

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. 253

March, 2004

OFFICERS 2002-2003

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Next Meeting

Saturday, March 20
Auburn, MA
Public Library
Doors open at 9AM

**Map and directions are
on the back page**

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

MMNE News

The annual May meeting of the MMNE will be held at the **Elks Lodge, 91 Park Street, Hudson, MA** on Saturday 15, 2004, from 9AM to 4:30PM. (The location was incorrectly listed as Marlboro, MA in the February Calendar of Events.) This is approximately 1.7 miles by car from the Moose Lodge where the May Meeting has been held for several years. The luncheon will be provided by the same caterer we have used for several years, with the same menu. The lodge can accommodate approximately twice as many persons as before. A sign-up sheet for the May meeting is enclosed. With the extra space available, please encourage other micromounters to join us. Bob Janules will be speaking about "The Minerals of New Hampshire's Conway Granite."

The club needs material for the give-away table from both local and distant members. The local members will be contributing material from New England and MSH, so specimen material from other localities would be appreciated. Material can be submitted either mounted on cards or in egg cartons (or similar containers). Make sure they labeled as to locality and species (if known).

Minutes of the Feb. 21, 2004 MMNE Meeting Chelmsford Public Library

With 10 members present, the meeting was called to order at approximately noon by President Jim Cahoon. Mechanisms for attracting more micromounters to the May Meeting were discussed. An attempt will be made to contact all of the mineral clubs in the North East regarding the date of the meeting.

It was suggested that a program committee be set up to plan for two topical meetings per fiscal year, one in November and the other in February or March. (The September meeting is typically show and tell time for specimens from the summer collecting season, October is at Vera Fogg's, April is the annual business meeting with elections, and May is the large meeting with speaker.) Topics might include a particular locality, a particular mineral species, or techniques in the collection, preparation, storage or cataloging of specimens. Suggestions for topics are welcome from the membership. Anyone interested in being on the program committee please contact Jim Cahoon – cahooncj@aol.com.

Meeting sites and dates were discussed. The consensus was that a single site was preferable to visiting a different location each month. The members present all agreed that the facilities and location of the Chelmsford Library were very good for almost all members, and inquiries will be made at the library regarding a regular meeting schedule on the 3rd Saturday of September, October (unless the October meeting is held at the Fogg residence), November, January, February, March and April.

The May meeting was discussed in terms of possible changes to the format, in an attempt to enlarge the scope and attendance of the meeting. An ad hoc committee was set up to evaluate options, and will report back to the club at regular meetings. Anyone interested in being involved with this committee please contact Mike Swanson – msmicros@crocker.com.

Mike Swanson, secretary pro tem

NOTE: MSH collecting dates at bottom of calendar

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.

Officers for 2002-2003

| | | |
|--|----------------|--|
| President: Jim Cahoon, 31 Parker St., Maynard, MA 01754 | (978) 897-8221 | jcahoon@geochronlabs.com |
| Vice President: Bob Janules, 17 Woodard Rd., Merrimack, NH 03054 | (603) 424-9269 | janules@worldnet.att.net |
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| Secretary: Pat Barker, PO Box 810, Campton, NH 03223-0810 | (603) 536-2401 | barker@eagle1st.com |
| Directors: Gene Bearss (2003-5), 33 North Avenue, Sanford, ME 04073-2943 | (207) 324-3610 | |
| Bob Wilken (2003-4), 551 W. Shore Drive, Bristol, NH 03222 | (603) 744-3717 | microxl@mfire.com |
| Membership Chairperson: Brian Porter, 355 Walsh Ave., Newington, CT 06111 | (860) 666-4505 | port0202@cox.net |
| Editor: Mike Swanson, 646 Greenfield Rd., Leyden, MA 01301-9400 | (413) 773-3867 | msmicros@crockers.com |

2004 CALENDAR OF UPCOMING EVENTS

Micromounters of the North Shore Rock and Mineral Club meet the 2nd Wednesday of every month at the home of John and Margaret Stewart, 244 Mill Street, Burlington, MA. All members and visitors are welcome. For more information, call John or Margaret at (781) 272-0854.

SHOWS

April

15 - 18 - Rochester Mineralogical Symposium

June

26-27 – 40th annual Rock Swap and Mineral Show, Gilsum Elementary School and Town Recreation Fields, Rte 10, Gilsum, NH. 8-6 Saturday. 8-4 Sunday. Contact: (603) 357-9639. No admission charge.

