

MNCA Website www.dcmicrominerals.org

The Mineral Mite



Vol. 56 – No. 8 Washington D.C. – A Journal for Micromineralogists Oct. 2023

October 30 3-5:30pm Kings Park Library of Burke, VA

Program: Dave Fryauff's Recent Collecting & Micro Study

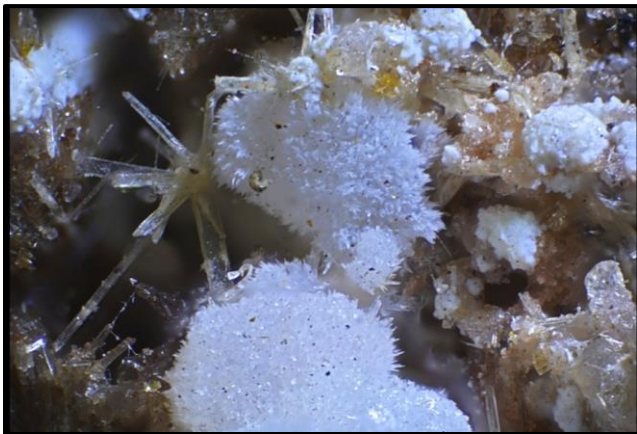
by Jeff Guerber, Vice President

The October meeting will be on Monday, Oct. 30, 3:00-5:30 pm in the Kings Park Library Conference Room (the small room). MNCA club president David Fryauff will update us on some of his recent mineral collecting journeys.



For November, we'll meet on Wednesday, Nov. 29, in KPL's large meeting room. Scott Duresky will be sharing with us the results of his research into the Rutherford #2 pegmatite.

Mystery Micro Mineral of the Month



*Clue: White-colorless radial crystal aggregates from the Franklin Mine, Franklin, Sussex Co., NJ.
by Aloha Pete Chin, Honolulu, Hawaii*

President's Message:

by David Fryauff



I had the pleasure of attending the Baltimore Mineral Society's 67th annual Paul Desautels Memorial Micromount Symposium with dear friend and MNCA past president David MacLean on the weekend of 7-8 October 2023. The new venue for this year's symposium was the Natural History Society of Maryland on 6908 Belair Road...just a couple of miles south of the 495 beltway. This was a truly smart and comfortable new venue.

Thanks to another MNCA past president (Tom Tucker), we came loaded with numerous specimens for the giveaway tables. We did not make it to the Friday night session with short talks and slide shows, but we enjoyed the excellent zoom presentations by new Hall of Fame inductees Martin Stolworthy and Ray Demark. Turn to page 3 for the rest of David's article.



Al Pribula, Quintin & Willow Wight

Micromineralogists of the National Capital Area, Inc.

Mystery Micro Mineral of the Month

by Aloha Pete Chin, Honolulu, Hawaii

White-clorless radial **Sclarite** crystal aggregates, "asterisk" of chlorophoenicite crystals, pinkish brown rhodochrosite spheres, "knobby" opaque white spheres of UM1986-10-CO:ClMgMn aka "Mineral F" on a bed of barely visible gageite. Franklin Mine, Franklin, Sussex Co., N.J. FOV=2.5mm.

Previous Meeting Minutes 9.27.2023

by Bob Cooke, secretary

The Micromineralogists of the National Capital Area (MNCA) met on September 27, 2023, at the Fairfax County Kings Park Library in Burke, Virginia. Members present were Bob Cooke, David Fryauff, Jeff Guerber, Dave Hennessey, John Kress, Dave MacLean, Michael Pabst, and Tom Tucker.



President Dave Fryauff called the meeting to order at 3:50 PM. Dave MacLean and Tom Tucker were recognized for their service as past presidents. With one correction. minutes of the June, July and August meetings were approved as published in the Mineral Mite. The June minutes had reported that Scott Duresky would discuss his research on the Rutherford Mines of Amelia County, VA in a November presentation to the NVMC; the presentation will actually be given to the MNCA in November.

