

September 30 3-5:30pm Kings Park Library, Burke

Program: National Limestone's Paxtonia & Mount Pleasant Mills Quarries, PA

By Jeff Guerber, Vice President

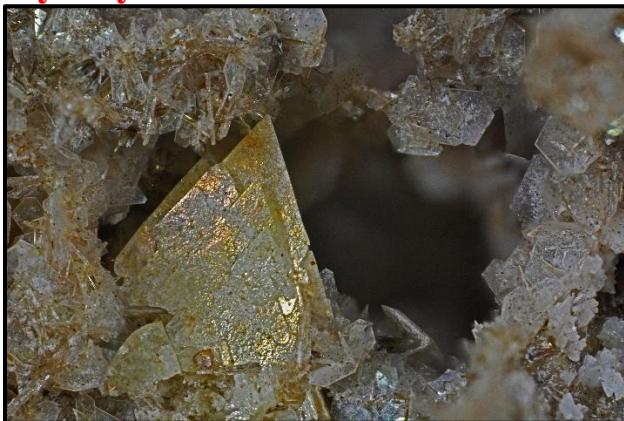


New member John Sanborn has volunteered to give us a presentation on NVMC's recent collecting trip to National Limestone's quarries in Paxtonia and Mount Pleasant Mills, Pennsylvania. The Sept meeting will be on MON, SEPT. 30, 3:00-5:30pm in the Kings Park Library large meeting room.



John Sanborn at a National Limestone Quarry, PA

Mystery Micro Mineral of the Month



President's Message:

By David Fryauff



I was surprised to see that our friends in The Baltimore Mineral Society have placed me into the Friday evening session of the 68th Paul Desautels Memorial Micro-mount Symposium, September 4-6, 2024. The venue for this event will be (as last year) the Natural History Society of Maryland at 6908 Belair Rd., Baltimore, MD 21206. I hope that members of our MNCA group will be able to attend this year's Symposium where Paul Adams and George Rambo will be inducted into the Micromounter's Hall of Fame.

I honestly do not recall volunteering to give an informal program... but then, again, I am starting to forget some simple things like attending our monthly meetings, feeding the dog, shaving, and keeping up correspondence with my brother, cousins, and other family members.

I'm glad I read through the 4 pages Mike Seeds sent out, otherwise I would have messed up. I am wondering if any of you guys can help me as I begin to prepare for my presentation on "The unusually Fluorescent (LWUV) Response of Bi-terminated Fluorapophyllite from the Vulcan Materials Quarry in Manassas, Prince William County, Virginia.

Continued next page

Mystery Micro locality: Mont St.-Hilaire, Quebec, Canada. FOV=7mm. Answer can be found on page 3.
By Aloha Peter Chin, Honolulu, Hawaii

President's Message continued

The Vulcan Manassas quarry was one of the most accessible, and mineralogically productive of all the northern VA traprock quarries. While all the great quarries in Centreville, Bull Run, and Loudoun County had shut out mineral collectors before 2010, the Vulcan group kept their doors open to all of the DMV mineral clubs right up to 2019 when COVID-19 hit. The Vulcan Manassas quarry was the first quarry I collected in, when I became a member of the GLMSMC back in 2010 and in those 9 years, I think I made over 20 trips to this quarry, most of them as the field trip coordinator for our Montgomery MD GLMSMC club. We had excellent relations with this quarry and in the time, I was leading field trips there we never had any mishaps or accidents. Among many exciting and interesting mineral finds from the Vulcan Manassas quarry, my "best" find was a hand-size piece of prehnite with crystals of calcite, stilbite, and what I thought was quartz.