July

7-12 - EFMLS/AFMS Convention & Show. Gem & Mineral Society of Syracuse. State Fairgrounds. Syracuse, NY.

MICROMINERAL RELATED CONFERENCES AND SYMPOSIUMS

March

13 – Micromount Show – Swap, Sell, Learn. Rock and Mineral Club of Lower Bucks County, First Methodist Church, 840 Trenton Road, Fairless Hills, PA. Table space (1/2 8' table) \$8. Contact Richard Tillett, 820 Sycamore Ave., Croyden, PA 19021. (215) 785-2642.

20 - MMNE Meeting - Auburn, MA Public Library. Map on last page. Doors open at 9AM.

April

2-4 - 32nd Annual Atlantic Micromounters Conference. Tyson's Westpark Hotel, McLean, VA. Info & Registration: Steve Weinberger, cweinber@bcpl.net.

May

15 – MMNE Reunion Meeting. Elk's Lodge, Hudson, MA. 9AM to 4:30PM.

22-23 – Maine Mineralogical and Geological Society 21st Annual Gem and Mineral Show. Finley Gym, U. New England, 716 Stevens Ave., Portland, ME. 10-5 both days. Contact: Wes Baker (207) 784-1738 or wesbton@adelphia.net.

June

25-27 – Northern California Mineralogical Assoc. Annual meeting. Pollock Pines, CA.
www.geocities.com/yedlinite/Meeting.html

MONT ST.HILAIRE COLLECTING DATES - 2004

May 22 and 23, July 3, July 24, September 4, October to be determined

**A MICROMOUNTER EXPLORES NEW HAMPSHIRE'S CONWAY GRANITE
(CONTINUED – Part 3)**

THE NORTH SUGARLOAF MOUNTAIN PEGMATITE

BY BOB JANULES

Janules@worldnet.att.net

We New England mineral collectors are surely familiar with pegmatites. Many of our classic localities feature granite pegmatites that had been mined in the past for mica, beryl or feldspar. Most are dikes or lenses, often with distinct zones. When I heard the term pegmatite applied to Conway granite localities I was confused since few localities have pegmatites with the complex features I was familiar with. Later I learned that the Conway granite pegmatites are of the syngenetic variety with the same composition as the parent rock surrounding them. These are contrasted with the epigenetic pegmatites, such as those at the mica mines I mentioned, where their granitic composition differs from that of the country rock they intruded. Syngenetic pegmatites are usually characterized merely by a more coarse texture than the immediate surrounding rock. The pegmatite at the smoky quartz collecting area near the summit of North Sugarloaf Mountain in Bethlehem, NH is one of the few exceptions, as it displays some complexity. Features include a coarse wall zone, a core of bull quartz, a unit composed of compact granular albite and intermediate zones with a graphic granite texture. Good microminerals have been found from all areas of this pegmatite.

My first collecting trip to the Sugarloaf pegmatite in 1981 was memorable. I was guided to the locality by Mike Undercoffler and Bob York, both being fellow members of the Nashua Mineral Society. I worked the core of bull quartz that day opening several pockets. Unfortunately the pockets were mostly barren, just voids with the only crystal faces occurring on the surface of the pocket walls. Near the end of the day Mike opened a pocket in the albite zone. From this he recovered a good number of small plates and one larger (about 10cm across) piece. All the specimens felt heavy. They were covered with a gold-colored "clay" due to decomposed mica of that color. When the specimens were cleaned the reason for their weight became apparent. All of the smoky quartz matrixes were covered with cassiterite crystals, individually a few millimeters across, but causing the plates to sparkle. I benefited from our rules of collecting which entitled me to a third share of the large flat of specimens. Even the first pick was up for grabs with coin flips deciding who would walk away with the large specimen, a true museum piece. God was fair and just that day and the large cabinet specimen went to Mike.

Mike's find spurred quite a bit of interest in the locality and many field trips ensued. Using my loupe I soon discovered that at this locality there were several interesting microminerals in the small vugs. I recognized fluorite, ilmenite, zircon (later determined to be xenotime) and others. Scott Whittemore also became interested in the minerals here. Both of us began a systematic study of these minerals. Bob Whitmore wanted us to submit an article on the locality for the upcoming New Hampshire edition of Rocks and Minerals magazine. What followed was the most fun I had yet experienced while mineral collecting. It seemed that each trip brought something new to light, and with the help of the late Gene Foord at the U.S.G.S., the exotic mineralogy of this pegmatite was identified and appreciated.

