# 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. 252 February, 2004




***Next Meeting***
Saturday, February 21
Chelmsford, MA Public Library
10AM - 3PM

***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

## A MICROMOUNTER EXPLORES NEW HAMPSHIRE'S CONWAY GRANITE

**(CONTINUED)**


**By Bob Janules**
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### THE CONWAY GRANITE

Conway granite is a major constituent of a number of igneous plutons that outcrop in central and north central New Hampshire. The granite is a medium to coarse two-feldspar biotite granite. Fresh Conway granite has in the past been used for building stone, while glacially broken down Conway granite is used for road metal in the National Forest. It is of interest to mineral collectors primarily because it is miarolitic, featuring cavities lined with quartz and microcline crystals as well as a number of accessory minerals. Granites similar in structure and mineralogy include, in this country, the Pike's Peak granite in Colorado and the Sawtooth Mountains in Idaho. When comparing suites of accessory minerals the closest match to the Conway granite is the miarolitic granite at Baveno, Italy.

Conway granite formed deep within the earth following a period of volcanic activity, caldera collapse, and subsequent ring dike formation. The cavities represent a late phase of the granite crystallization as water vapor and other volatiles came out of solution from the melt. As the magma rose upwards there was a drop in pressure that lowered the solubility of gases in the melt. In addition, water became enriched in the remaining magma as the anhydrous quartz, feldspar and mica crystallized from the melt. The exsolved water rose to the top of the magma chamber along with highly volatile elements such as fluorine. Other chemical elements also became enriched at the late stage of granite formation. These elements were those that could not be incorporated as an impurity in the crystal lattices of the rock forming minerals because of their size or charge. Trapped subsurface, these volatile "bubbles" upon cooling created voids that allowed for the growth of free standing euhedral crystals. The "bubbles" prior to cooling likely had the physical properties of a gel rather than a gas or a liquid. The resultant miarolitic cavities, which range in size from a few millimeters to several meters across, are often localized in bands along a geologic contact and are typically representatives of the roof zone of a magma chamber.

As stated earlier the Conway granite solidified below the surface of the earth. It was the action of glaciers that tore apart surface rock and exposed the granite. For this reason, pocket crystals can be found not only in the exposed outcrops but also in float boulders and buried in soil, sometimes at a distance far from their source.

Micromounters do not need to find their own pocket to obtain good specimens. In the grout piles of previously worked pockets there often are overlooked accessory microminerals. The microcrystals sometimes are found growing on the surface of the larger pocket crystals but they also can be found within vugs of the pocket wall material. A good example is the huge pocket located off the Kankamagus Highway in Albany known as the "Moose Pocket" that Peter Samuelson first discovered. Here cassiterite clusters and zircons were found upon microcline crystals, while bastnasite-(Ce), columbite, and siderophyllite were found exclusively in cavities of a biotite rich granite that formed part of the outer shell of the pocket.

*(continued on page 3)*

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

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**

**July**

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

### MICROMINERAL RELATED CONFERENCES AND SYMPOSIUMS

**February**

**20 - 21 - Southeast Micromounters Winter Gathering.** Advent Christian Village, Dowling Park, FL Contact Ed or Martha Cunningham, (386) 658-2589, edmarc@atlantic.net. www.home.earthlink.net/~earlrock/wintermicro/index.html

**21 – MMNE meeting -** Chelmsford, MA Public Library, 10AM – 3PM

**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

**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, Marlboro, MA. 9AM to 4:30PM.

**June**

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

## A NOTE FROM YOUR MEMBERSHIP CHAIRPERSON

Dear Members,

I am resigning as membership chairperson of the MMNE effective after the May meeting. I enjoyed being your membership chairperson for the last 5 years. If anyone is interested in being the membership chairperson please let the president know.

