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. 242

January 2003

Next Meeting

Saturday, January 18th
Chelmsford, MA
Public Library
9:00AM to 3:00PM

Map and directions are on the back page

Dues are $10/person or $15/family for the calendar year, payable to MMNE and mailed to the membership chairperson

MEMBERSHIP NEWS

Protocol for weather related meeting advisories
President Jim Cahoon has agreed to put a voice mail message on his answering machine any time there is a question regarding a meeting for weather related causes. This will be tacked on the **END** of the regular answering machine message, so be sure to listen to the entire message. He will also set up an e-mail notification system for those members with e-mail at home. His phone number is **(978) 897-8221** and e-mail is **cahooncj@aol.com**. All members who wish to get e-mail notification regarding meetings must notify Jim of the e-mail address they wish to use.

ATTENTION MMNE MEMBERS

Dues for 2003 are payable on or before January 15, 2003. If they are not received by then this will be you last newsletter.

Minutes of the November 16th, 2002 Meeting

The November 16th meeting was held at the Chelmsford Library. The meeting was called to order at 11:00 AM with nine members present.

Jim Warner spoke at length about a pile of Palermo Mine #1 dump material which Bob Whitmore had deposited in his back yard shortly after he purchased the mine. Jim had looked at a small portion and found foggite, bjarbeyite, phosphophyllite, whitmoreite and other rare phosphates. Bob offered to sell the pile to Jim, and he is planning on buying it, but he is interested in passing surplus on to other members of the MMNE. Those interested should contact Jim Warner directly - (508) 752-8328 or buckybaggera@yahoo.com).

Pat Barker plans to attend the second in the series of Meetings for the National Forest Plan Review. Every year mineral collectors seem to be phased out more and more, she said. In the last month, Gordon Jackson, one of our members, was confronted at the Moat Mountain collecting area by a ranger, Robert Smith, who took his picture,

Continued from previous column.

threatened him with arrest, fines, confiscation of his car and collecting tools, all because he had sawed off a tree root. He was made to fill in a nearby hole and marched out to his car. There he was told that he wouldn't be arrested this time but was issued a warning. "The Land of Many Uses" doesn't include our use, apparently.

Norm Biggart and Margaret Stewart told us that the carpet has been replaced at the Burlington Library, so we may schedule meetings there again. Chelmsford Library sent Norm a from to fill out for meeting dates in 2003. He asked if we were pleased with the Chelmsford facilities, and everyone present agreed it was a favorite spot.

Jim Cahoon told members that the Boston Mineral Club is going to order plastic boxes, early in 2003, from David Shannon. Our club may join in on this order. Cotton-filled paper boxes will be available also.

The problem of duties of club officers came up again. It was voted unanimously to allow either secretary, recording or corresponding, to assume the duties of the other secretary at an MMNE meeting or function in the absence of the other secretary. The proposed revisions to the by-laws, to be voted on at the April meeting, will condense the two jobs into a single position.

Jim Cahoon said he would contact treasurer Anita Hubley to make sure that Rocks and Minerals magazine has been all monies designated for the color fund in the past, and more recently, for memorials for Les Hitchings and Ted Stanescki.

Members present discussed speakers for the May Reunion Meeting. Charlie Weber and Mike Swanson suggested that we invite Jason and Mandy Smith, a couple from North Carolina, to speak on recent finds, particularly phosphates, at the Foote Mine in North Carolina. Bob Janules kindly offered to be the back-up speaker. He would speak on "Miarolytic Cavities."

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The *Newsletter* is the official publication of the Micromounters of New England (MMNE). The last by-laws revision was 1966. The MMNE is a member of the Eastern Federation of Mineralogical and Lapidary Societies (EFMLS) (cf <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* unless the author has reserved all rights in which case written permission must be obtained from the author. If there are questions regarding copying contact the editor. The club address is c/o the Corresponding 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.

CALENDAR OF UPCOMING EVENTS

January 2003

18 - MMNE meeting, Chelmsford, MA Public Library 9:00AM to 3:00PM

31-Feb. 2 - Southern California Micro-Mineralogists Pacific Micromount Conference, San Bernardino County Museum, 2024 Orangetree Lane, Redlands, CA contact Beverly Moreau(714) 577-8038 or bcmoreau@4dnet.com

February 2003

7/8 - Second Annual SE Micromounters Winter Gathering Advent Christian Village, Dowling Park, FL. Info @ http://ns1.rfci.net/carl/wintermicro

14 - Tucson, AZ Micromount Symposium

15 - MMNE meeting, Burlington, MA Public Library 10:00AM to 3:00PM, snow date same site 2/22

March 2003

1/2 - Meriden Mineral Mineral-Fossil-Gem Show Maloney High School, Gravel St., Meriden, CT Sat. 9:30 - 5:00, Sun. 10:00 - 4:00, Exit 16 off I-91, West on E. Main St., 3rd Right.