The group discussed field trips.

*The Sep 23 Open House at the Willis Mountain Kyanite Mine was cancelled because of rain.

*A GLMS-MC trip to Hunting Hill Quarry is still scheduled for Saturday September 30 (Dave Fryauff will be one of the ten participants).

*GLMS-MC will have an auction and pot luck on September 30 from 11 am – 4:30 pm at Griffith Park Pavilion, 29 South Summit Ave, Gaithersburg MD

*The Southern Maryland Rock and Mineral Club will host their annual mineral show on Saturday, October 7, 2023 from 9 to 4 pm at the Old Waldorf School, 3074 Crain Highway, Waldorf, Md.20601 (On the access road near Checkers - next to Jaycee's Hall)

Dave Hennessey proposed that all of the remaining micromounts from the Barry Remer collection be donated at the Desautels Micromount Symposium. All agreed.

Discussion of the Atlantic Micromount Conference indicated that members were pleased with the event as it occurred on June 3rd at JMU. Opinions varied as to the venue and scope of activities for a 2024 AMC. Michael Pabst agreed to discuss options with Professor Liz Johnson and Dave Fryauff will talk with Sue Marcus.

Members confirmed that MNCA will sponsor a micromount demonstration table at the George Mason/NVMC Mineral Show on November 18-19. Dave Fryauff is the point-of-contact. A discussion of MNCA membership revealed that there is a small list of members who attend meetings and a much larger list of people who receive emails about club activities. Requests for a copy of the membership list should be sent to Michael Pabst. The meeting adjourned at 4:50 PM.

Previous Program Reviewed 9.27.2023

by Bob Cooke, secretary

Our September meeting was held on Wednesday, Sept. 27, 3:00 - 5:30 pm in the Kings Park Library Meeting Room. Members studied the new Betsy Martin Collection.



Prior club meeting photo by Kathy Hrechka

2023 Baltimore Mineral Society's 67th Annual Paul Desautels Memorial Micromount Symposium

by David Fryauff, President MNCA

The 2023 Hall of Fame inductees were Martin Stolworthy ("Killham Mine: A Story of a Minor Cornish Tin Mine") and Ray Demark ("Notable New Mexico Microminerals"). Both presentations took us on beautifully photographed and carefully researched historical and mineralogical adventures.

It was a very pleasant surprise to have Quintin and Willow Wight down from Canada for this symposium. Quintin's deeply researched presentation, "Theory and Practyse (sic) of Micromounting took us back in time to the earliest beginnings of microscopy and the progressive transition from visualizing animacules to preserving, visualizing, and making known the hitherto unseen/unknown world of microscopic minerals (aka microminerals). Great talks interspersed between lots of fun social time, good food and drink, and naturally.....tables groaning under the weight of giveaway mineral specimens from mines, quarries, and localities covering every corner of the globe.

You can believe me when I tell you that I gave serious deliberation to many of these giveaway specimens, not only for myself, but collectively for all of you, my dear and esteemed fellow Micromineralogists of the National Capital Area (An appropriate & tasteful emoji can go here, friends). Sincere thanks for all the hard work and time devoted by the Symposium Chair, Prof. Mike Seeds, and his fellow BMS officers Al Pribula, Herb Close, and Jake Slagel.



Al Pribula checking out some of the freebies.



Quintin Wight presentation



Bernie Emery, Quintin Wight, & Al Pribula

Photo credits by David Fryauff

2023 Desautels Memorial Micromount Symposium Photo Gallery

by Hillar Ilves, attendee



Dr. Mike Seeds, Symposium chair



Dr. Mike Seeds, concentrating on micromounting



Attendee stations, set up with their microscopes.



Al Pribula preparing micros for the silent auction. Note the natural world items in the exhibits, sea-shells, butterflies, birds, etc.

Continued next page.

Micromineralogists of the National Capital Area, Inc.



Micromineral freebie unknown



Micromineral freebie unknown



Chalcedony, aka grape agates



Seashell collection



Pyrite with quartz



Photographer Hillar Ilves capturing a saber tooth cat.