Sincerely, Brian Porter

*(Conway Granite continued from page 1)*

Sometimes good specimens of micro material can be obtained not from a cavity but from coarse pegmatitic segregations in the granite. A corroded danalite crystal wholly embedded in coarse pegmatite at North Sugarloaf Mountain's digging site comes to mind here. Fine micromounts of many species were prepared from that find. There are some Conway granite localities that feature an abundance of small cavities, usually a half inch to two inches across, that contain interesting accessory minerals. Some areas of Moat Mountain and the Folsom Brook Gulch are examples of this. Recent activity by collectors in search of cabinet specimens at the Oliver Trench on Moat Mountain left behind a large number of very vuggy rocks for a lucky micromounter (me) to explore. I was able to acquire a large suite of interesting minerals with the examination and further break down of the discarded rock.

Interesting accessory minerals in Conway granite are rarely abundant. Diligence and perseverance are required even at the productive localities. In areas with many miarolitic cavities available, one has to examine a large number of them before finding something other than the usual quartz, feldspar and (sometimes) mica. If one finds goodies in one cavity within a boulder riddled with cavities it is easy to think the other cavities will produce more of the same. Such thinking usually leads to disappointment. I usually measure the success of a collecting trip more by whether I found anything new or interesting than by the number of specimens obtained.

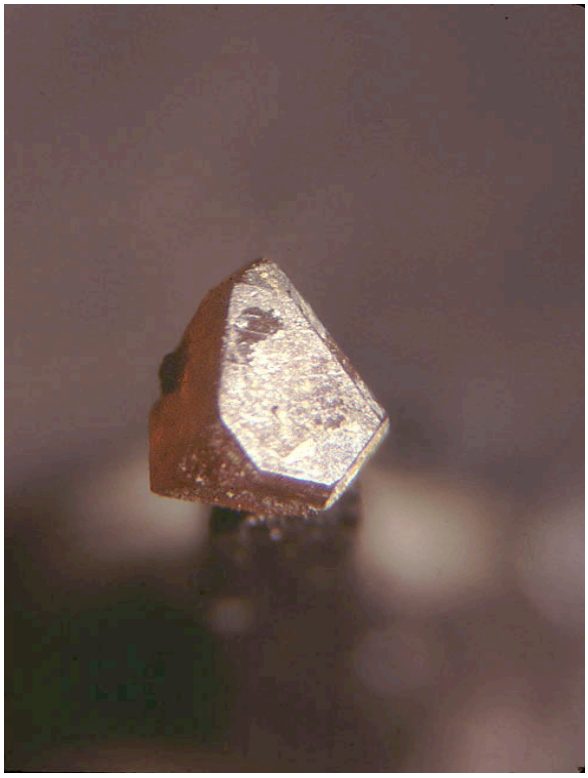
With introductory material now out of the way, this ongoing article will next deal with the locality that started it all for me – North Sugarloaf Mountain.

MONAZITE - (Ce)
Bald Mt. Ossipee, NH
(Photo by Bob Janules)

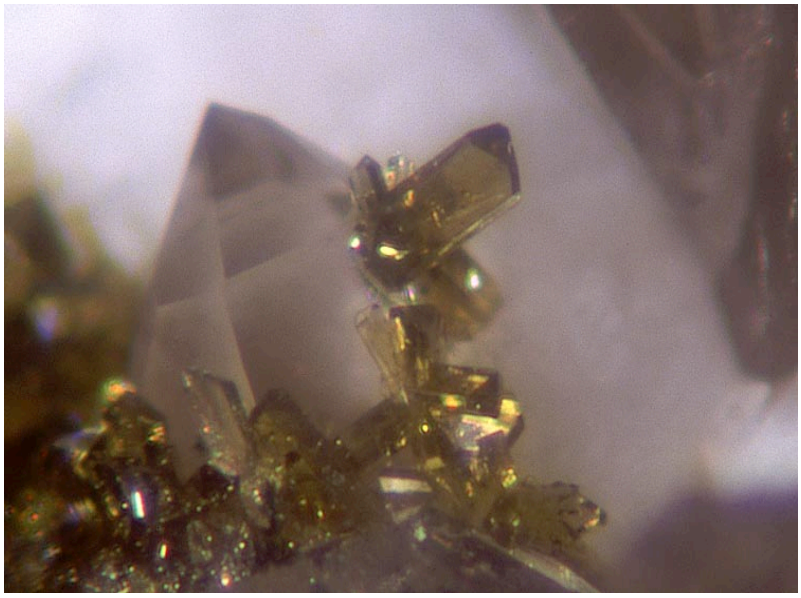
Zoned ZINNWALDITE
North Percy Peak, Stratford, NH
(Photo by Bob Janules)

