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. 260 January, 2005

Next Meeting

Saturday, January 15
Chelmsford, MA 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

MEMBERSHIP NEWS, JANUARY 2005

Here's hoping all have had a happy holiday season. ***Please note that his is the last Newsletter you will receive if your 2005 dues are not received prior to January 15th.*** Those of you receiving snail mail can check your renewal date on the address label – 2005 or later is paid up.

MMNE Secretarial Report for November 20, 2004
Chelmsford Public Library

President Jim Cahoon called the November meeting to order at approximately 11:30 AM. No secretarial report was available; however, the Treasurer's report was given and approved.

Recognizing the fact that Pat Barker submitted a letter of resignation as Club Secretary, the President requested a volunteer to continue in that capacity. Discussion centered upon ways to handle the minutes in the event that the secretary could not be present. It was suggested that the meeting could be recorded on audiotape and forwarded to the secretary for transcription and submission to the editor. Bob Wilken volunteered to serve, and Jim Cahoon declared that his duties commenced immediately.

President Cahoon recognized Pat Barker's many years of service and requested that the new secretary send a note of thanks to her on behalf of the club.

The President reported that the Elks Lodge had been booked for the MMNE Symposium to be held on May 21, 2005. With an awareness of a problem from last year, he also indicated that he would be discussing with the Elks Lodge management ways to darken the hall and guarantee adequate electrical outlets.

President Cahoon requested suggestions for the symposium's guest speaker. Mike Swanson and other members present expressed an interest in a program that would highlight the use of digital photomicrography of minerals. Members also reacted favorably to an "out-of-town" speaker recommended by Anna Wilken. This individual would be contacted to ascertain willingness to speak. Member Scott Whittemore said he would be disposed to give a presentation regarding digital photography. He indicated that he would be able to do this as "backup" for the May Symposium or for some later MMNE meeting.

There was brief discussion of the symposium caterer, and it was recommended that a change of menu should be considered and investigated.

Members discussed the club policy of donating money to the Rocks and Minerals color fund as a way of recognizing deceased members. There was the impression among some that the magazine was no longer publishing the memorial notices, hence, making the gesture pointless. President Cahoon said he would write the publisher to determine exactly what the magazine's current policy is.

(Secretary's report concluded on the bottom of page 5)

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

January 2005
- 15 - MMNE meeting. Chelmsford, MA public library
- 22 - Boston Mineral Club Annual Auction. Needham Village Club, Needham, MA
  Contact Jim Catterton @ (978) 369-7979 or jim.catterton@verizon.net
  Set up at 11 AM, viewing at noon, acution at 1 PM

February
- 10-13 - Tucson Gem and Mineral Show, Tucson, AZ Convention Center
- 19 - MMNE meeting. Chelmsford, MA public library

March
- 26 - MMNE meeting. Chelmsford, MA public library

April 2005
- 1-3 - Atlantic Micromounters Conference sponsored by the Micromounters of the National Capitol Area.
  Contact Steve Weinberger at cweinber@bcpl.net.
- 14-17 - Rochester Mineralogical Symposium, Rochester, NY. Details to follow.
- 16 - MMNE meeting. Chelmsford, MA public library
- 31-May 1 - Maine Mineral Symposium. Details to follow.

May 2005
- 21 - MMNE Annual Symposium. Elks Lodge, Hudson, MA

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A MICROMOUNTER EXPLORES NEW HAMPSHIRE'S CONWAY GRANITE
PART 8 : OFF THE KANKAMAGUS

By Bob Janules
janules@worldnet.att.net

There are a number of unnamed hills south of the Kankamagus Highway that run from Rocky Gorge for several miles to the East that have produced a number of significant pockets, most notably for Peter Samuelson. I read about one such find in Mineral News (1) that featured pyrochlore, fluocerite-(Ce), and bästnasite – (Ce) crystals in sizes suitable for small cabinet display. I figured that this pocket had great potential for exotic micro material . The pocket also produced sharp siderite rhombs, thumbnail sized and larger. When I saw such a crystal in Bob Whitmore's collection, it was labeled as having come from Blackberry Crossing, Albany, New Hampshire. This was my clue to locate the pocket.

