

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. 288

April, 2008

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Current Meeting

Saturday, April 19th
Trinity Lutheran Church
Chelmsford, MA
Doors open at 9 am

Map and driving
directions are on page 7

Next Meeting

Saturday May 17th
(Annual Symposium)
May 17, 2008
The Elks Lodge
91 Park Street,
Hudson, MA

For information regarding
MEETING CANCELLATION
due to inclement weather,
Joseph Mulvey
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Next Meeting:

Saturday, April 19, 2008, Trinity Lutheran Church, Chelmsford, MA. Doors open 9 am. Check newsletter page 7 for map and directions.

Topical theme selected for the April MMNE meeting

The meeting topic for the April MMNE meeting program will be "Microminerals of Maine". See detailed meeting plan on page 2.

Also at the April meeting, Tom Mortimer will demonstrate a 35 mm slide and negative scanner he recently purchased. Members with 35 mm micro-mineral slides are asked to bring a few to the April meeting to test the performance of this unit.

A Micromineral article reprint in this issue

Through the efforts of member Bob Wilken, we have secured permission from Bill Henderson and the *Mineralogical Record* to reprint a portion of Bill's Apr-May 1986 article on the construction of a micromagnetism detector, (see page 5). Thanks Bob!

Minutes from our unofficial March meeting

by acting president Joe Mulvey

Well the weather was pretty bad for the Saturday March 15, 2008 meeting of the Micromounters. Merri Porro was already in the parking lot when I arrived with my daughter. The church was locked until almost 9:30! Can't blame anyone – the snow was pretty bad and there were a lot of spin-outs witnessed on our drive from Nashua down to Chelmsford.

People did arrive but we never reached enough for a quorum. I think Norm Biggart was the last arrival at about around 10:30 – 11 am.

Since this was not an official meeting, I am going to add some info that I was hoping to share with all the members.

Art Show at the Micromounters Meeting

Inga Jewell brought in a fantastic photo album detailing much of her artwork over the years. Her choice of materials was impressive! Among the ingredients she uses are birch bark, fruit skins and mud from our favorite mineral locales! Her landscapes, children in action and figurines all made us reconsider our perceptions of art. Her landscapes are truly beautiful. It was a pleasure and an honor to be able to review the beauty that resides within her soul.

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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. Meeting sites may change 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 \$12/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.

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2008 CALENDAR OF UPCOMING EVENTS

April 2008

- 19 - MMNE meeting, Trinity Lutheran Church, doors open at 9 am
- 10 – 13 35th Rochester Mineralogical Symposium <http://www.rasny.org/MineralSymp.htm>

May 2008

- 17 - Annual MMNE mini-symposium, Elks Lodge at 91 Park Street, Hudson, MA, doors open at 8 am for member set up.

Meeting topic for the March MMNE meeting program

Continuing with our monthly meeting focus topics, the theme for the April meeting will be **Micro Minerals from the state of Maine.**

To participate in this program theme, members are encouraged to:

1. Bring their Maine micromineral specimens, (known and unknown), to the meeting.
2. Swap and/or Give-away some of your extra Maine specimens. A designated table will be assigned for member swap offerings and give-aways.
3. Select some of your better, (and perhaps unknown), Maine specimens for viewing by other members.

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March MMNE meeting report, continued from page 1**Demo of Microscope Camera**

I brought a demo model of the Ken A Vision 7200um gooseneck style digital camera that connects by a USB cable to a computer. We plugged this into a laptop then into a projector and broadcast the output in realtime on the big screen. The 7200um is a 1 megapixel camera. Its business end nestles one of the eyepieces of a microscope. To attach, a machined metal tube fits in a recess of the camera and stays in place sometimes once the camera is pushed tight to the scope. This is not a very good method because there is enough play to make alignment between the camera and the scope challenging. And, each time you try to adjust the stage, you need to re-align the parts. My scope is a very basic Bausch & Lomb given to me by Jim Cahoon. To adjust the focus, the magnifying assembly moves up and down making focus a challenge.

Contrast was poor and different lighting solutions did not seem to make a noticeable difference. The software supplied with the camera is written for children; menus are icons of the limited options supported. The camera certainly worked well when displaying people around the room. It just did not seem well suited to what it is touted to do.

I will be sending this unit back. But a heartfelt thanks goes to Ira Friedland of VSO Marketing for coordinating the loan of the equipment.