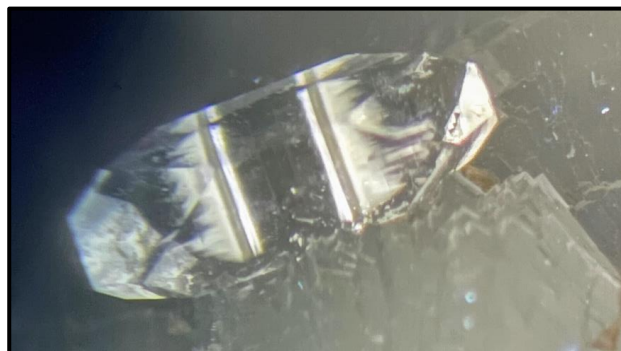
Those little clear, bi-terminated crystals were not quartz. They were apophyllite. These were not the typical cubic and tabular hydroxyapophyllite-K (formerly termed apophyllite-(KOH)) that was the predominant apophyllite group member common throughout the northern VA trap rock quarries. These oddly shaped apophyllite crystals were elongated with bi-terminated pointy tips and looked very much like Mindat's fluorapophyllite-K member (formerly termed apophyllite-(KF)). I used a LW UV flashlight to help visualize these small crystals and was amazed to see them light up on my rock "like a swarm of bees" because each crystal had two sets of bright double lines encircling the prism just below the two pyramidal terminations. I posted good photos of these crystals to Mindat calling them apophyllite-group and asking "the Mindat member community" to let me know if they had seen or found this type of apophyllite crystal and its UV pattern at Manassas, or other northern Virginia traprock quarries, or virtually anywhere else. Interestingly, I have several excellent, large, bi-terminated specimens of what I believe is fluorapophyllite-K from Poona, Maharashtra State, India that demonstrates no LW or SW UV fluorescent response.....So what does it mean? I am guessing that the UV response is due to organic impurities in the crystal that are alligning according to internal cleavage lines in the structure. But wait.....there's more to this story.....

Fluorapophyllite-K

By David Fryauff

If ANY of YOU MNCA members have specimens of the bi-terminated fluorapophyllite-K species that you have collected in the northern VA traprock quarries, please take a look at it under LW UV and see if it has the surprising fluorescence that I observed in specimens which I collected at Manassas. My photos of these fluorapophyllite-K can be seen on the Mindat.org page for the Vulcan Manassas, VA quarry.

If you have a good specimen of this mineral that also shows unusual fluorescence, please take a photo of your specimen under LW UV and send it to me to include in the presentation!!!! I think I have made 20 field trips to the Vulcan Manassas quarry over the years since 2010 and usually found the blocky Hydroxylapophyllite crystals.....Only a few times have I found the bi-terminated Fluorapophyllite-K type crystals. I suspect that some of you out there have some of these rocks in your garage or basement.



Fluorapophyllite-K Vulcan Quarry Manassas, VA. David Fryauff photomicrography. Posted on Mindat.



Fluorapophyllite-K Vulcan Quarry Manassas, VA. David Fryauff photomicrography. Posted on Mindat.

Micromineralogists of the National Capital Area, Inc.

National Limestone Quarry Collecting Sept 30th program by John Sanborn



John Sanborn at a National Limestone Quarry, PA

Mystery Micro Mineral of the Month

By Aloha Peter Chin, Honolulu, Hawaii
Answer: **Genthelvite**, Poudrette Quarry, Mont St.-
Hilairius, Quebec, Canada. FOV=7mm.

Previous Meeting Minutes 6.24.2024

By Bob Cooke, Secretary

The Micromineralogists of the National Capital Area (MNCA) met on June 24, 2024, at the Fairfax County Kings Park Library in Burke, Virginia. Seven members were present: Bob Cooke, Jeff Guerber, Dave Hennessey, John Kress, David MacLean, Michael Pabst and Tom Tucker. The MNCA business meeting was called to order by Vice President Jeff Guerber at 4:45 PM. He recognized Dave MacLean and Tom Tucker for their contributions as past presidents. Minutes of the May 2024 MNCA meeting were approved as published in the Mineral Mite. Michael Pabst reported there were no financial transactions.

Tom Tucker brought a flat of self-collected Tyuyamunitite from the Marie Mine in Carbon County, Montana for give-away.

Discussion of a possible AMC for 2024 revealed no hot prospects for a location.



Jeff Guerber will continue to investigate options for the Rockville Science Center and Michael Pabst will continue discussions with Prof. Liz Johnson at James Madison University.

MNCA will continue to meet monthly through the summer but without formal agendas. The next Mineral Mite will be published in September. The next MNCA meeting will be Monday, July 29th in the Kings Park Library large meeting room.
The meeting adjourned at 4:45 PM

Previous Program Reviewed 6.24.2024

By Bob Cooke, Secretary

Michael Pabst narrated a presentation on photographs he has taken of uranium minerals in his collection.



