



MICROMOUNTERS OF NEW ENGLAND

Volume 410

Monthly Club Newsletter

March 2022

Welcome to the Micromounters of New England

Our next meeting will be held virtually via Zoom beginning at 10am. Meeting invite details below.

Topic: MMNE March 2022 Meeting

Time: March 19, 2022 10:00 AM Eastern Time (US and Canada)

Join Zoom

Meeting <https://us02web.zoom.us/j/88328981549?pwd=WjEycnNLNElpZHF6VnpQSHRKOFVJQT09>

Meeting ID: 883 2898 1549 Passcode: 616502

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sriellye@aol.com

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John Walsh

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Scott Dion
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Secretary

Neil Cavanagh
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Director

Tom Mortimer
tjmort@comcast.net

Director

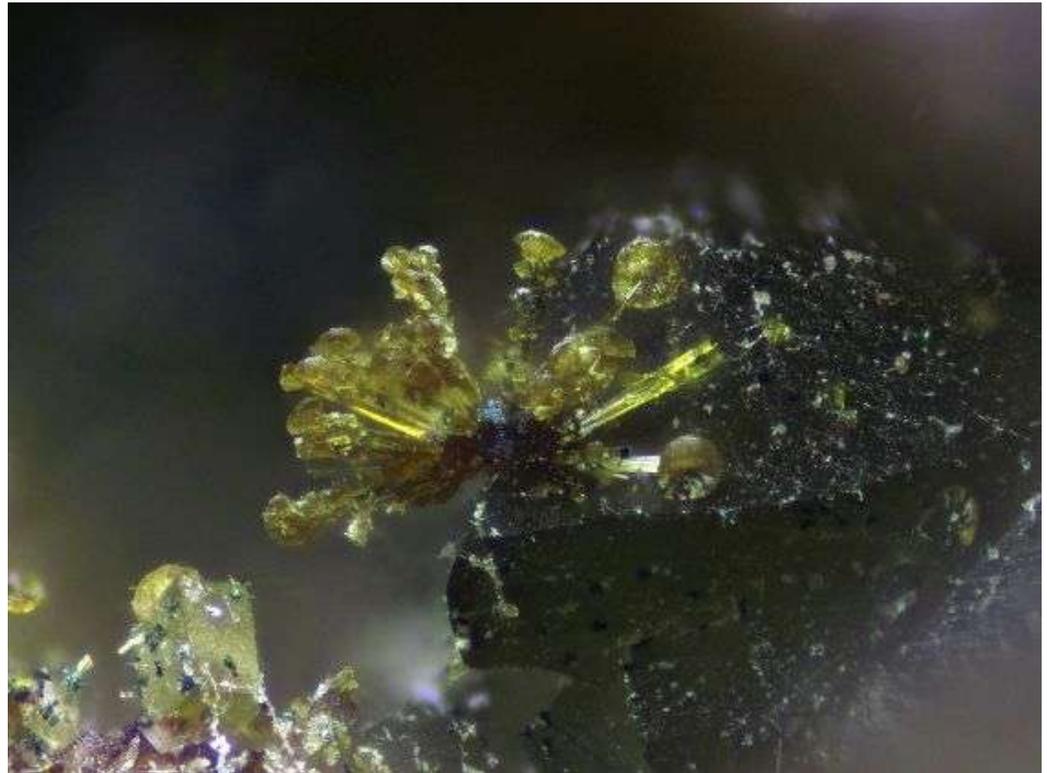
Bob Wilken
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Newsletter

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Whitmoreite on whitmoreite: A 0.6 mm naval mine.
Palermo #1 Mine, North Groton, NH.
A Bob and Anna Wilken specimen. © 2022 Bob Wilken

MMNE Secretarial Report for January 15, 2022

(Virtual Meeting online via Zoom)

23 members present, 1 arrived later. Scott Rielly started the meeting at 10:12 AM.

Scott Dion read the treasurer's report. Scott Rielly noted that he is still having trouble gaining access to collecting sites due to COVID.

Correction to November 2021 secretary report: Woody Thompson will check with British MM society for speakers (not Kermit as stated)

OLD BUSINESS:

Tom Mortimer asked about the status of an additional collection purchase. Ongoing.

Peter Cristofano asked about Federation insurance. Scott Dion stated that the check would be sent out to the Federation within the next month.

For the June symposium – Bob Janules may talk on the Oliver Trench at Moat Mountain NH if the symposium is virtual.