Ferric Phosphates: Strengite and Phosphosiderite, and Beraunite

by Michael Pabst PhD, Treasurer

In the previous article we looked at Ludlamite and Vivianite, which are ferrous phosphates (Fe^{2+}), although we saw that light can darken and autoxidize Vivianite to



Metavivianite that contains some ferric iron (Fe^{3+}). Here we describe two dimorphs of ferric phosphate, Strengite (orthorhombic) and Phosphosiderite (monoclinic). They are very similar minerals in appearance. Their β angles differ by only 0.51° , a difference that would be hard to discern visually. They can be distinguished by X-ray diffraction. Fortunately, the habits of Strengite and Phosphosiderite sometimes differ visibly, and the matrix is usually different, depending on the locality, so one can make an educated guess between Strengite and Phosphosiderite.

Strengite. Strengite $\text{Fe}^{3+}(\text{PO}_4) \cdot 2\text{H}_2\text{O}$ is orthorhombic *mmm* – dipyramidal, so $\beta = 90^\circ$ exactly. Hardness $3\frac{1}{2}$ -4. (The arsenate analog of Strengite is Scorodite, which appeared in a previous article.) Strengite is often associated with other iron phosphates, like Stewartite and Kidwellite, as seen in the photos below. These other iron phosphates also contain another metal cation in addition to iron, and we will look at them in a later article.



Strengite (purple), Stewartite (yellow) and Caxoxenite (orange balls) from Foote Mine, Kings Mountain, Cleveland County, NC. FOV 1.5 mm. Photo and specimen by Michael Pabst, using stereo microscope, stacking 8 images.



Strengite from Indian Mountain, Cherokee County, Alabama. FOV 2.5 mm. Photo and specimen by Michael Pabst, using stereo microscope, stacking 15 images.



Strengite (pink), Kidwellite (green) and Beraunite (brown blades) from Indian Mountain, Cherokee County, Alabama. FOV 6 mm. Photo and specimen by Michael Pabst, using stereo microscope, stacking 27 images.

Ferric Phosphates continued

Phosphosiderite. Phosphosiderite $\text{Fe}^{3+}(\text{PO}_4)\cdot 2\text{H}_2\text{O}$ is monoclinic $2/m$ – prismatic, $\beta = 90.51^\circ$. Hardness 3½-4. I have two specimens from the Bull Moose Mine in South Dakota, both on a matrix of black Rockbridgeite or Barbosalite?



Phosphosiderite from Bull Moose Mine, Custer County, South Dakota. FOV 2.5 mm. Photo and specimen by Michael Pabst, using stereo microscope, stacking 8 images.



Phosphosiderite from Bull Moose Mine, Custer County, South Dakota. FOV 4 mm. Photo and specimen by Michael Pabst, using stereo microscope, stacking 3 images.



Phosphosiderite from Bull Moose Mine, Custer County, South Dakota. FOV 4 mm. Photo and specimen by Michael Pabst, using stereo microscope, stacking 25 images. (This is from the other side of the specimen in the preceding photo.)

Here is a purple Phosphosiderite from Brazil that looks a lot like the first photo of purple Strengite from North Carolina. Clearly one cannot distinguish Phosphosiderite from Strengite based on color.



Phosphosiderite on Dufrenite from Salpucuaia Mine, Minas Gerais, Brazil. FOV 3 mm. Photo by Michael Pabst using macro lens and stacking 85 images; specimen from Betsy Martin MNCA collection.

Ferric Phosphates continued

Here is a beautiful Phosphosiderite from the Bull Moose Mine, photographed by Edgar Müller: <https://www.mindat.org/photo-489075.html>. If this is the true color, I am impressed.