COLLAPSED POCKET

On a bright late summer day Mike Graham and I started a hike at the Blackberry Crossing Campground. At the right corner of the campground there is a trail that parallels the Kankamagus Highway to the West. We walked it awhile then cut uphill. After wandering around for a while we found a trail of orange ribbons. They led to a small spot where previous collectors had dug in the soil. It appeared to be a collapsed pocket. Chunks of wall material had been discarded . These were interesting. The feldspar was not as blocky crystals but as overlapping ridges. Later analysis confirmed these were microcline, not albite. Our digging produced results. Mike found an outstanding large cabinet specimen of two divergent smoky quartz crystals. I found a miniature smoky with a dark red danalite xl., several millimeters in size growing on it.

It was Labor Day weekend and driving back we saw many swimmers at the river that runs alongside the highway. I looked at them splashing around. Then I looked at Mike and myself. We were both dirty, dinged up and tired. I remarked in total sincerity, "They don't know what fun is."

MOOSE POCKET

On our next attempt to find the pocket we walked further down the trail before we went uphill. After some hiking we found yet another series of orange ribbons. We followed them to a huge pocket. It was not the one we were looking for. I recognized it from a photo in another issue of Mineral News (2). This was Peter Samuelson's "Moose Pocket" from which came the largest (by weight) smoky quartz crystal found in the state (260 pounds!). This huge miarolitic cavity was mostly backfilled, but there were extensive grout piles to investigate. I collected micro material at this pocket over the course of several years and found the following minerals in addition to quartz, microcline and albite.

Mica Species - A number of different minerals of the mica group were found at the Moose Pocket. One section of the pocket wall featured albite that contained a dark black mineral of the **biotite** group. Somewhat corroded pieces of this matrix often contained, within its vugs, an interesting assemblage of micro minerals, which are described below. Also in this section of the pocket wall are brown botryoidal spheroids about a millimeter across with a radial cross section. On the surface these crystals display a velvet-like luster. They strongly resemble goethite, but are in fact **siderophyllite**. Immersion of fresh specimens in a solution of Iron Out show that the color of this mineral after surface coatings are removed is a dark green. A somewhat weathered sample of this mineral was analyzed by x-ray and the presence of the clay mineral **macaulayite** was revealed. The siderophyllite appears to have formed from the alteration of the biotite group mineral.

The silvery mica most prevalent in the vugs from this pocket has been shown by analysis to be **zinnwaldite**. Zinnwaldite also occurs here as barrel-shaped to hemispheric half-shell crystals from micro size to several inches across. These interesting crystals show a dark brown outer rim with a center that is light yellow or silver colored. A sharp hexagonal growth line is at the contact of the two zones. I have seen specimens from here labeled "biotite with muscovite interior", but EDS analysis shows both zones to be zinnwaldite with the outer rim containing a higher iron content than the center. Crystals of this type have also been found in other nearby pockets.

(continued on page 4)

The Moose pocket also contained large chunks of a gray-colored mica in compact massive form, very much like lepidolite from epigenetic pegmatites. This is the only pocket in the Conway granite environment where I have seen mica in this form. This mineral has not been analyzed.

Cassiterite – Interesting micro specimens of cassiterite were found, forming almost exclusively on microcline crystals from the pocket. The cassiterite forms as short prismatic crystals that appear lustrous black. The true color is a dark reddish brown seen only on the thinnest of crystals. What makes these cassiterites interesting is that they form in clusters, which is quite unusual for this mineral. Cassiterite specimens were initially abundant in the pocket tailings.

Columbite – Clusters of tabular and bladed ferrocolumbite crystals were found in the biotite-rich pocket wall matrix and were usually associated with other minerals. A number of clusters were found that suggest an octahedral shape. It is likely these clusters formed after the alteration of a previously formed mineral, pyrochlore perhaps. The ferrocolumbite has some uranium content and intergrown in the centers of the clusters is often found a glassy metamict oxide of niobium, uranium and titanium. This may be **ishikawaite**, but a structural determination is needed to pin down the identity.