15 - MMNE meeting, Auburn MA Public Library 9:00AM to 3:00PM, snow date same site 3/22

April 2003

3-5 - Rochester Symposium, Micromounters Playroom

11-13 Atlantic Micromounters Conference, Tysons Westpark Hotel, McLean, VA. Contact Steve Weinberger (410) 833-7926. E-mail: cweinber@bcpl.net

19 - MMNE annual business meeting, Northboro, MA Public Library, 9:300AM to 3:00PM

26/27 - Trotter Dump Field Trip, Franklin,, NJ contact your own club NEFTA representative Sterling Hill Mine open for digging on Sunday

May 2003

2 - 4 - CMMA Annual Micromount Conference

17 - MMNE Reunion Meeting, Marlboro, MA Moose Lodge 9:00AM to 4:00PM

June 2003

20 - 22 -Northern California Micromount Symposium, Pollock Pines

WEB SITES AND OTHER REFERENCES OF MINERALOGICAL INTEREST

Carbonate-bearing Minerals. List of all known carbonate-bearing minerals. http://www.gly.uga.edu/railsback/CO3/CO3mins_intro.html

Ecole des Mines de Paris: Contains catalog of mineral names origins and scientific references of mineral species. http:www.cnsmp.fr/mineral/catalog/html

Franklin and Sterling Hill Minerals: species list, mineral photos, selected chapters from reference books. http://www.simplcthings.com/franklinminerals/

Minerals of Australia and New Zealand: Guide to minerals and localities. http://crocoite.com

Nova Scotia Minerals. Ronnie Van Dommelen's site "Mineralogy of Nova Scotia" http://www.is2.dal.ca/~dommelen/mainrock.html

Mineralogy database from Norway: GEOLIB http://www.geosystems.no

Mineralogical Abstracts shareware database: **MinAbs** by Peter Susse. Up to (?) 1999. http://www.psusse.de/minabs.com

Tsumeb, Namibia: Dan Weinrichs website featuring three photo galleries of specimens from Tsumeb. http://www.danweinrich.com

Clara Mine (Germany) mineral list http://www.rbmineral.de/rb3.htm

Eudialyte: Alkaline mineral localities of the world: http://www.kocln.nctsurf.de/~w.steffens/welcome.html

THE SHOMIOKITE-(Y)/ADAMSITE-(Y) STORY FROM MONT SAINT-HILAIRE

OR why amateur mineralogists should consider learning how to perform REE (rare earth element) testing and/or use optical methods for identifying unknown minerals.

For many years Steve and Janet Cares have utilized a spectroscope, mounted in place of a regular microscope ocular, to assist in the identification of MSH (and other) unknowns. Recently, relatively inexpensive spectroscopes have become available in Europe, and a number of micromounters have started using them with good success.

The polarizing microscope is a very powerful tool which has been used for many years for the identification of the optical characteristics of an unknown mineral. As the professional mineralogists have been given x-ray, EDS and other high quality (and very high priced) techniques, the use of the polarizing microscope has all but dried up because it is rather time consuming to use. There are currently a few amateurs, the MMNE's Bill Henderson being one of these, who have used optical techniques to identify unknown minerals. At times the use of this technique this has allowed for the unearthing of a new species such as willhendersonite, or identified totally new habits of an existing species such as the tabular crystals of micheelsenite.

Recently there were two articles in the CMMA Micronews which discussed the use of the spectroscope and the polarizing microscope to differentiate shiomiokite-(Y) from adamsite-(Y). The articles are included here to show the value of these technologies in the hands of amateur mineralogists.

The spectroscope can usually be modified with a sleeve so that it can temporarily placed in one of the ocular tubes on a binocular microscope.

The polarizing microscope can be expensive, running from several hundred dollars up to many thousand dollars for a professional instrument. One needs to obtain index liquids which also are quite expensive, but considering the power of the tool, it should at least be considered by the serious student as a valuable tool. Doing the optical evaluation of an unknown specimen can take anywhere from half an hour to many hours. As Bill Henderson suggests in his article, it would be wise for anyone interested in using the polarizing microscope to read about, and preferably have some instruction in the use of the techniques before making any purchase. The liquids, although expensive, can be used (and reused) for many analyses making the individual cost very reasonable.

Remember that optical identification is potentially a very time consuming process. If you ask a fellow collector to do optical work, be prepared to offer some of the unknown or other specimen material in return for the service.