I cannot talk about this locality without mentioning a remarkable find I made in the coarse wall zone. I noticed an embedded patch of earthy brown material. I started to chip at it and noticed the interior was cherry red – danalite. This crystal was etched and hydrothermally reworked; it crumbled into bits as I chiseled away. I set a newspaper below it to collect the drippings. From this material I recovered a large amount of micro material, most notable was bertrandite in exquisite sprays of prismatic crystals. I had only chipped away a few inches of ledge, yet I found the following mineral species: microcline, quartz, albite, danalite, bertrandite, phenakite, fluorite, ilmenite, columbite-tantalite, ishikawaite, anatase, xenotime, gadolinite-(Ce)-gadolinite-(Y), bastnasite-(Ce), pyrite, zircon and an unidentified fluorescent uranium secondary associated with the zircon. The find was in 1986. Just recently I went back to the cigar box that contains what is left of this material and I prepared about a dozen new mounts. I still have more left to occupy my time on future winter days.

Since the magazine article (1) was published I can think of only one more species to add to the Sugarloaf species list – bazzite. One specimen was found that had tiny bright blue bazzite crystals associated with bertrandite. The article is quite complete in its coverage of the Sugarloaf pegmatite minerals. Here, I just want to highlight the species that I consider to represent the best from Conway granite.
in the United States as other localities in this country only featured embedded crystals.

(continued on next page)

(Conway Granite, continued from page 3)

Gadolinite – (Ce) – Gadolinite – (Y) - This mineral occurs as sheaf-like aggregates and individual prismatic crystals with a diamond shaped cross-section. In most cases the gadolinite is altered to an earthy yellow brown pseudomorph. When fresh it is in various shades of brown with prominent color zoning. Analyses have shown that there are chemical differences between the various zones and that both the cerium-dominant and yttrium-dominant species exist within the same crystal. A series of pockets, the first opened by Tom Mortimer, produced a number of thumbnail sized gadolinite crystals, an order of magnitude larger than the norm. These free growing pocket crystals are likely the finest in the United States as other localities in this country only featured embedded crystals.

Bertrandite – Bertrandite from the Sugarloaf pegmatite has been found featuring many different crystal habits. The most spectacular bertrandite came from the danalite crystal mentioned earlier. The radial sprays of prismatic bertrandite are especially appealing. I have not seen better bertrandite from any locality.

Cassiterite – Sugarloaf cassiterite crystals are most commonly equant and usually twinned. Untwinned crystals tend to be prismatic in habit and more translucent with a rich red-brown color.

Bastnasite – (Ce) – This species occurs at this locality in a number of colors and crystal habits. Yellow-brown, brown, orange and red crystals have been found, usually with a resinous to vitreous luster. Tabular crystals are the most common usually with trigonal symmetry.

Ilmenite - Sugarloaf ilmenite is usually very lustrous. The thin platy crystals often show sharply defined striations; more stout crystals often exhibit hillocks and depressions. Specimens of ilmenite with anatase crystals on their surface are most appealing.

Hingganite – (Y) – This member of the gadolinite group is found as small turbid colorless or beige clusters with crystal faces in parallel orientation. It is always associated with nodules of etched pale purple fluorite. I am not aware of any other locality for this mineral in this country.

Anatase – Anatase from the Conway granite localities is black in color. Anatase from the Sugarloaf pegmatite is typically splendent in luster often with a well-developed prism. Often here it forms in clusters. Twinned crystals have been found, although rarely.

I have not been to this locality, once my favorite, in several years. It is not that there is nothing left to find, it is more that there may not be anything NEW to find. When I was last there the albite zone and the quartz core had been worked out. They continue at some depth but are now covered with a heavy layer of dump material. The proximity of this pegmatite to the hiking trail that leads to it is problematical. Because of the pitch of the slope, any dump material tossed away invariably ends up on the trail. This makes excavation difficult.

The Sugarloaf trail is quite popular. It is somewhat steep, but not all that long. A spectacular view is available for a modest effort. Walking down from the site I often encounter hikers. Because I am carrying digging tools, I am treated like a god. They mistake me for trail maintenance and thank me profusely. I have never tried to correct them of their error.