Bästnasite-(Ce) - If one finds a columbite cluster from the Moose Pocket, it is likely that it has bastnäsite crystals growing on it. These attractive crystals are tabular, equant or short prismatic and are honey colored or salmon pink. Bastnäsite-(Ce) crystals were also found in vugs in the grey compact mica mentioned earlier. These are a gemmy orange, prismatic in habit. They are extremely attractive micro crystals, but are usually very small, a fraction of a millimeter in size.

Unidentified Oxide – Often some of the columbite crystals show alteration to a tan colored pseudomorph. The late Gene Foord examined Moose Pocket material, and he found this mineral to be the most interesting of the lot. It contains thorium, uranium and iron. He thought it was likely a mineral he had found before at two other localities. It has the potential of being a new mineral species.

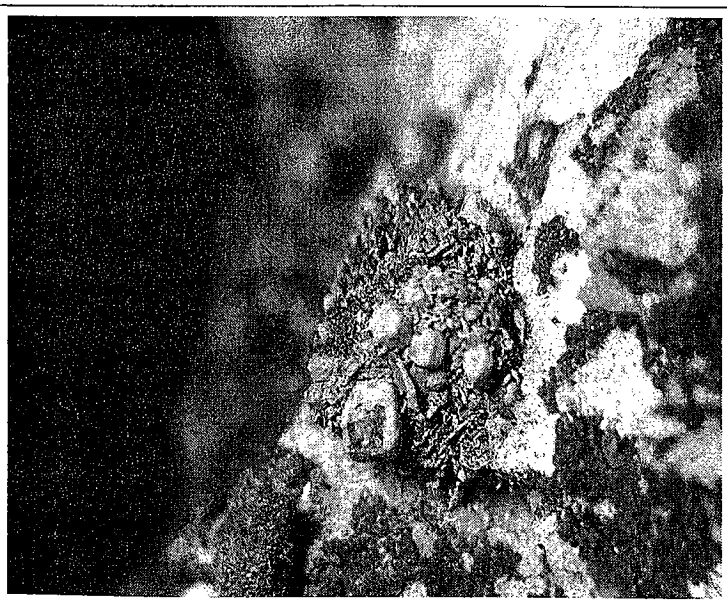
Zircon – Brown zircon crystals to several millimeters in size were noted scattered and widespread among the Moose Pocket material. Sometimes they are found as compound crystals with parallel faces noted on the surface of the crystals.

Siderite – Rhombs of black siderite were occasionally found as micro crystals in some specimens from this locality.

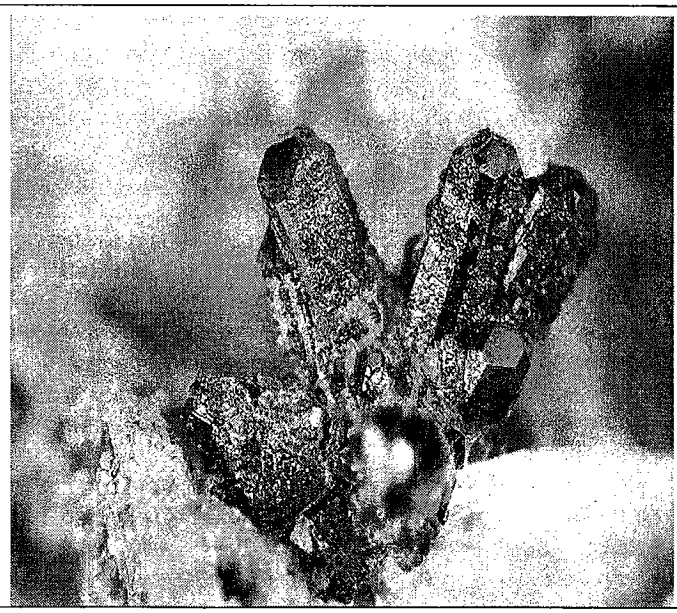
1) Hollmann, K. 1989. A rare mineral discovery in Albany, New Hampshire. Mineral News 5(1):6-7