Wulfenite (orange) $Pb(MoO_4)$

Torbernite (green plates) $Cu(UO_2)_2(PO_4)_2 \cdot 12H_2O$

Kasolite (yellow) $Pb(UO_2)(SiO_4) \cdot H_2O$

Malachite (green acicular) $Cu_2(CO_3)(OH)_2$

FOV 5 mm Musonoi, Katanga, D R Congo

Photo by Michael Pabst

Previous Meeting Minutes 7.29.2024

By Bob Cooke, Secretary

The Micromineralogists of the National Capital Area (MNCA) met on July 29, 2024, at the Fairfax County Kings Park Library in Burke, Virginia.

Continued next page.

Micromineralogists of the National Capital Area, Inc.

Meeting Minutes 7.29.2024 continued

Ten members were present: Bob Cooke, Dennis Coskren, Dave Fryauff, Jeff Guerber, Dave Hennessey, Kathy Hrechka, John Kress, David MacLean, Michael Pabst and Tom Tucker. Two visitors were also present: Craig Moore and John Sanborn. By the end of the meeting, both Craig and John were new members.

The MNCA business meeting was called to order by President Dave Fryauff at 4:15 PM. He recognized Dave MacLean and Tom Tucker for their contributions as past presidents. Dave Fryauff will ensure that the Virginia state corporation fee will be paid, and signatures will be updated.

Dave Hennessey and Dave MacLean both brought egg cartons of mixed minerals for give-away. Tom Tucker brought a flat of minerals from Cornwall, Lebanon County, Pennsylvania. Tom also brought a very nice plexiglass carousel with 10+ mounted, labelled micros and empty sockets for 3 more specimens to be added. When completed this carousel may fit into our "Mineral Beauties" wheel which we routinely use as part of our MNCA display at the November NVMC & March GLMSMC shows.

There were no developments regarding an Atlantic Micromounters' Conference (AMC) for 2024. Kathy expressed support for the Rockville Science Center as a possible venue.

The following mineral-related activities were mentioned:

*Aug 16-18 Gem Miners' Jubilee, Lebanon Expo & Fairgrounds, 80 Rocherty Rd, Lebanon PA 17042

*(Sep 14 Blue Arrow Farm, Whiskey Crossing -- could not verify any information)

*Sept -date unknown- Sam Linton is organizing a field trip to the Haines & Kibblehouse Penn-Maryland Materials Quarry, Fulton Township, Lancaster County, Pennsylvania

*Sep 20-22 Shenandoah Valley Gem & Mineral Society Mineral Show, Augusta Expo Center, 277 Expo Road, Fishersville, VA

*Sep 28/29 Central Pennsylvania Rock and Mineral Club Mineral Show, Zembo Shrine Auditorium 2801 N. 3rd Street, Harrisburg, PA 17110

*Oct 4-6 Desautels Micromount Symposium at Natural History Museum, Baltimore, MD

*August 17 NVMC will sponsor a field trip to National Limestone Quarries 1 & 2, Snyder County, PA. POC is Katy Johnson at 703-283-6272

Kathy Hrechka reported a SNAFU in the sponsorship of MNCA's web site. Our traditional website name (dcmicrominerals.org) now results in a white/blank page. Temporarily, you can reach the MNCA site by going to <https://dcmicrominerals.weebly.com/> Kathy is working with Casper Voogt to correct the issue with Go-Daddy and Weebly. Members authorized funds as necessary to establish a working contract. Kathy also requested help posting pictures and information to the website once it has been fixed; John Sanborn agreed to help. George Loud is moving back to the DC area and is expected to attend the October MNCA meeting.

Next MNCA meeting will be Monday, August 26 at the Kings Park Library. Dave Fryauff suggested everyone bring a picture of their favorite blue or green mineral. The meeting adjourned at 4:45 PM

Previous Program Reviewed 7.29.2024

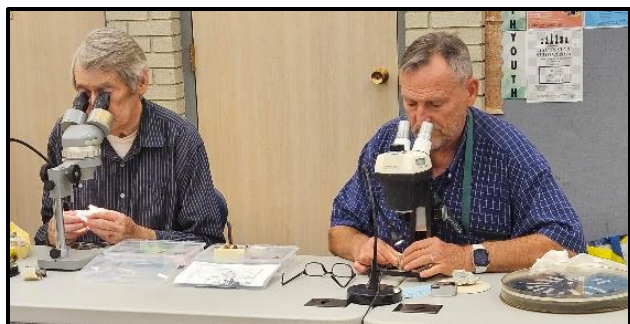
By Bob Cooke, Secretary

David Fryauff gave a slide presentation on "Minerals Recently Collected from the Barite Mining District, Washington County, Missouri." The trip was undertaken by Sam Linton and Marco Molinaro who collected numerous specimens which they shared with Dave. Dave then photographed and identified them for our enjoyment.



