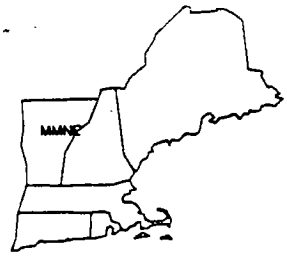


MICROMOUNTERS OF NEW ENGLAND

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

PRESIDENT
Ralph Carr
25 Farnum Road
Warwick, RI 02888

VICE-PRESIDENT
Fran Morrison
182 Pine Street
Pawtucket, RI 02860

SECRETARY
Patricia Barker
P.O. Box 810
Campton, NH 03223

TREASURER
Janet Cares
18 Singletary Lane
Sudbury, MA 01776

EDITOR
Shelley Monaghan
12 Conant Drive
Brockton, MA 02401

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 March Meeting will be Saturday, the 14th, 1992 at the Sudbury Public Library

February 1992 Newsletter 156

The next regular meeting of the Micromounters of New England will be on Saturday February 15th, 1992 at the Auburn Public Library. Our program will feature an EFMLS slide show on micromounting.

Dues are now past due. Please check your mailing label on your envelope. If you have a red "D" on the label, you are not listed as having paid your dues.

John Ebner has sent me several corrections for the micromineralogist calendar which was printed in last month's bulletin. He states that the Yedlin Collection in not available for general viewing at the April Atlantic Micromounters Conference but is available for special study. At the Naturalist Center, the Graves and the Zimmerman-Darnell Collections are available for general viewing. Also, John notes that the Cleveland Museum of Natural History symposium is from Friday through Sunday.

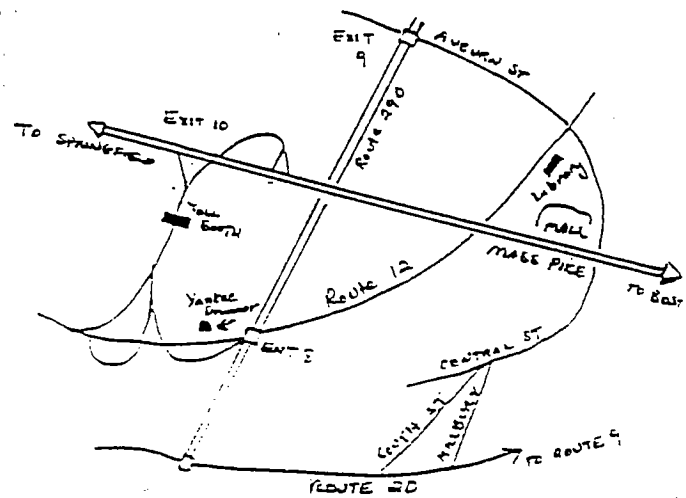
Speaker for Northeast Meeting:

Dr. Abe Rosenzweig of Tampa, Florida has accepted our invitation to speak at the May 9, Northeast Meeting. He presented a choice of several topics, and at the January meeting, those present chose "The Mineralogy of Uranium", by a nearly unanimous vote.

Thanks to those who subscribed or renewed subscriptions to Rocks & Minerals, a subscription has been donated in the club name to the Auburn Public Library. Special thanks to Charlie Weber for collecting and doing the paper work for this project at our November meeting.

From Bob Janules:

Much of what had been called fairfieldite for many years from the Dunton Mine is actually crandallite. This includes Figure 9 of Van King's article in Mineralogical Record (Vol. 6, No. 4, p. 197). This was confirmed by x-ray. Van thinks it's some of the best crandallite in the world.



Voggite and Viitaniemiite from the Francon Quarry

Voggite-bearing material was fortuitously collected in the last hour of the last of the regularly-scheduled trips to the Quarry in 1985. This material comprises a thin contact zone where a dark, steeply-dipping dike has cut across the flat-lying gray intrusive sill. This voggite-bearing contact is gray and distinctively spotted with abundant small cavities that have been infilled, for the most part, with white minerals. The voggite occurs as acicular white crystals arranged in sprays and matted aggregates. Unfortunately, visual identification is unreliable because voggite is similar in appearance to mordenite which is present in this material.

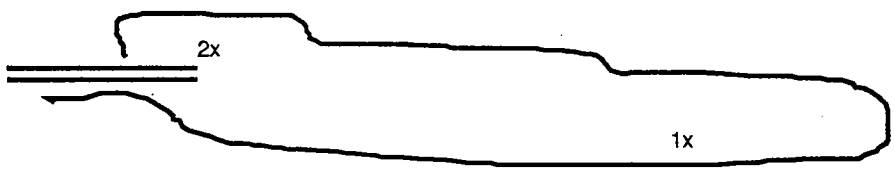
To the best of my knowledge, the only viitaniemiite was found in 1976m on a 30 cm block of the typically-gray upper sill, lying loose on the main quarry floor near the wall. Two hand specimens showing colorless cryolite were obtained from this block. A search of the nearby sill for similar material was unsuccessful. Viitaniemiite was subsequently found on these specimens. It forms thin bladed crystals to 2 mm in length, with a rectangular cross-section, and somewhat resembles aragonite in appearance.

References for voggite and viitaniemiite:

Roberts, A.C., A.P. Sabina, T.S. Ercit, J.D. Grice, J.T. Szymanski and R.A. Ramik (1990): Voggite, a new hydrated Na-Zr hydroxide-phosphate-carbonate from the Francon quarry, Montreal, Quebec. *Canadian Mineralogist*, **28**, 155-159.