(1) Whittemore, S., and Janules, B. 1990. Pegmatite and miarolitic cavity minerals of North Sugarloaf Mountain, Bethlehem, New Hampshire. Rocks and Minerals 65:338-347

Next : More Sugarloaf

MMNE 2004 Membership List

You will find the MMNE 2004 membership list with the Newsletter. As most of you know, this is sent out once a year with the March issue. This information is being sent only to members in good standing, and by the terms of our bylaws, it may not to be shared or distributed to any person who is not a member of the MMNE.

If there are any additions or changes, please notify your editor immediately (Mike Swanson – msmicros@crocker.com)



Above: Bastnäsite, Conway granite
Below: Bertrandite twin, Conway granite



Above: Bertrandite spray, Conway granite
Below left: Cassiterite
Below: Gadolinite, bastnäsite, fluorite
All photographs by the author



AUBURN, MA
PUBLIC LIBRARY

Located on Rte 12 just north
of the shopping mall

Doors open 9AM

At the junction of the Mass Pike and I-290, look
for Rte 12 and take it NE. Go past the shopping
center on the right (approximately one mile), and
the library is just beyond it, again on the right.

Michael W. Swanson, Editor
Micromounters of New England *Newsletter*
646 Greenfield Road
Leyden, MA 01301-9400

**MICROMOUNTERS OF NEW ENGLAND
ABSENTEE BALLOT FOR 2004-2005 OFFICERS**

This ballot is to be used by members of the Micromounters of New England who are unable to attend the annual business meeting on April 17, 2004 and who wish to cast a vote for the officers of the club.

The bylaws state that the Nominating Committee shall generate a slate of officers which is then presented to the membership in the *Newsletter*. This slate, along with nominations from the floor, shall be presented to the membership at the annual business meeting held each year in April. All members in good standing have the right to cast a ballot, either in person or via an absentee ballot. Ten percent (10%) of the total membership, but not less than ten (10) members, shall form a quorum for the purpose of electing officers or the transaction of business.

The following slate of officers was generated at the MMNE meeting held in February, 2004.

| | | |
|-----------|-----------------------|-------------------------------|
| Nominees: | President: | Jim Cahoon |
| | Vice-President: | Bob Janules |
| | Treasurer: | Anna Wilken |
| | Secretary: | Pat Barker |
| | Director (2004-2006): | Bob Wilken |
| | Director (2003-2004): | Not up for election this year |

All nominees have agreed to serve if elected.

BALLOT FOR OFFICERS

| OFFICE | NOMINEE | IN FAVOR | WRITE IN CANDIDATE |
|--|-------------|--------------------------|--------------------|
| President | Jim Cahoon | <input type="checkbox"/> | _____ |
| Vice-President | Bob Janules | <input type="checkbox"/> | _____ |
| Treasurer | Anna Wilken | <input type="checkbox"/> | _____ |
| Secretary | Pat Barker | <input type="checkbox"/> | _____ |
| Director (2004-2006) | Bob Wilken | <input type="checkbox"/> | _____ |
| OR a Single Vote for the slate as presented | | <input type="checkbox"/> | |

If you cannot attend the meeting and wish to cast an absentee ballot, please fill out the information below and mail it to the Secretary – Patricia Barker, PO Box 810, Campton, NH 03223-0810 at least one week prior to the election (no telephone or e-mail ballots are acceptable). **Do not mail this ballot if you plan to attend the meeting.**

Signed: _____ Date: _____

Name (Please print): _____

MICROMOUNTERS OF NEW ENGLAND
Saturday, May 15th
23rd Annual Reunion Meeting
The Elks Lodge
91 Park Street, Hudson, MA

| | | |
|------------------|-------------------|--------------------------------|
| Schedule: | 9:00 AM – 12 noon | Registration, informal session |
| | | Silent auction, sales table |
| | 12 noon – 1:00 PM | Lunch (catered) |
| | 1:00 PM – 2:00 PM | Speaker |
| | 2:00 PM | Door prize drawings |
| | 2:00 PM – 4:30 PM | Informal session |

PROGRAM

Bob Janules, a member of the Micromounters of New England
who has collected extensively in New England, will talk about the
“Minerals of the New Hampshire Conway Granite.”