Members viewing David Fryauff's program, on "Minerals Recently Collected from the Barite Mining District, Washington County, Missouri." Photo by John Sanborn

Micromineralogists of the National Capital Area, Inc.



Tom Tucker and David Fryauff. Photo by K. Hrechka

Previous Meeting Minutes 8.26.2024

By Bob Cooke, Secretary

The MNCA business meeting was called to order by President Dave Fryauff at 4:40 PM. He recognized Dave MacLean and Tom Tucker for their contributions as past presidents. Michael Pabst reported there were no changes to the club finances. Scott Duresky, Dave Hennessey, Dave MacLean and Tom Tucker brought minerals for give-away.

Upcoming mineral events include:

*Sep 20-22: Shenandoah Valley Gem & Mineral Society Mineral Show, Augusta Expo Center, 277 Expo Road, Fishersville, VA

*Sep 28-29: Central Pennsylvania Rock and Mineral Club Mineral Show, Zembo Shrine Auditorium 2801 N. 3rd Street, Harrisburg, PA 17110

*Oct 4-6: Desautels Micromont Symposium at Natural History Museum, Baltimore, MD

*Oct 5: Southern Maryland Rock, Mineral and Fossil Show at 3074 Crain Highway, Waldorf, MD

*Nov 9: Richmond Gem and Mineral Society annual Rock Swap and Sale from 9 a.m. to 3 p.m. at Ridge Baptist Church 100 Shady Grove Road, Mechanicsville, VA

*Nov 23-24: Northern Virginia Mineral Club/George Mason University annual Gem Mineral & Fossil Show in Dewberry Hall, Johnson Center, George Mason University, Fairfax, VA

The next MNCA meeting will be held on Monday, Sept. 30 at the Kings Park Library. The meeting had dissolved into chaos by 4:50pm.

Previous Program Reviewed 8.26.2024

By Bob Cooke, Secretary

David Fryauff gave a slide presentation on “Report on June 2024 EFMLS Field Trip to Millville Quarry, Harpers Ferry, Jefferson County, West Virginia.” The trip was limited to ten participants and included MNCA members Dave Fryauff and Corrine Wilson. The destination was a limestone quarry, variously known as the Millville Quarry, Keystone Quarry or Shenandoah Quarry. Specimens collected on the trip included Barite, Calcite, Dolomite, Limonite, Pyrite and Quartz.



MNCA meeting members. Photo by John Sanborn



Newest member Corrine Wilson from Frederick, MD. Legacy member, Dave Hennessey in the background. Photo by David Fryauff

Iron Carbonates: Ankerite, Siderite, Pyroaurite

By Michael Pabst PhD, Treasurer

The last category of iron minerals that we will look at is iron carbonates. First, two common carbonates, Siderite and Ankerite, and then one exotic micromineral iron carbonate, Pyroaurite.



Siderite. Siderite is ferrous carbonate $\text{Fe}^{2+}\text{CO}_3$, a member of the Calcite Group. It is yellowish-brown to greyish-brown, pale yellow, tarnished or iridescent sometimes, pearly luster sometimes. Hardness $3\frac{1}{2}$ - $4\frac{1}{2}$. Siderite is trigonal – $3\bar{m}$ hexagonal scalenohedral. Crystals typically found as brown to tan rhombohedrons in clusters with faces often curved. Named by Wilhelm Karl von Haidinger in 1845 from the Greek "σίδηρος" (sideros) "iron". Many "Siderite" specimens are actually iron-bearing Calcite, which means there is more Ca^{2+} in the crystals than Fe^{2+} . For most specimens, even in museums, there is no elemental analysis available.

Some photos of Siderite:



Siderite. Aquarius Mine, Macklem Township, Timmins, Cochrane District, Ontario. Photo by Michael Pabst, using macro + Raynox lens, stacking 59 images. (Possibly iron-bearing Calcite.) Betsy Martin/MNCA specimen.



Siderite. Clackamas River, Clackamas, Oregon. FOV 9 mm. Photo by Michael Pabst, using macro + Raynox lens, stacking 56 images. Betsy Martin/MNCA specimen.