Beraunite. Finally, let's look at the ferric phosphate Beraunite $\text{Fe}^{3+}_6(\text{PO}_4)_4\text{O}(\text{OH})_4 \cdot 6\text{H}_2\text{O}$. Beraunite is monoclinic m – domatic, $\beta = 93.67^\circ$, which is a low symmetry class with only one mirror plane. Nevertheless, Beraunite does form nice crystals. Beraunite is dark red to brown. Hardness 3-4. Beraunite has recently been redefined to be the fully oxidized or ferric form of this iron phosphate, which was formerly known as “Eleonorite”. There is now also Ferroberaunite, $\text{Fe}^{2+}\text{Fe}^{3+}_5(\text{PO}_4)_4(\text{OH})_5 \cdot 6\text{H}_2\text{O}$, containing both Fe^{2+} and Fe^{3+} , which is usually green.

My best Beraunite specimens come from Indian Mountain in Alabama.



Beraunite (red), Kidwellite (light green) on Dufrenite (black) from Indian Mountain, Cherokee County, Alabama. FOV 6 mm. Photo by Michael Pabst, using stereo microscope, stacking 25 images.



Beraunite (red) with Kidwellite (gray-green) from Indian Mountain, Cherokee County, Alabama. FOV 9 mm. Photo by Michael Pabst using stereo microscope, stacking 23 images. (Reminds me of an angry red-headed lizard.)

On Mindat, there are spectacular photos of Beraunite from Indian Mountain, Alabama, taken by Henry Barwood: <https://www.mindat.org/photo-722053.html> and <https://www.mindat.org/photo-722117.html>.

In the next article, we will talk about iron phosphates, like Rockbridgeite, that contain *both* ferrous and ferric iron as essential components of the crystal structure.



Where in the world is Michael Oct 2023? He is in the Mineral Museum at Athens University in Greece, admiring azurite/malachite from the Christiana mine, 2nd 3rd Lavrion, Greece. Photo by Karen Pabst

Micromineralogists of the National Capital Area, Inc.

Friends of Mineralogy – Pennsylvania Chapter Symposium Nov 10-12, 2023 <https://www.rasloto.com/FM/>

Friends of Mineralogy – Pennsylvania Chapter SYMPOSIUM ON PENNSYLVANIA MINERALOGY AND GEOLOGY and FIRST ANNUAL MINERAL, GEM, AND FOSSIL SHOW

IN PERSON and ONLINE

Symposium and Show November 11, 2023 Field Trip November 12 University of Pittsburgh – Johnstown, PA

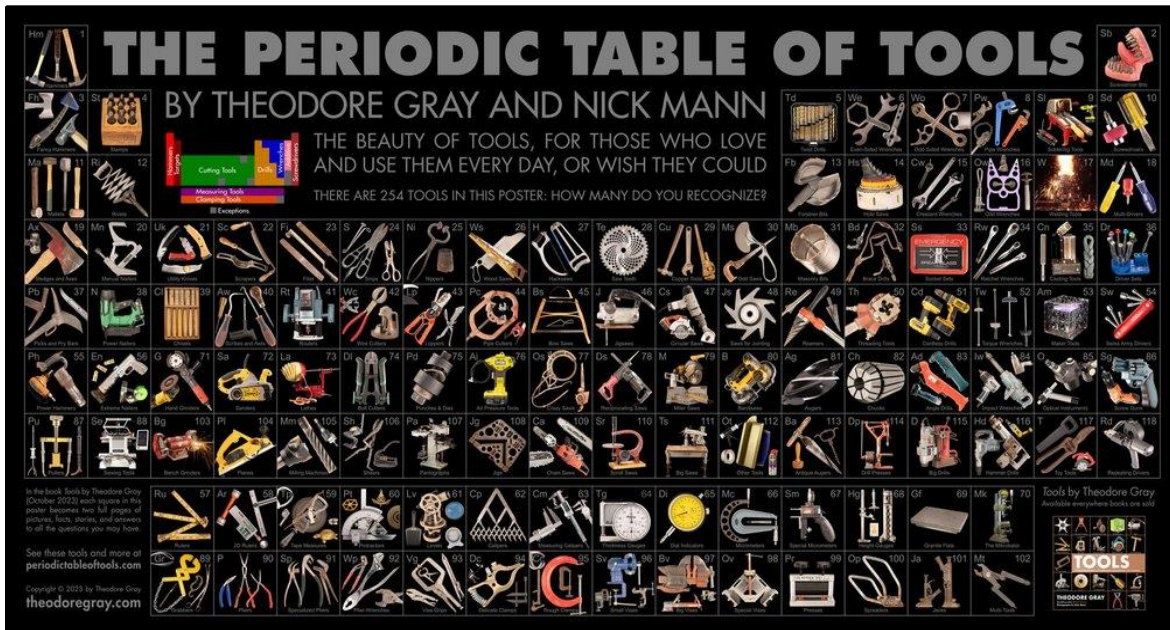
The Friends of Mineralogy – Pennsylvania Chapter will hold their 2023 Symposium and field trip, and First Annual Mineral, Gem, and Fossil Show, on the second weekend in November. Mineral collectors arriving on Friday are invited to an evening Meet & Greet; bring your best find from this year to talk about. Those in attendance on Saturday will check in at the University of Pittsburgh – Johnstown’s Heritage Hall at the Living Learning Center. Activities, including informative talks by knowledgeable speakers on minerals, geology, and mining in Pennsylvania and beyond, are planned. Online attendance is also being planned. The Mineral Show, held on Saturday only, is free admission for all. On Sunday, a field trip will provide an opportunity for mineral collecting at New Paris Quarry. The field trip is open only to symposium registrants who attend the Saturday afternoon safety briefing in person or online. Safety equipment will be required.