NEW BUSINESS:

Scott Rielly mentioned that he thought the Madison Ledge Mine was performing restoration.

Meeting was adjourned at 10:23AM

Respectfully submitted,

Neil Cavanagh, Secretary

MMNE member Danielle Desmarais passed along a notification of a quarry field trip sponsored by the Flanders Nature Center "A Geology Field Trip to the O&G Quarry, Southbury, CT."

Geology Field Trip to O&G Quarry - Sat., April 9 10:00AM - 12:00PM

Join Flanders & PRWC on a tour of O&G's Southbury trap rock quarry for a field trip highlighting some fascinating geological facts and views of ancient volcanic rocks and minerals. Appropriate for all ages, a fun and informative slide lecture will be followed by a guided tour of the quarry to identify ancient volcanic rocks and minerals.

DATE: Saturday, April 9

TIME: 10:00 AM–12:00 PM

PLACE: O&G Traprock Quarry, 236 Roxbury Road , Southbury, CT

Link:

<https://app.etapestry.com/cart/FlandersNatureCenter/default/category.php?ref=897.0.843728235>

A fee and registration may be required.

MMNE Secretarial Report for February 19, 2022

(Virtual Meeting online via Zoom)

19 members present, 3 arrived later. Scott Rielly started the meeting at 10:08 AM.

Scott Dion read the treasurer's report.

OLD BUSINESS:

None

NEW BUSINESS:

Bob Wilken made a proposal and motion to grant George Adleman a \$1,000.00 grant for purchase of a suitable Raman microscope, if and when purchased, to allow Raman testing on smaller micro specimens. This proposal had been unanimously recommended by the Executive Committee. The proposal was passed unanimously by members present.

Scott Dion advised that the Trinity Church has again revised their policy on in person meetings. They will now allow in person meetings, to include all of their previous stated requirements that include only using our designated room and area. The only bathroom available for use would be the bathroom in the entry corridor, and the club would need to clean up after the meeting, to include wiping down all areas, table, chairs, etc. Janitorial services will not be available.

A motion was made and unanimously passed to table discussion on in person meetings until next month.

Scott Rielly is presently pursuing two collections for the club.

Danielle Desmaris discussed the possibility of running a field trip to the Westfield Serpentine Quarry.

Scott Rielly noted that he is still having trouble gaining access to collecting sites due to COVID.

Meeting was adjourned at 10:53AM, followed by the online auction.

Respectfully submitted,

Neil Cavanagh, Secretary

BENDADAITE FROM THE TURNER MINE, MARLOW, NH: A FIRST FOR NORTH AMERICA?
BOB AND ANNA WILKEN

On a late October day in 2020 Anna and I headed out for our second or third trip that year to the Turner Mine in Marlow, NH. Our search for further micro species there had recently turned up a few interesting discoveries. The upper dump had been pretty well trenched and turned over revealing some material with narrow stringers of lithiophilite. Characteristic phosphate black staining was present in much of it, most notably in the cleavelandite. A discovery of a jahnsite group species found in 2017 had intrigued me (Bob) and drew me back. But, for whatever reason it took nearly three years to do so.

Although Turner is most noteworthy for its elbaite, it is almost always embedded. So, if you are lucky, you might expose a small crystal segment in matrix. Apatite in varying attractive shades of blue to green is also found squeezed and running throughout some of the pegmatite. Due to color similarities, it is often difficult to visually distinguish the apatite from tourmaline when massive. The pegmatite is not very generous in terms of vugs, so micro crystals are generally difficult to find. If you are lucky, you may find a vuggy albite specimen with betrandite crystals, fluorapatite, or a columbite. Chabazite crystals are occasionally found in the interstices of cleavelandite. Garnet is generally embedded, as are zircons. With a