Tom Mortimer forwarded a note from member Ron LePage who is also a member of the Kennebec Club who writes:

I was just reading the bulletin about the microscope/camera set-up that the club is looking into. The KRMC recently purchased a microscope/camera combination and a laptop to use it with. We found a good deal on EBay for a stereo microscope 30x60 power that comes with a camera which fits directly into the right eyepiece. The scope and camera is sold by AmScope. They have a wide range of scopes in their EBay store. The camera is manufactured by Precision World and is just a small little camera which is designed to be used with a microscope. But it works rather well. You put the specimen under the scope as you normally would and you can adjust the focus as normal to get a picture on the laptop screen. It was a hit at the meetings the last two months and raised a lot of enthusiasm for micromounting. If the MMNE club has a good microscope, a camera unit can be purchased from Precision World for \$95 plus shipping. (about \$9.99) I will be making an order with them soon

I visited ebay and saw a 5 megapixel version of what the Kennebec Club bought and it was not too expensive. I will be looking further into this option. Interesting to note the Kennebec club bought a laptop, camera and a microscope!

May Symposium

Even though there's still lots of snow on the ground in the northern states of New England spring is here and there is only one meeting before the symposium! All are encourage to bring donations to Hal Herard at the April meeting so that we are not swamped on Symposium day. I would like to contact Jim Daly and see if he would be interested in donating something to the even in exchange for free advertising in the official symposium brochure. If you know of a dealer that may be willing to donate for similar recognition now is the time to contact them!

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March MMNE meeting report, continued from page 3

As always, we need donations for the symposium from all members as our stocks of both sales and giveaway material are running quite low. . Please bring your donations to the March or April meeting for color coding. If each MMNE member would consider donating ten to fifteen specimens for the sales table and a couple of flats or egg cartons of material for giveaways, there would be plenty for everyone. Please remember: Your registration fee covers only part of our operating expenses – your donations cover the rest. We also need items for the silent auction and door prizes which could include hardware, books, posters, other printed material, and mounting supplies (or anything else a micromounter might be interested in). If you have items for the auction, please tell us what you have at the March or April meetings so tags can be made in advance. If you cannot be at any of these meetings, e-mail Anna Wilken www.microxl@mfire.com or call at 603-536-2013.

Please bring your donations with you to the meeting, or get them to Hal Herard ahead of time. Please put prices on them whenever appropriate. If you are bringing mounted material for sale, please color code them with price stickers (dots) as follows:

- \$1.00 yellow,
- \$2.00 red,
- \$3.00 green,
- \$4.00 silver,
- \$5.00 gold.

Anything above \$5.00 needs to have an actual price tag.

If you do not have the colored stickers, group them by price category, and they can be marked at the meeting.

The meeting officially convenes at 9:00AM, but anyone who can come in at 8:00AM to help set up the various venues (sales, silent auction, etc.) will be appreciated.

Please sign up promptly for the meeting so that we can get an accurate count for the caterer. Bring a friend or two if you can. There is plenty of space. All reservations which include lunch must be in the treasurer's hands before May 12th. Walk-ins can pay at the door, but extra meals may not be available.

Please fill out and send in the **Registration Form** on newsletter last page as soon as possible.

Election of Officers for 2008-2009

The April meeting is when the following years' officers are elected. Usually, these candidates are nominated at the March meeting.

As acting president since Mike Swanson stepped down I will toss my hat in the ring to be President for the next year.

The vice-president spot is currently vacant. After many years of faithful, prompt and reliable service Anna Wilkins is stepping down as our Treasurer. Tom Mortimer has volunteered to handle the newsletter for another year. I believe the current directors are the core of the nominating committee. We need to fill the positions of Vice President, Treasurer and maybe one of the Directors spots. Please consider filling one of these duties. The club really needs your support!

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Microminerals

Bill Henderson

Magnetic Minerals and a Micro Magnetism Detector

In the far distant past, so obscured by the mists of time that his name is long forgotten, a magical guest left me a wondrous device for determining the magnetic properties of microminerals. The device, simplicity itself, is shown in Figure 1.

Some 20 cm (8 inches) in height, the thing has only two parts. The first is a base with two vertical sides. In my case, the base and sides are of plastic, and the sides are attached to the base by filling the open base with epoxy resin. The base can be made in any number of ways, but the absolutely essential requirement is that the bearing surfaces of the top edges are smooth and level. Even a playing card will do, if it fulfills this condition. The second part is a vertical arm (soda straw or balsa stick) to the bottom of which is attached a small but powerful magnet. I have been using two magnets, one 6 x 12 mm and the other 6 x 6 mm. The former is attached with glue to a soda straw, while the latter is attached to a balsa stick with sticky putty. The magnet and arm are supported by a thin sewing needle. The needle should be placed so that the whole arm is in very delicate balance, just able to stay upright. This is best done by making the upper arm too long on purpose and then trimming it with a razor blade until the proper balance is achieved.

I like to adjust mine until the arm sways a bit by itself. It should be ever so slightly susceptible to air currents in the room and should respond visibly if directly breathed upon. If it's flipping endlessly about, the thing is too sensitive, however.

To use it, a microcrystal of a mineral suspected of being magnetic is brought near the magnet. It can be on matrix and even in its micro box. If the mineral is fairly magnetic and the crystal not overly small, the magnet will be attracted to the specimen, and the vertical arm will sway. With weakly magnetic or small crystals, the movement will be very slight, and the specimen should be tested repeatedly after the arm stops moving. If movement is seen each time the specimen is brought near the magnet, then the movement is truly due to magnetism and not to air currents. Of course, don't breathe on the apparatus while using it.