**ERRATUM**

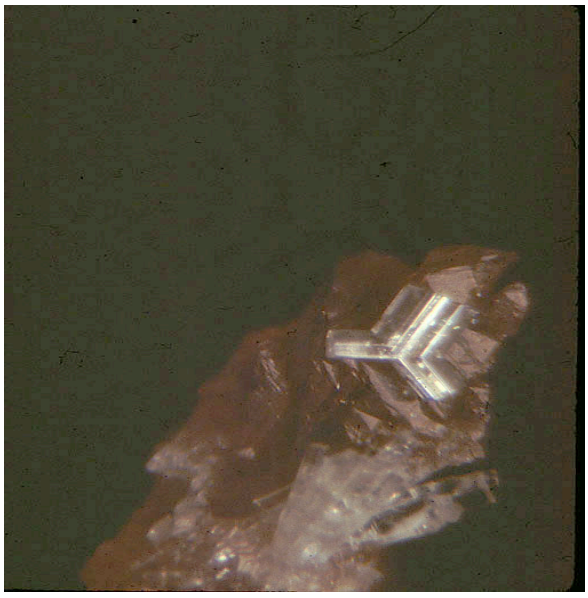
It was reported in the January, 2004 *Newsletter* Meeting Minutes that the May Reunion speaker in 1987 was Dr. Frank Mandarino. In reality the speaker was Dr. Joseph Mandarino, well known to all of us as one of the experts on the minerals and mineralogy of the quarries at Mont St.-Hilaire, Quebec, Canada. My apologies to Dr. Mandarino.



BASTNÄESITE -(Ce)
North Sugarloaf Mt., Bethlehem, NH
(Photo by Bob Janules)



EPIDOTE
Oliver Trench, Moat Mt., Hale's Location, NH
(Photo by Scott Whittemore)



BERTRANDITE trilling on DANALITE
North Sugarloaf Mt., Bethlehem, NH
(Photo by Bob Janules)

TITANITE
Oliver Trench, Moat Mt. Hale's Location, NH
(Photo by Scott Whittemore)

EUGENE BEARSS

The Micromounters of New England has been honored for the 6th time by having a member elevated to the Micromounters Hall of Fame. This time the honor has gone to Gene Bearss whose achievements are well known to his fellow members. Gene has a remarkable record of collecting and identifying new minerals, not only here in New England, but also in the Franklin-Sterling area of New Jersey.

It has been a joy to know Gene and his wife Marie. Both have a marvelous sense of humor and are such giving and caring friends. MMNE Members got to know Gene at the May Reunion Meetings at the Ashland, MA 4-H Club Headquarters. A group of about a dozen of us used to meet at the conference hall Friday afternoon to arrange the lecture hall for the Saturday program. I remember Gene zipping around, up and down the two floors helping to carry the heavy tables and chairs, set up the give-away table, the sale table, and the outer alcove where we had the morning snack table and conversation area. Then all the boxes of minerals and equipment had to be carried upstairs. In the evening we sat around looking at Gene's and other field collector's latest finds. Just like kids, we would stay up till all hours, laughing and recounting collecting excursions. (Often the speaker stayed overnight with us in the dormitory rooms downstairs.)

Next morning the Stewarts, the Cares, and Edna Lerer would arrive early. Then Gene would go into high gear again helping to empty the cars and carrying boxes up to the lecture hall, arranging the sale table and the give-aways, so that by 9:00 am we were ready for the influx of MMNE Members and guests. Now at the new venue, the Moose Hall in Northborough, MA, Gene is one of the first arrivals and helps to organize the events such as the door prizes, and mark down sales, and the call to lunch. (His parade ground voice brings everyone to attention).

Over the years Gene has gathered and mounted a micromount collection of some 10,000 specimens. Gene has collected at Palermo, Government Pits, Weeks, Fletcher, Globe, Keyes, G.E. Smith, and the Mascot mines and quarries.