Bring your microscope, light, extension cord and specimens for show and tell, discussion, identification, giveaway or the sales table. There will be some give away material available, primarily from New England and Mont St.-Hilaire, but we would appreciate donations of material from other sources to spice up the selections. There will be a sales table as well as a silent auction. Please consider donating some choice micromount material and micromount related items to help defray the cost of the meeting.

There is a registration fee of \$20 for MMNE members and \$25 for non-members which includes light refreshments, lunch and a souvenir program.

The following lodging sites are available nearby. Please make your own reservations.

Best Western, 121 Coolidge St., Hudson, MA (978) 562-1001
Lincoln Inn, 3342 Lincoln St., Marlboro, MA (508) 263-5500
Radisson Inn Marlboro, 75 Felton St., Marlboro, MA (508) 480-0015
Holiday Inn Hotels, 265 Lakeside Ave., Marlboro, MA (508) 481-3000

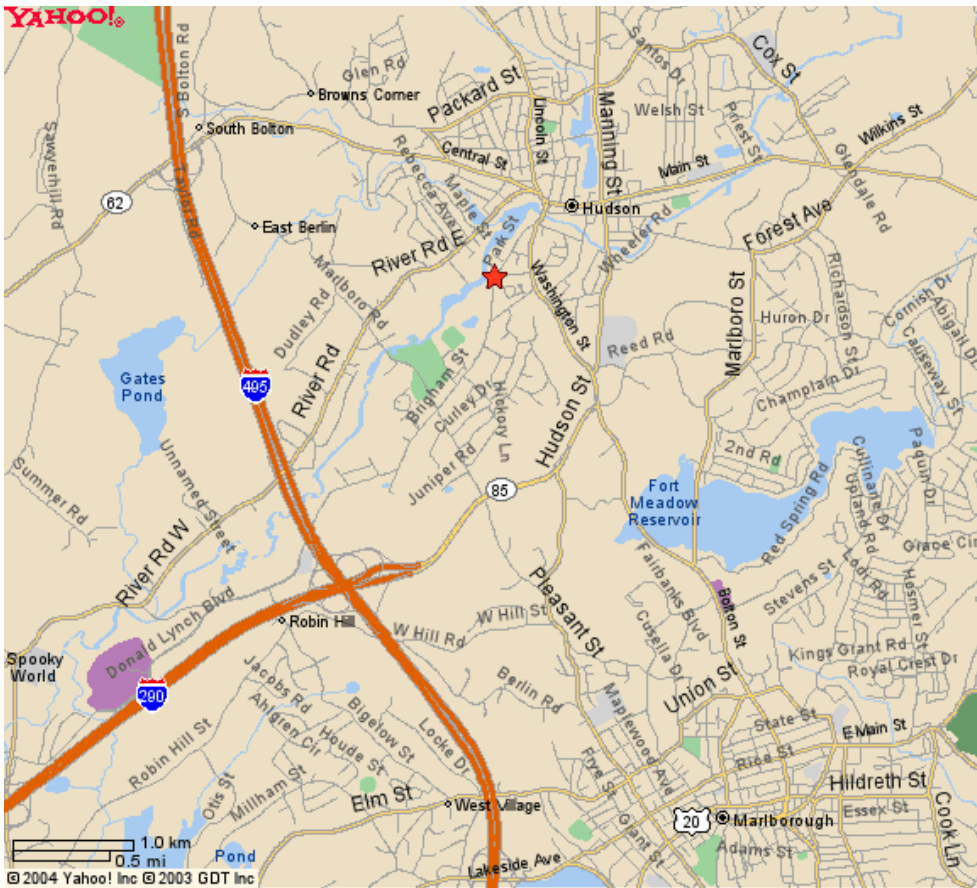
A map to the meeting site is on the reverse of this page.

REGISTRATION FORM

REGISTRATION FEE: Members \$20, Non-members \$25
MAKE CHECKS PAYABLE TO: Micromounters of New England
RETURN TO: Anna Wilken
551 West Shore Road, Bristol, NH, 03222

NAME(S) _____ @ \$20 each _____
@ \$25 each _____
ADDRESS _____

Please return this form by May 10, 2004 as space is limited.
48 hour notice is required for cancellation with refund.



HUDSON, MA overview (above) and Elks Lodge (below)