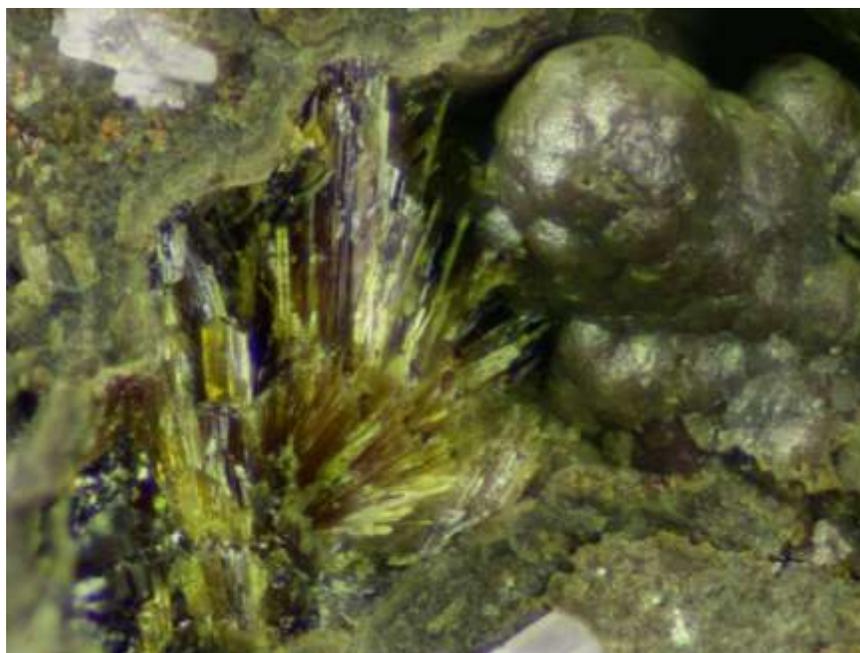


Figure 1: 1.1 mm field of view

single trip or even maybe a second or third, you may come to the conclusion that you've found everything there is to find.

As so often is true, persistence and collecting sheer volumes of material eventually may bring a reward. Often times you are fortunate to go home with one interesting rock in a whole bag or bucketful. And, that was the case with an unusual find that Anna made. While in the process of breaking down one of her pegmatite chunks, she was lucky enough to find what appeared to be either childrenite or whitmoreite. Either of these would have been a satisfying discovery for Turner. After a Boston College EDS was done

almost two years later, the result was a surprise. It proved to be an arsenate analogue of whitmoreite called bendadaite.

In fact, bendadaite has not been reported in North America according to Mindat.org records. (<https://www.mindat.org/min-31722.htm>)

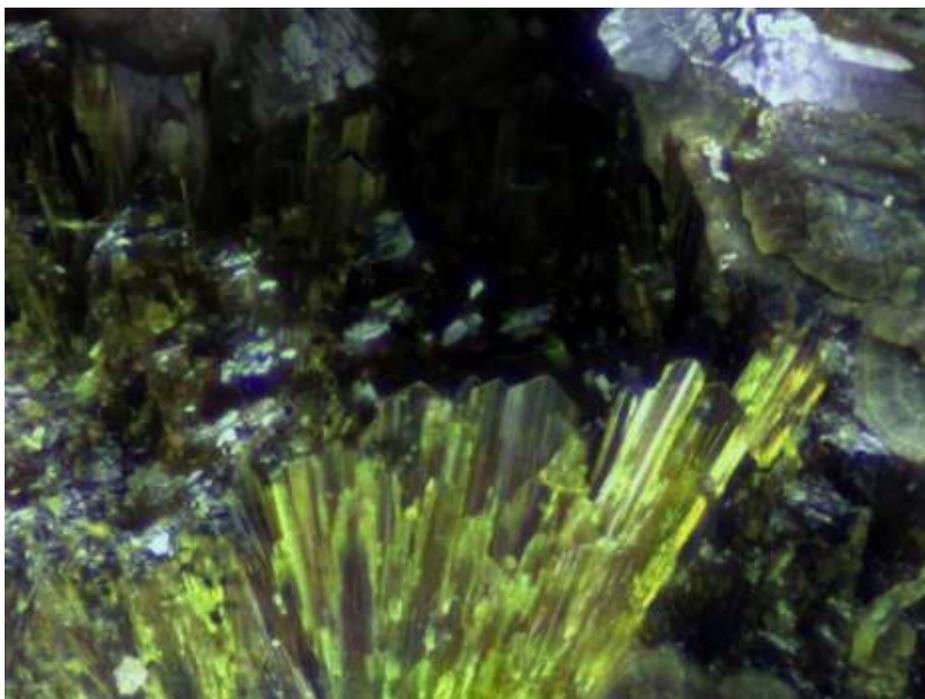
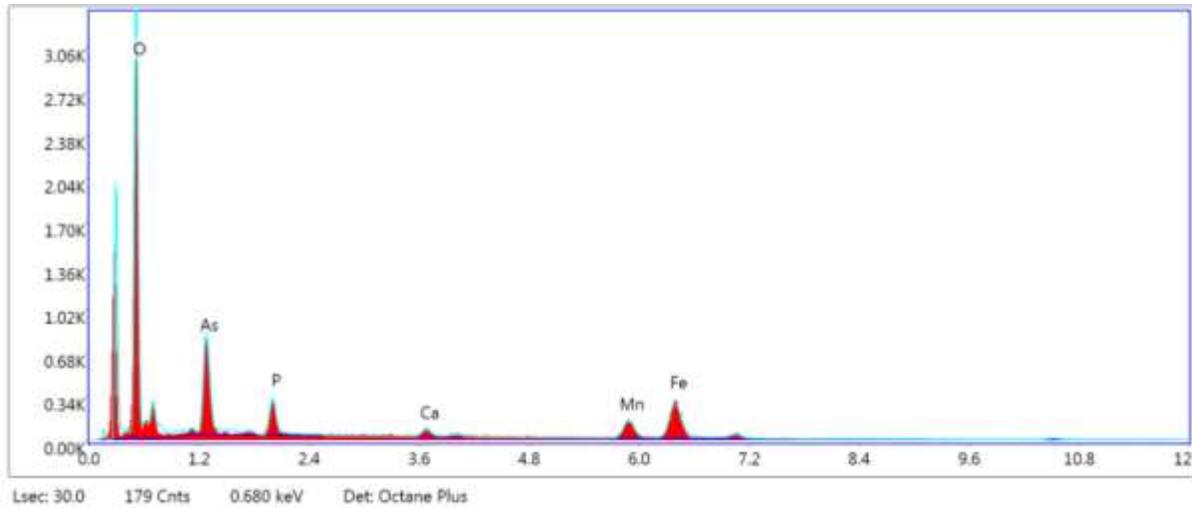