Siderite. Liskeard, Cornwall, England. FOV 8 mm. Photo by Michael Pabst, using macro + Raynox lens, stacking 82 images. Betsy Martin/MNCA specimen. Nice calcite-like crystal

Continued next page

Iron Carbonates continued



Siderite. Vekol Mine, Pinal County, Arizona. FOV 8 mm. Photo by Michael Pabst, using macro + Raynox lens, stacking 67 images. Betsy Martin/MNCA specimen.



Siderite (iridescent brown). Frostburg, Maryland. FOV 7 mm. Specimen and photo by Michael Pabst, using macro + Raynox lens, stacking 144 images.



Siderite with Hematite and colorless Dolomite. Antwerp, NY. FOV 9 mm. Specimen and photo by Michael Pabst, using macro + Raynox lens, stacking 65 images

Ankerite. Ankerite is calcium ferrous carbonate $\text{Ca}(\text{Fe}^{2+}, \text{Mg})(\text{CO}_3)_2$, a member of the Dolomite Group. Ankerite usually contains significant Mg and sometimes Mn. Ankerite is brown, white to grey, yellowish-brown, tan, with pearly luster. Hardness $3\frac{1}{2}$ - 4. Ankerite is trigonal - 3^- rhombohedral. Named after Matthias Joseph Anker (1771-1843), an Austrian mineralogist. Most old specimens labelled "Ankerite" are likely iron-bearing Dolomite. True Ankerite, where Fe^{2+} is the dominant cation in the second position in the formula, is rare. The ideal end-member composition $\text{CaFe}(\text{CO}_3)_2$, with dolomite structure, has not been synthesized or found in nature, and probably does not exist.

However, my specimen in the next photo might be Ankerite, based on energy-dispersive spectroscopy (EDS) analysis of a similar specimen from the same locality on the ruff.info database (RRUFF ID: R050197.2), which shows the following chemical composition consistent with Ankerite, where in the first position Ca^{2+} is 100% and in the second position Fe^{2+} is 52% with Mg^{2+} at 35% and Ca^{2+} at 8% and Mn^{2+} at 5%. Here is the photo on Mindat: <https://www.mindat.org/min--309642.html>. This is a beautiful specimen showing orange saddle-shaped rhombohedral crystals. The orange color is like that of my specimen shown next.

Continued next page

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Ankerite (orange) on Sphalerite (dark brown) with Brianyoungite (white) sparsely scattered among the Ankerite crystals, but abundant on another side of the specimen (see next Figure). Brownley Hill Mine, Nenthead, Alston Moor, Eden, Cumbria, England. FOV 4 mm. Specimen and photo by Michael Pabst, stacking 68 images.



This specimen is labeled Brianyoungite, which was the main item of interest, with Ankerite and Sphalerite being secondary. I was lucky to notice the likely iron-dominant Ankerite.

The next figure shows a museum specimen of Ankerite from Colorado.



Galena and Sphalerite on Ankerite. Eagle Mine, Gilman District, Eagle County, Colorado. FOV 40 mm, roughly. Specimen in the Mineral Museum of the Colorado School of Mines. Photo by Michael Pabst with iPhone camera. {I don't know whether the Ankerite has been analyzed.}

Photo on left:

Brianyoungite on Sphalerite from the specimen of Ankerite in the figure above. FOV 2 mm. Photo by Michael Pabst, using macro + Raynox lens, stacking 45 images. Brianyoungite is $Zn_3(CO_3,SO_4)(OH)_4$.

Continued next page

Iron Carbonates continued

Pyroaurite. Pyroaurite is a basic magnesium iron carbonate $Mg_6Fe^{3+}_2(OH)_{16}[CO_3] \cdot 4H_2O$, a member of the Hydrotalcite Group. Yellow, white, gray, green, or colourless, Hardness $2\frac{1}{2}$. Trigonal – $6/mmm$ dihexagonal dipyramidal. Pyroaurite was named in 1865 by Lars Johan Igelström from the Greek $\piυροζ$ (pyros) for "fire" and Latin "aurum" for "gold" after the golden-yellow color of the mineral upon heating at low temperatures. Pyroaurite was first found at Långban, Värmland, Sweden. Pyroaurite is the Fe^{3+} analog of Hydrotalcite $Mg_6Al_2(CO_3)(OH)_{16} \cdot 4H_2O$ Stichtite $Mg_6Cr^{3+}_2(OH)_{16}[CO_3] \cdot 4H_2O$, and Desautelsite $Mg_6Mn^{3+}_2(OH)_{16}[CO_3] \cdot 4H_2O$, and forms solid solutions with these minerals. Commonly originates as a low-temperature alteration product of Magnetite in serpentinites, as in the figure below:



Pyroaurite (pale yellow). Haines & Kibblehouse Penn-Maryland Materials Quarry, Fulton Township, Lancaster County, Pennsylvania. FOV 3 mm. Specimen collected by David Fryhauff. Photo by Michael Pabst, using macro lens. Note small isolated perfect hexagonal crystal of Pyroaurite in lower center of photo.

Here is a pretty rose of Pyroaurite from Italy, photographed by Roberto Bosi:

<https://www.mindat.org/photo-433333.html>.

And from photographer Stephan Wolfsried, a photo of thin orange hexagonal plates of Pyroaurite from Morocco: <https://www.mindat.org/photo-804385.html>.

If I were a well-disciplined person, I would add a few more articles about iron minerals, including Pyrite, Marcasite, etc. But I am eager to move onto the next metal, glorious copper. Only uranium rivals copper as the cause of beautiful colored minerals. So, the next articles will be about copper minerals. Next time, I will start with my latest acquisition, Ramsbeckite, one of many colorful copper sulfates.

A New Discovery from the Rutherford #2 Pegmatite

by Scott Duresky, Charlottesville, Virginia

Throughout my research, and in examining many samples of Cleavelandite, I very rarely discovered specimens that were discolored and not iron stained. All of these were distinctly orange-yellow in long wave UV light, and by my estimate, represented about .05% of the Cleavelandite found in the #2 Pegmatite.

On close examination under a microscope, the fluorescence seemed to emanate from inside these samples, and in the PowerPoint of my research, this phenomenon was suggested. Consequently, I surmised that this was due to Fluorapatite inclusions which formed as the magma of the pegmatite was cooling in the final stages of mineralization.

Recently, this theory was confirmed. After a presentation to the Northern Virginia Mineral Club, one of their members gave me a large sample that he collected on his single trip to the Mine in 1996. It was not only discolored, but one side was totally covered by a mineral that had a brilliant yellow fluorescence in long wave UV light, and in small areas, exhibited yellow-orange fluorescence.

Looking at the specimen in rare mineral dealer Tony Nikischer's superior microscope, we observed that the coating consisted of frothy bubbles of Fluorapatite that were very similar to material coming out of pegmatites in Maine, and that the small areas of yellow-orange fluorescence were emanating from inside the Cleavelandite. Tony has suggested that this was material being deposited over time as the Cleavelandite was crystallizing, coating its surfaces in the process. His observations provided a clearer explanation of what I had observed and verified my supposition that Fluorapatite was the source of all of the fluorescence observed.

Micromineralogists of the National Capital Area, Inc.

Vermont Rocks

By Erich Grundel, New York MNCA legacy member

If you are in the vicinity of southern Vermont between now and November 10 take a trip to Bennington, Vermont. This quintessential New England town has an important history. In 1777 it was the site of a significant battle during the Revolutionary War. This event is marked by an obelisk that rivals the Washington Monument and is every bit as dominant as the skyline. It also is home to the world-famous Bennington Museum. More about that at the end.

Currently the museum has a temporary exhibit called Vermont Rocks. I suspect the double entendre is deliberate. The exhibit looks at the history of mining and minerals in the Green Mountain State. Historically the state was a significant producer of asbestos, iron, copper, marble and slate with the last two still in existence. Artifacts, maps, photos, paintings and mineral specimens comprise the contents that take up several rooms. Explanatory texts describe the context of each element of the displays. This is a well prepared educational/scientific/cultural exhibit.

There are three mineral cases as well as a few larger separate specimens, All totaled, I counted about 75 specimens. The specimens came from private collections as well as some from the Geological and Mineralogical Museum at Harvard University. One of the cases was devoted to specimens from the state's most famous locality: the asbestos quarries at Belvidere Mountain near Eden Mills/Lowell. Shut down since the 1970s, this locality produced fine examples of grossular, diopside, vesuvianite and clinocllore. Today these specimens are much sought after by collectors. You are not likely to ever again see a finer display anywhere. Another case was devoted to quartz. The state has produced some interesting crystals including some good examples of the faden phenomenon. The third case was devoted to some of the other minerals found in Vermont.