Speakers scheduled for Saturday, November 11: William Kochanov, PG - Gypsum Occurrence in the Vanport Limestone, Lawrence County, Pennsylvania Dr. Andrew Sicree - Minerals from Centre County: From the bottom of the quarry to the top of the Sky Dr. Robert Altamura - A Model for the Cause of Iridescence in Plagioclase Feldspar and the Effect of Superimposed Polysynthetic Twinning Chris Howard, Aleya Schreckengost, and Dr. Ryan Kerrigan - The Geochemistry and Petrology of the Bald Hill Bentonites in Southwestern Pennsylvania Aleya Schreckengost - Examining Mineral Fluid Inclusions to Assess the Economic Potential of Allegheny Hydrothermal Systems William Stephens, PG, and Stephen R. Lindberg - Minerals and Geological Investigations at the New Paris Quarry, Pennsylvania

All interested mineral collectors are invited to register and attend. As usual, there will be a silent auction, give-away table, and plenty of opportunities for visiting with fellow enthusiasts. Lunch is available on site by prior order (see registration form), at the nearby campus cafeteria, and at restaurants within short driving distance.

Please see the web site for registration <https://www.rasloto.com/FM/whats-new>

November 10-11-12, 2023 Location: Friday evening, Nov. 10: Meet & Greet at Sleep Inn, 453 Theatre Dr, Johnstown, PA 15904



Micromineralogists of the National Capital Area, Inc.



American Federation of
Mineralogical Societies

(AFMS)
www.amfed.org

Please read the AFMS bulletin attached in original monthly email to MNCA members.

2023 Purpose of the AFMS: To promote popular interest and education in the various Earth Sciences, and in particular the subjects of Geology, Mineralogy, Paleontology, Lapidary, and related subjects, and to sponsor and provide ways to coordinate the work and efforts of all interested persons and groups; to sponsor and encourage the formation and international development of Societies and Regional Federations and thereby to strive toward greater international good will and fellowship.



Celebrating 50 years!
The Rock & Gem magazine is recognized as the
official magazine of the AFMS.
Free archived downloads

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Eastern Federation of
Mineralogical and Lapidary
Societies

(EFMLS)
<https://efmls.org>

**Communication and Involvement
Are the Keys to Our Success!**

Please read the EFMLS bulletin attached in original monthly email to MNCA members.