Figure 2: A 0.8 mm field of view

The ideal formula for bendadaite is $\text{Fe}^{2+}\text{Fe}^{3+}_2(\text{AsO}_4)_2(\text{OH})_2 \cdot 4\text{H}_2\text{O}$. It is a relatively new member of the arthurite group...the group that includes such species as whitmoreite, earlshannonite and ojuelaite. Bendadaite's type locality is the Bendada phosphate pegmatite in central Portugal. (https://rruff-2.geo.arizona.edu/uploads/MM74_469.pdf) It has since been reported from Africa, Europe, Asia (China) and South America. The International Mineralogical Association (IMA) approval was conferred in 2007 and the published abstract followed three years later in 2010.



Element	Weight %	Atomic %	Net Int.	Error %	Kratio	Z	A	F
O K	40.68	70.77	668.09	7.23	0.2374	1.1658	0.5007	1.0000
AsL	18.92	7.03	174.81	6.93	0.1013	0.8225	0.6512	0.9996
P K	4.12	3.71	95.42	8.06	0.0304	1.0154	0.7238	1.0034
CaK	1.68	1.17	27.67	12.83	0.0164	0.9965	0.9560	1.0276
MnK	9.80	4.97	73.87	8.42	0.0904	0.8721	0.9984	1.0589
FeK	24.79	12.36	150.86	5.51	0.2246	0.8845	1.0000	1.0243

As was the case with the Bendada pegmatite type specimen, it appears likely that this specimen developed in a void created by the dissolution of arsenopyrite, a relatively common sulfide at Turner. You can see by the EDS analysis however this specimen does not measure up to the “ideal” formula. There has been a partial substitution of As by P, quite permissible according to Jim Nizamoff. Also, there has been some substitution of Fe by Mn. Ca did not appear at all in a second probe. This analysis was done using a carbon tape grain so the sample was susceptible to contamination.

Dues have been suspended for 2021 members for calendar year 2022.

A new member application is provided below.

Membership in the MMNE runs from January 1st to December 31st. Dues are payable on or before January 1st for the upcoming year. Please fill out this form and return it with your payment to the club Treasurer. Please make checks payable to the Micromounters of New England, 15 Powers St #68, Milford NH 03055.

Name: _____

Street/PO Box Address: _____

City/State/Zip : _____

Telephone: _____ E-mail address: _____

Annual Membership Individual @ \$12 each _____ Total Member \$ _____

Annual Membership Family @ \$16 each _____ Total Members \$ _____

Annual Symposium: Number of Attendees @ \$15 each _____ Total Symposium \$ _____

Membership type: Individual \$ 12.00, Family \$ 16.00. Family membership includes two adults residing at the same address and all children at that address under the age of 18.

The Newsletter is published in January, February, March, April, May, June, October and November (no July, August or December issue), and is published approximately one week prior to the next scheduled meeting.