite - Bob Janules Photo

Middle Row: Oliver Trench Locality
Left: Wulfenite - Scott Whittemore Photo
Right: Bavenite - Bob Janules Photo

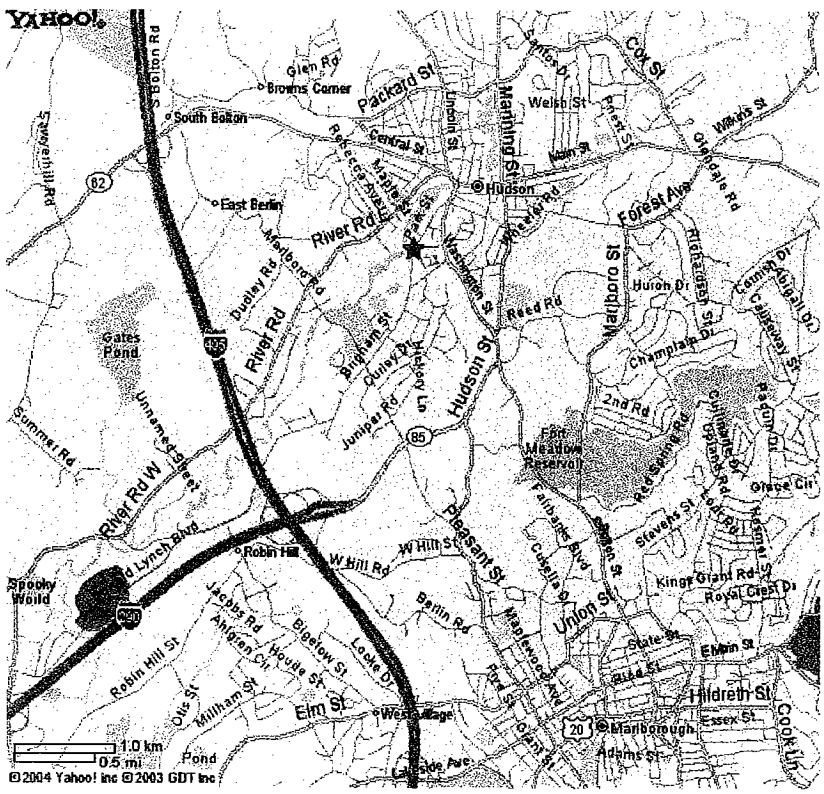
Bottom Row:
Left: Milarite - Bob Janules Photo
Center: Samarskite ? - Bob Janules Photo
Right: Fergusonite -(Y) - Scott Whittemore Photo



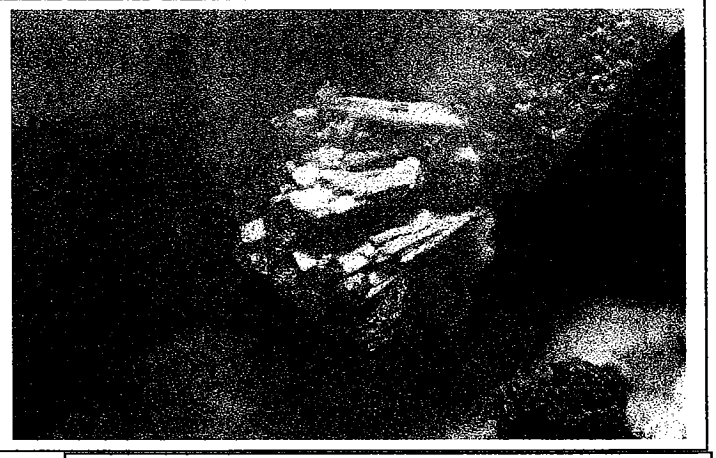
Fergusonite -(Y) - Scott Whitemore Photo



Take Rte 85 from the I 290/I 495 interchange east to Washington Street. Turn left and go to the end. The Elks Lodge in on Park Street at the end of Rutland Street.



I 290/I495 Interchange
Hudson, MA



Captions for these pictures are at the bottom of page 4