The fame of the museum is due to the paintings on display from the brush of Anna Mary Robertson Moses aka "Grandma" Moses. The self-taught "Grandma" came from a family of similarly gifted painters but of styles that are different. Almost everyone at some point has seen one of her distinctive paintings. The museum has just acquired five of her works and are now already on view.

My favorite one among the entire collection is the farm scene showing people chasing turkeys in preparation for Thanksgiving.

For further information, including hours of operation, check the museum website.



*Bennington Museum of art, history, and innovation.
Photo by Erich Grundel*

Franklin Mineral Show, New Jersey September 21 & 22, 2024



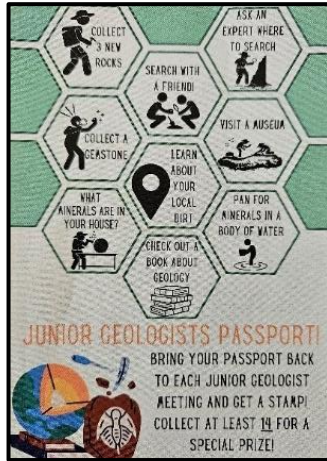
A few of my "finds", far from micro-minerals. I suppose a big hammer would take care of that conversion. I cannot bring myself to do it though yet. John Sanborn photo and Franklin Sept 21 & 22 show announcement.

The Mineral Mite September 2024

Junior Geologists Lab at Kings Park Library, Burke

By Kathy Hrechka, Editor

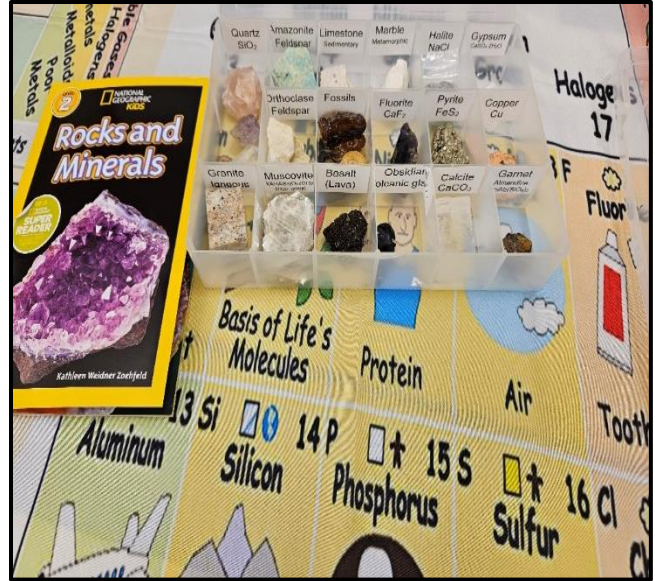
Local geology club member, John Weidner envisioned a strategy for club members to share our craft with students at the Kings Park library in Burke. Once each month we get to “talk rocks” with kids in the community. Some kids bring rocks in their pockets for us to identify, while others come to learn from our activities. On August 22 John Weidner, Kathy Hrechka, Ken Rock, and Tom Taaffe, volunteered with their mineral exhibits.



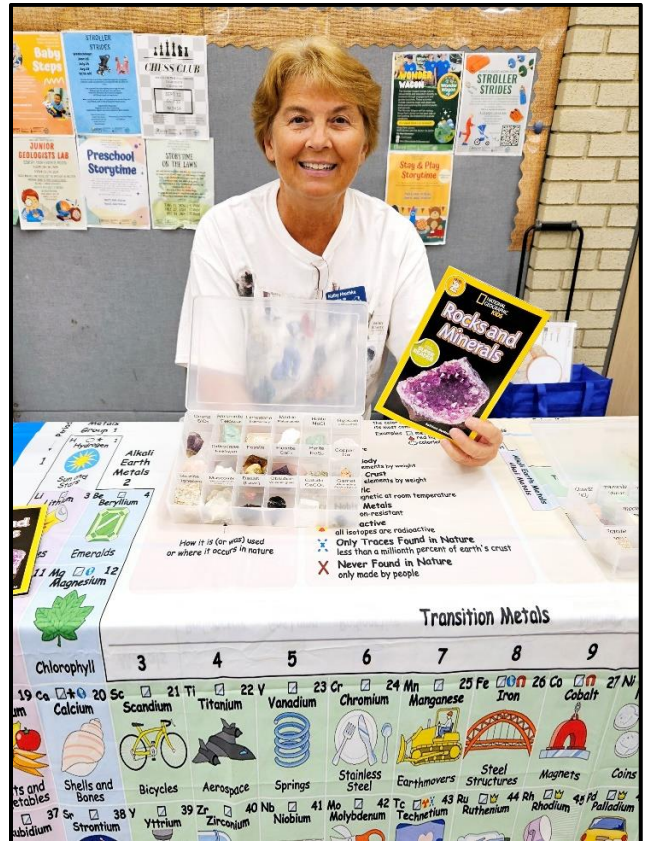
We are grateful to follow our club mission statement to promote geology to our youth. If you are interested in helping, contact John at one of our geology meetings.