Michael Swanson, Editor MMNE Newsletter

SHIOMIOKITE-(WHY)

Liz Fodi, Ed. CMMA Micronews

Last July at MSH, in the vicinity of the "pit," Modris Baum found what he took to be adamsite. Shortly afterwards he reported the following:

My "adamsite" may, in fact, be shiomiokite-(Y). That would be really exciting as one or two of the xls are actually terminated. REE absorption lines: The latter are more like adamsite or thomasclarkite, but the double line in org/red is very prominent. Some of the xls appear to have (more or less) rectangular cross sections. They are nearly transparent with lots of vertical striations which show through making it surprisingly hard to tell what the actual shape is.

In an update received this month it turns out that material submitted by another collector, similar to the stuff collected in July, had, in fact, turned out to be shomiokite-(Y). Modris reports that some of the collectors in particular J.P. Beckerich, have found several specimens of similar material, including some with terminations.

(Ed: A photograph was included with this article, but it did not reproduce well enough to print.)

....The color is pale yellow, rather like champagne. There is a very, very slight tinge of green.

The terminations look somewhat frosted but the prism faces on the terminated xl, which is transparent, are quite lustrous. The larger, unterminated, xls are more prominently grooved and striated and have internal flaws, giving the xls a somewhat silky appearance.

The REE pattern is like adamsite-(Y) or horvathite-(Y) in that there are more prominent lines in the blue and green, but more like thomasclarkite-(Y) in that there is a more prominent "double" line in the red-orange.

Caveat: re-examination of previously collected adamsite-(Y) showed a very similar pattern on some specimens. But these seem to be just a coating of adamsite-(Y) on some yellowish cores. It's not clear it the cores are shomiokite-(Y) or petersenite-(Ce) which has a very prominent "double" in the red-orange. A little involved, but there is the possibility that folks may have adamsite-(Y) with petersenite-(Ce)cores rather than shomiokite-(Y).

The visually discernable associations are "flaky" adamsite-(Y), tiny greenish "ball" elpidite, nondescript siderite and/or rhodochrosite, and unidentified tiny white balls. Mostly it's just microcline and aegerine. I did find some (one each) epididymite, leifite, genthelvite, and thomasclarkite-(Y) in the same general area.

Final article next page

MORE ABOUT SHOMIOKITE-(Y)

Bill Henderson

Reports of recent shomiokite finds at Mt. St.-Hilaire in the latest Micronews prompted me to examine some of my as-yet-untested adamsite look-alikes to see whether shomiokite was lurking there. I identify my unknowns primarily by optics combined with simple chemical tests.

The second specimen I tested, collected in contact rock in September of 2001, had on it colorless acicular to short columnar crystals striated lengthwise. Some were in an irregular mat; other crystals were more isolated, well formed and large enough to see their cross section. Associated species were very pale, rounded crystals of rhodochrosite; a few pink, larger cleavages of the same; black, very splintery, substantial aegerine; colorless, transparent calcite rhombs; small gaidonnayite crystals; analcime; and a matrix of feldspar, probably microcline. The unknown dissolved very rapidly in 1:4 HCl, and evolved copious amounts of carbon dioxide. It showed REE absorption peaks in the orange and green, much the same as those seen by Modris Baum for putative shomiokite (last Micronews).

For optical study, I mounted a single crystal of the unknown on a sewing needle so the crystal was coaxial with the needle. On the spindle stage, I found the unknown to show parallel extinction and +/- elongation. The alpha index was 1.532, and gamma 1.534, both perpendicular to the length of the crystal. Beta, parallel to the crystal was in between.

The low indices, their extremely low birefringence, and the +/- elongation are quite unusual for a mineral, and fit the optics of shomiokite perfectly. The indices found are very close to those reported for Russian shomiokite. The differences may be due to a small difference in chemistry of the two.

The optics plus chemical tests run leave no doubt that my unknown is shomiokite. Note that it is impossible to distinguish by eye shomiokite from adamsite or several other Hilaire species. Moreover, it is extremely difficult to distinguish shomiokite from adamsite, both Y minerals, by REE absorption lines alone.

In some cases I have to spend many hours to determine the optics, and thus, the identity , of a Hilaire unknown. In this case, about 15 minutes would now be enough.

In the case of Hilaire, optics distinguish the donnayite, synchesite, burbankite and manasseite groups of carbonates from each other, and usually distinguish the members of the group. They distinguish all but two of the amphiboles from each other. I used them to find lanthanite for the first time at Hilaire, and to find micheelsenite in a completely unexpected, tabular form, aesthetically vastly superior to the more common

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tabular form, aesthetically vastly superior to the more common acicular, variety. Optical techniques, although they are now passé for pros, are an extremely powerful tool in the hands of amateurs willing to master them.

From Micronews, Nov/Dec 2002 with permission of the author

CATALOGING A COLLECTION

Micromount collectors are notorious for have multiple specimens of the same species from same site often collected on many different collecting trips (Mont St.-Hilaire and the Palermo #1 Mine being typical examples of such sites) but each of which may represent a different habit, color or association. Micromount collections are also full of unknown species which are difficult to store and retrieve relative to other specimen material from the same matrix block. The following comments about cataloging and databases arise from the use of a system which uses Microsoft Access to handle exclusively micromounts and deal with these issues.