Local Geology Club Meetings:

October 2023

2: Northern VA Mineral Club NVMC 7:30pm
Fall club auction.
www.novamineralclub.org

**4: Mineralogical Society of the District of Columbia
MSDC 7:30pm Zoom**
www.mineralogicalsocietyofdc.org

**9: The Gem, Lapidary and Mineral Society of
Montgomery County, Maryland - GLMSMC**
Meeting 7:30 pm www.glmsmc.com

**?: The Gem, Lapidary and Mineral Society of
Washington, DC - GLMS-DC meeting 7 p.m.**
Chevy Chase Community Center, 5601 Connecticut
Ave; Washington, DC. www.glmsdc.org

**No Baltimore Mineral Society BMS meeting this
month due to Desautels Symposium**
www.baltimoremineralsociety.org

30: Micromineralogists of the NCA, Inc. MNCA
3-5:30pm Kings Park Library, Burke
www.dcmicrominerals.org

The Mineral Mite October 2023

Micromineralogists of the National Capital Area, Inc.



GeoWord of the Day and its definition

coalingite (co-a-ling'-ite) A brown or reddish-brown rhombohedral mineral: $Mg_{10}Fe^{3+}_2(CO_3)(OH)_{24} \cdot 2H_2O$

heulandite-Ca (heu'-land-ite) A zeolite mineral: $(Ca,Na)_5(Si,Al)_36O_{72} \cdot n H_2O$. It often occurs as white to pink foliated masses or as coffin-shaped monoclinic crystals in cavities in decomposed basic igneous rocks. See also: *clinoptilolite*; *stilbite-Ca*.

perovskite (pe-rov'-skite) (a) A yellow, brown, or grayish-black cubic mineral: $CaTiO_3$. It sometimes has cerium and other rare-earth elements. Cf: *latrappite*. Also spelled: *perofskite*. (b) A group name for cubic minerals with an analogous composition, but with Ca replaced by Na, and Ti replaced by Nb.

All terms and definitions come from the [Glossary of Geology, 5th Edition Revised](#).

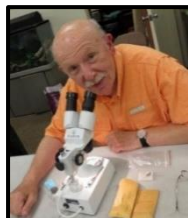
GeoWord of the Day is brought to you by: EnviroTech! envirotechonline.com.

Barry Remer update. Please visit him.

by Kathy Hrechka

We learned that Barry is now bedridden, and happy to converse with us. We so love Barry and remain his family within our geology community. Please visit him or send a card to brighten his day. Sincerely, Kathy

Barry Remer
Potomac Place
3236 Locker Street
Falls Church, VA 22042
Potomac Place phone
571-378-0295



Micromineralogists of the National Capital Area
www.dcmicrominerals.org

We are temporarily meeting at Kings Park Library in Burke, 3-5:30pm (forth Monday) until we locate a permanent meeting place.

MNCA Purpose: To promote, educate and encourage interest in geology, mineralogy, and related sciences.

President: David Fryauff
Vice President: Jeff Guerber
Secretary: Bob Cooke
Treasurer: Michael Pabst
Editor/Historian: Kathy Hrechka
Website: Kathy Hrechka
AMC Conference: open

The society is a member of:

* Eastern Federation of Mineralogical and Lapidary Societies (EFMLS) www.efmls.org
* American Federation of Mineralogical Societies (AFMS) www.amfed.org affiliation

Dues: MNCA Membership Dues 2023
\$15 (single) or \$20 (family) donations
MNCA - Michael Pabst, Treasurer
270 Rachel Drive
Penn Laird, VA 22846

Editor's Note: By Kathy Hrechka

Send your articles and photos to your editor.
Club Article Deadline is the 1st of each month.
***The Mineral Mite* will be emailed by the 5th.**
No newsletter July/August

Inducted into Editor's Hall of Fame – 2018
EFMLS Trophy 2021 Small bulletins

Newsletter inputs:

* David Fryauff
* Jeff Guerber
* Michael Pabst
* Bob Cooke
* Pete Chin
* Hillar Ilves



The Mineral Mite October 2023