The Harvard, Emmons, Estes, Bell Pit, Nevel, Bennett, and the Orchard Pit, as well as the Sanford area are a few of the places in Maine that he has visited over and over. Mont Saint Hilaire in Quebec, Canada is well represented, as well as the Franklin and Sterling Mines in New Jersey.

Although Gene started mineral collecting in 1967 when he was in the Navy, he didn't get a microscope until 1975. He had learned to identify minerals with his hand lens. He joined the MMNE about l979.

Gene had a special interest in the minerals of Franklin and Sterling Hill Mines in New Jersey, and he attends the Rock Swap in "The Swamp" trading area and the indoor show every year. In the last 8 years Gene has contributed to the identification and publication of two new minerals species associated with the Franklin Ore Body: monazite-(Ce) and synchesite-(Ce).

In New Hampshire Gene was the first to report the existence of parisite at the Weeks Mine, a new mineral for both the mine and New Hampshire. Gene was also the first to identify jahnsite at Parker Mountain. He has collected the rare beryl analogue bazzite at the Government Pit and both he and Bob Janules have found bazzite at Sugar Loaf. In recent months Gene has collected two minerals at the Estes Mine that may be new species.

George and Doug Rambo (in their nomination of Gene to the Micromounter's Hall of Fame) said that two of his most significant contributions to mineralogy were the discovery, in a boulder at Mount Mica in Paris, Maine, of the original finds of kosnarite (l993) and mcrillisite (l994). These were micro minerals that Gene recognized could be new minerals. He sent samples to the late Eugene Foord of the USGS in Denver who analyzed them and determined that they were, indeed, new species in the world. These minerals are rare, but Gene has generously distributed his finds among the scientific community and to serious collectors.

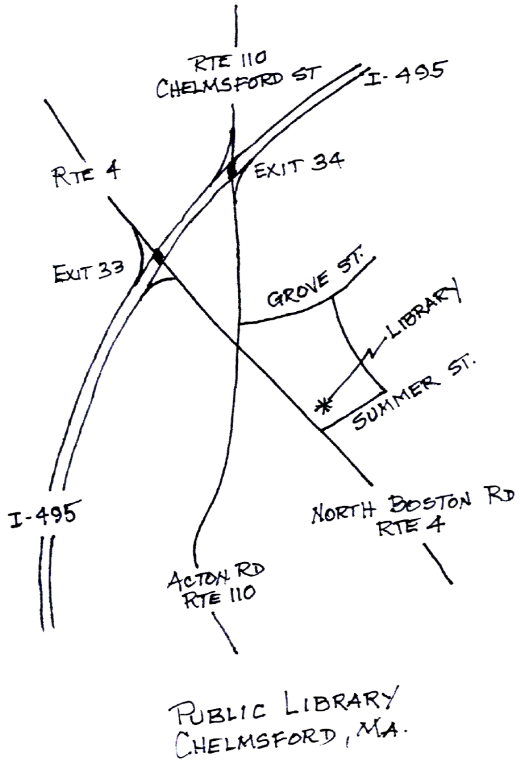
Gene's dry sense of humor is legend, and during his yearly job as auctioneer at the Saco Valley Gem and Mineral Show in September he squeezes the last penny out of his highly entertained audience.

Gene has contributed articles to many mineral publications besides the MMNE Bulletin. He has been the author of articles in the Mineralogical Record, Mineral News, Rocks and Minerals, and The Picking Table, the bulletin of the Franklin-Ogdensburg Mineralogical Society.

We are very proud of Gene and hope that in some, not far off, time, his achievements will be capped by having a mineral named after him, perhaps genebearssite!

Pat Berry Barker

Thanks to George and Doug Rambo, Norm Biggart, and Dana Morong for help with this article.




CHELMSFORD, MASS LIBRARY

Note: This map is confusing. As you head south on Rte 4 , Rte 27 will bear off to the right as a one-way street after you pass through the center of town. Start onto 27 but keep turning left onto Bartlett St. and then Adams Avenue. This will take you around behind the library and then lead into Rte 4 heading north. Turn left onto Rte 4, and then turn left into the library parking lot

Michael W. Swanson, Editor
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