2) Hollmann, K. 1988b. Record size smoky quartz crystals found in Carroll County, New Hampshire. Mineral News 4(11):2-3

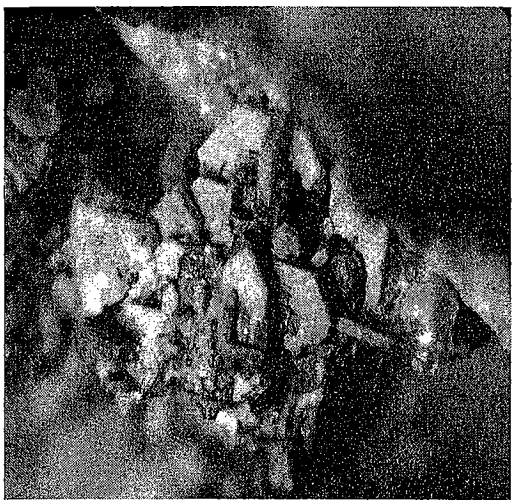
Next: More collecting off the Kank



Bastnäsite-(Ce)
Photo: Scott Whittemore



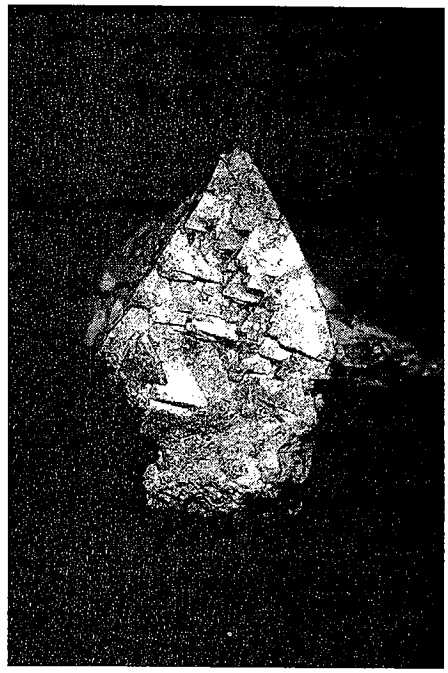
Cassiterite
Photo: Scott Whittemore

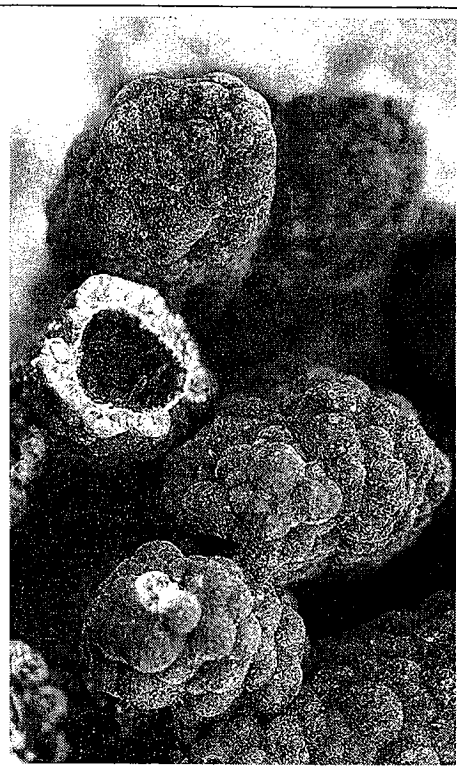


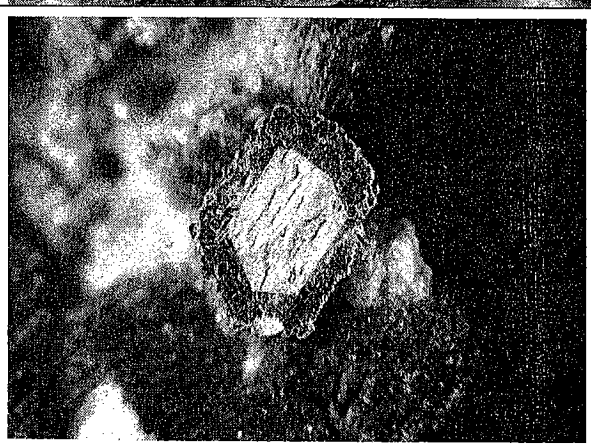
Left:: Moose Pocket
Unknown – Th-U Oxide
Photo: Scott Whittemore

Right: Zircon
Photo: Bob Janules

Below Left:: Bastnäsite-(Ce)
xls on a columbite cluster
Photo: Bob Janules







Left:: Zoned Zinnwaldite
Photo: Bob Janules

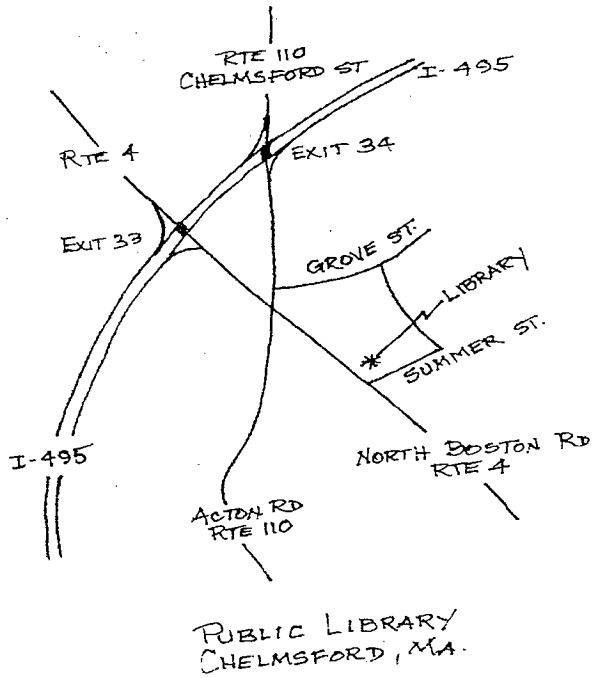
Right: Siderophyllite
Photo: Scott Whittemore

(Secretary's report concluded)

Bob Janules was thanked and applauded for his continuing series of valuable articles on New Hampshire minerals and localities for the MMNE Newsletter.

A question was asked concerning the status of the funds for the Newry Mineral Park. It was noted that the effort had been scuttled because some other entity had purchased the land. But, there was uncertainty as to when the funds would be returned to donors.

The meeting was adjourned at approximately 12:30 PM. Respectfully submitted, Bob Wilken, Secretary



DIRECTIONS TO CHELMSFORD PUBLIC LIBRARY

From I-495 Northbound

Take Exit 33 and turn right (South) at bottom of ramp onto Rte 4. Follow Rte 4 approximately ½ mile through several sets of lights to traffic island in center of town.

*Continue on Rte 4 to the right at the island and proceed past the Mobil station on your left (Note that you are on a one way street). The library is on the same island as the Mobil station. Continue on Rte 4 staying to the left for several hundred yards. The back side of the library is to your left. Take Rte 4 North, a left hand turn, and the library is the first building on the left. Park in the lot and enter through the front doors. The meeting room is to the right, just inside the entrance.

From I-495 South bound

Take exit 34 and turn right (South) at the bottom of the ramp onto Rte 110. Follow Rte 110 (Chelmsford Street) to junction of Rtes 110, 129, and 4. Go straight into Chelmsford Center, staying to the right of the Mobil station and follow directions from I-495 Northbound (*)

OR take Exit 33 and follow the directions from I-495 Northbound

Michael Swanson
Editor, MMNE *Newsletter*
646 Greenfield Road
Leyden, MA 01301-9400