Ramik, R.A., B.D. Sturman, A.C. Roberts and P.J. Dunn (1983): Viitaniemiite from the Francon quarry, Montreal, Quebec, *Canadian Mineralogist*, **21**, 499-502.

By Bob Ramik of the R.O.M. (Royal Ontario Museum), in the *Micronews*, bulletin of the Canadian Micro Mineral Association, January 1992.



1 viitaniemiite 2 voggite

Sight Identification

The ability of mineral collectors to sight identify minerals is fascinating. Many knowledgeable collectors can reliably identify up to several hundred species on sight, and yet, most often, they cannot explain the process by which they do it. Each specimen possesses a certain definite characteristic that immediately gives away its identity, and yet the characteristic itself remains undeniable.

Probably, a close examination would reveal that the characteristic is a complex combination of various factors, including: (1) Optical properties, including luster, transparency, and color; (2) physical properties, such as heft (an imprecise, but often useful indicator of density), texture, and flexibility; (3) crystallographic properties, chiefly crystal form, cleavage, and fracture; and (4) environmental properties, including mineral association, rock type, and specific collecting locality. Such textbook properties as hardness, streak, index of refraction, specific gravity, various chemical reactions, fluorescence, magnetism, and the like are used, if at all, only to confirm an identification which is already a strong suspicion.

Normally, only a few of these factors contribute strongly to an identification, but each factor becomes the key in certain specific instances. For instance, knowledge of the locality and the minerals that have been found these is frequently important. Ask the question, "Whatzit?", and the immediate return will likely be, "Where's it from?" An example occurred on our recent trip to the Frost pegmatite mine. A specimen was found that strongly resembles tourmaline but the locality contains so little tourmaline that the identification is suspect. Further investigation may, perhaps, show it to be idocrase. Of course, locality knowledge by itself is limited, because there is no assurance that the list of past finds includes everything that can or will occur at a given site.

On the other hand, there are certain associations that are so distinctive that it becomes possible to identify not only the species but the source. The material from Franklin, New Jersey is an obvious example. A solitary crystal of franklinite might be mistaken for magnetite, but the association of franklinite, willemite, and calcite is very distinctive, for both species and locality.

It is the author's personal observation that the average crystallography course begins with a massive dose of solid geometry, trigonometry, and technical nomenclature, enough to scare off all but the most dedicated, technically minded student. This is too bad, for it doesn't have to be that way. Sure, the precise, mathematical descriptions are necessary for more advanced work, but part of this exercise is to show that one doesn't have to think in terms of bipyramid, prism, and pinacoid to recognize apophyllite. What the beginning collector needs first is to get the ability to identify the most common minerals, and particularly the minerals most often found in his own area, in the specific habits found in the collecting sites he visits. Later on is soon enough to wonder why some crystal forms never (well, hardly ever!) occur on some minerals, or why some species seem always to occur in one crystal habit, while others show myriads of forms.

The importance of various factors in identifying a species may vary from site to site. Prehnite found in the Virginia Triassic diabase is probably most often identified by its light green color and botryoidal form. But prehnite from the serpentine quarry at Hunting Hill, Maryland is neither green nor botryoidal. Here, despite the white color and crystalline form, the luster distinctly says, "Prehnite". Similarly, tiny, individual crystals of prehnite are found in the diabase – transparent, colorless, and in a variety of shapes. But the tabular crystal forms are diagnostic, along with the frequent, symmetrical overgrowths that produce an hourglass or bow tie aggregate.

Of all the factors, those influenced by crystallography are probably the most important, Calcite probably the species most commonly found by collectors, occurs in a bewildering variety of habits and crystal forms. some of these forms are mimicked by other species, such as dolomite, chabazite, adularia, and analcime. Still, a little knowledge of crystallography can enable the collector to tell them apart.

From *Mineral Minutes*, November 1971.

Atlantic Micromounters Conference
March 27, 28, 29, 1992

Once again the Micromineralogist of the National Capital Area have sent information regarding their annual conference. The Saturday and Sunday sessions will be held at the University College Center of Adult Education at Adelphi Road and University Boulevard, College Park, Maryland, 20742.

The pre-conference reception on Friday from 7 to 11 PM will be held at the Museum of Natural History, Smithsonian Institution, Washington, D.C., in the Learning Center. Plans include having the Naturalist Center, where the Graves and Zimmerman micromount collections are housed open from 7-9 PM. due to space limitations, only registrants for the full conference and their immediate families may attend the reception. There will be a two dollar ($2) charge for those family members NOT registering for the full conference. Parking is available at the Smithsonian Parking Lot in the rear of the building.

The focus of this year's conference will be Phosphates. Robert Cook, Professor and Head of the Geology Department at Auburn University, Alabama will deliver three lectures: Phosphate minerals associated with tin deposits in Llallagua, Bolivia; Phosphate minerals in pegmatitic tin occurrences in the Black Hills and southeastern USA; and Secondary phosphates in the Fort Payne chert of Alabama. Lou Perloff will also be there with a suite of mineral slides on pegmatitic phosphates.

There will be an auctions of micromounts, with a picture of the specimen being displayed on the screen while it is being auctioned. The highest bidder will receive the specimen and a color photograph of the specimen.

A new "Micromount Competition" will be open to everyone who registers for the conference. There will also be two raffles, one for twenty micromounts and the other for time on the Scanning Electron Microscope. Instead of a Sunday afternoon field trip there will be extra time this year for workshop activities. More information will be available at the meeting.

Word has reached us that Dorothea Thompson passed away. Our condolences to her husband and member Brownlow Thompson.