Why catalog a collection?

1. Access to a particular specimen or locality: Unless the collection is stored in alphabetical order or totally arranged by localities, it is difficult to find a particular specimen without a catalog which can be searched by specimen or storage site. For example, you want to search either for all specimens from Palermo #1 or a for phosphosiderite from all localities. The Palermo specimens are either going to be in a Palermo drawer or alphabetically in multiple drawers. The phosphosiderites might reside in the Palermo or Tip Top drawer, the phosphate drawer or the general alphabet ized collection. The database can tell you where all of the desired specimens are (supposed to be) stored.
2. Insurance protection or estate disposition.
3. Cross reference to other specimens found at same time or from same block of matrix.
4. Ability to make labels from data base.

What fields are needed for a catalog?

1. Numbering system.
   a. Simple sequential numbers which can be assigned by the program if wanted.
   b. Sequential numbers with ability to place all specimens from the same piece of matrix together. For example # 203.00 might refer to single item which was purchased from a dealer – you could use just # 203 – but if multiple mounts have been made from same block of matrix you can use 203.01, 203.02, etc. Each number is unique but linked by the database for easy retrieval even if they are filed far away from each other. Note that 203.01 and 203.02 do not need to be the same species, they just need to have a common origin.

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c. Use of embedded data such as acquisition or collection date or location in the storage system –for example # 98-203.10-PAL where 98 is the year of collection, 203.10 is the tenth mount from that matrix block without the year or storage location built in. A check in the data base will tell me where it is kept.
2) Species name (if known), or perhaps a UK number
3) Associations – either lumped together in a single field or individually in several fields so they can be searched individually.
4) Rock type or environment – Particularly with micro mounts the matrix is small, and one cannot always deter mine the environment from a small piece of matrix so preserving the information available from the original matrix block is worthwhile.
5) Location – A field can be created for each location sub unit: country, state, county, town or city, mine, mine level etc. providing much greater data search capability.
6) Date of collection if known, or date of acquisition.
7) Provenance – who collected, when, previous collections, purchase price or trade.
8) Photographs particularly digital – both for reference and for insurance protection.
9) Testing, if done, and by whom, where and when – where other specimens from same matrix block reside.
10) Comments such as type locality, etc.
11) Miscellaneous – references, chemical, physical, crystal lographic or optical data, etc.

Note: The list of field possibilities is almost endless, but with most databases you can "hide" the fields which you are not interested in so it is not so cumbersome.

C. Databases
1) Microsoft Excel - It is actually a spreadsheet but can be used as a simple data storage system without the ability to collate or extract information.
2) Microsoft Access (which I have used for many years) – database – It is almost infinitely expandable in terms of fields and entries and every field is searchable.
3) Other databases – Lotus is used by at least one person I know. Homemade databases are another choice.

D. Labels – what to include?
1. How much room you have depends on your mounting box. Theoretically the top and bottom of the box can each be used for separate information, but if you do not use a hinged box, enough common information (such as the specimen number) should be on each piece to make sure they stay together.
2. Specimen number .
3. Primary species and significant associations.
4. Complete site information – including stope, environment, level.
5. Collection date and/or source information.

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E. Database requirements
1. Ability to add, remove and modify entries
2. Ability to add or remove fields
3. Ability to link databases – For example, you can create separate locality and specimen databases which have a common link number. The specimen catalog may only have a link number for the locality which saves having to enter nepheline seyenite, level seven, Poudrette Quarry, Mont St.-Hilaire, Rouville Co., Quebec, Canada with each specimen from that environment. If you want to print out a full catalog, then the database can put all the information together in one list.
4) Ability to sort and print from any field or groups of fields. to collate or extract information.

Using this type of cataloging system makes life much easier in terms of maintaining a collection. Granted, if you have an uncataloged ten thousand specimen collection, the task of entering all the specimens into the database is rather daunting. If, however, you start by just taking important parts of the collection to catalog, it might seem more manageable. When we, as micromounters, collect such diverse sites as MSH and Palermo, the need for good information retrieval is important not just to the individual collector, but to the hobby and possibly to the scientific community, as we try to identify unknowns and put environment information together.

I would like to hear any comments and suggestions, pro or con, from our readers. Mike Swanson, Editor.

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The meeting was adjourned at 12:00 noon and was followed by an enthusiastic discussion on layered pegmatites, ring dikes, and related subjects.

Respectfully submitted,
Pat Barker, Corresponding secretary

(Ed. addition) Since the meeting, the Smith's have been contacted, and they have agreed to be our speakers in May. Anita and John Hubley have offered to pick them up and return them to the airport, drive them back and forth to the meeting, and host them at their home.