A still more sensitive technique is to move the specimen toward and away from the magnet in phase with the frequency of the swinging arm. The arm then moves further with every approach of the magnet. This method requires a little practice, but using it, one can get really large swings of the arm from very small or weakly magnetic specimens. Again, one should repeat the operation several times to be sure the magnetism is real.

The Mineralogical Record, volume 17, March-April, 1986

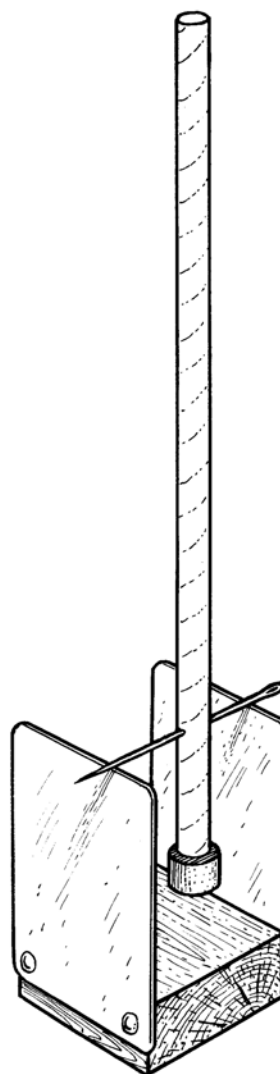


Figure 1. Micromagnetism detector as described in text. Comprised of a soda straw arm with small, round magnet attached at the base and supported on a sewing needle pivot, this moving part resting on two sides with a smooth and level bearing surface and affixed to a base.

Occasionally, of course, the magnetism detector will be responding to magnetic minerals in the matrix, and not to the micro crystals being tested. It sort of spoils things a bit, but where possible, a tiny crystal should be detached from a magnetic specimen and tested with the magnet. Of course, being loose, it will jump right to the magnet. If the detector described here gives no response, it is not necessary to detach a crystal for further tests.

Mineral books seldom have much to say about magnetic minerals. Rutley's *Elements of Mineralogy* (1970), for instance, says that only magnetite and pyrrhotite are attracted to a bar magnet, while other minerals are attracted by electromagnets. Not true, as I will show shortly, but it offers scope to those who wish to construct electromagnetic magnetism detectors. The same text gives the following list of magnetic minerals:

Editor Note: The remainder of this 4 page article contained many black & white mineral photos that reproduced poorly and are not included here.

Arkansas Club member Ed Hakesley has forwarded several photos originally taken as 35 mm slides. Ed used his "hpscanjet G4010 which also does slides" to convert these images into digital format.



Bastnaesite - N. Sugarloaf Mt. Bethlehem, NH



Fluorapatite – West Hayes Quarry



Fluorapatite, Cookeite – Chickering Mine, Walpole, NH



Bertrandite – West Hayes Quarry



Fluorapatite – West Hayes Ledge Quarry



Microlite – Greenlaw Quarry, Maine

DIRECTIONS TO TRINITY LUTHERAN CHURCH, CHELMSFORD MA

170 Old Westford Rd., Chelmsford, MA.

From Rt. 3, take Exit 32, (The "Drum Hill Rotary"). From Rotary, Take Old Westford Rd. towards Westford for about .85 miles to Grandview Rd. Entrance for Trinity Lutheran Church on left. Proceed up rather long driveway to parking area. If things go according to plan, we should be able to use the entrance on the far left side of the church. Our meeting room is just inside this entrance.

Those coming from the south may want to try an alternate route, exiting from Rt. 495 at Exit 33, then taking Rt. 4 north to a left onto Davis Rd.... see map below.



Micromounters of New England
Annual Reunion Meeting
May 17, 2008
The Elks Lodge
91 Park Street, Hudson, MA

Schedule:	9.00 AM – 12 Noon	Registration, informal session Speaker, silent auction, sales table.
	12 Noon – 1.00 PM	Lunch (catered)
	2.00 PM – 3.00 PM	Speaker
	3.00 PM – 4.00 PM	Informal session

PROGRAM

Bill Henderson, Jr. is giving the following talks:

- 1) Microminerals of Italy
- 2) Minerals of the Palabora Mine in South Africa
- 3) Thomaston Dam, CT.

Registration Form

Registration Fee: Members \$ 20.00 Non-members \$ 25.00

Please make checks payable to: Micromounters of New England (MMNE)
c/o Anna Wilken, 79 Meadow Lane, Campton NH 03223

Name(s) _____ @ \$ 20.00 each

_____ @ \$ 25.00 each

Address _____

Please return this form by Saturday May 10.2008. This is the closing date for ordering a meal.

48 hour notice is required for cancellation with refund.