John Weidner demonstrates his digital microscope. Kids who brought minerals enjoyed viewing them on the computer monitor.



Kathy Hrechka's mineral study box with labels and chemical formulas.



Kathy Hrechka promotes reading, along with her mineral study boxes.

Junior Geologists continued



Ken Rock teaches the three rock types.



Tom Taaffe demonstrates fossil discovery.

Below: Tom's educational collection, "How many of these Minerals can you identify?"



Micromineralogists of the National Capital Area, Inc.

The Baltimore Mineral Society 68th Paul Desautels Memorial Micromount Symposium October 4-6, 2024

Location: Natural History Society of Maryland
6908 Belair Rd, Baltimore, MD 21206

Friday, October 4

7:00 PM Registration, Coffee, and Treats

8:00 PM Fellowship with other Micromounters and informal programs given by participants:

*A new approach to wooden crystal models – Mike Seeds

*Unusually Fluorescent (LWUV) Bi-Terminated Fluorapophyllite – David Fryauff

*Collecting Pyrite at Navajún, in Spain – Quintin Wight

Saturday, October 5

9:00 AM Symposium Opens – Trading, Giveaway tables, Mineral sales, Silent Auction

10:00 AM Silent Auction

12 Noon Light Lunch (provided)

2:00 PM Voice Auction

3:00 PM **Micromounters' Hall of Fame**

Induction conducted by Quintin Wight
Paul Adams and George Rambo

The Mines and Minerals of the Candelaria District, Mineral County, Nevada Presented by Paul Adams

5:00 PM Dinner (at local restaurants on your own)

7:30 PM **The Minerals of the P. Y. Estes Quarry in West Baldwin, Cumberland County, Maine** Presented by Douglas Rambo

9:00 PM Symposium adjourns for the day.

Sunday, October 6

9:00 AM Trading, Giveaways, Conversation

11:00 AM **Gem Trails in Vietnam** Presented by Quintin Wight and Willow Wight

12 Noon Symposium Concludes.

Registration: Registrations will be accepted by mail or will be taken at the door either Friday night or Saturday morning. We encourage you to pre-register by mail prior to October 2nd

Registration Fee: The fee for the Symposium this year is \$30.00 in advance or \$35.00 at the door (includes dessert on Friday evening and light lunch on Saturday). Dinner will be on your own at local restaurants both Friday and Saturday evenings.

Digital Programs: Short informal digital (PowerPoint) programs are welcome on Friday night. We request that you notify the Chair in advance of the content of your program. Programs should not exceed 15 minutes and should be provided on a memory stick. It will not be possible to swap computers. A digital projector and laptop will be available.

Sales: Micromounts and mineral specimens of interest to micromounters will be available. Small tools, boxes, loupes, and other items also will be available. Contact Al Pribula apribula@towson.edu for Sales and facilities ahead of time if you desire to sell any items at the Symposium.

Donation Auction: Please contact Al Pribula apribula@towson.edu to donate any items for the Saturday auctions to benefit the Micromounters' Hall of Fame.

Zoom: Some parts of the Symposium will be available by Zoom. These parts will include the Hall of Fame presentations, the Hall of Fame announcements of honorees for 2025, talks on Saturday and Sunday morning. (No refreshments, lunch, giveaways or other rocks are available by Zoom.) For a Zoom invite email Mike Seeds mseeds@fandm.edu.

BMS Officers

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The Mineral Mite September 2024

Shoobox Adventures 138: Nothing

Photos and text by Mike Seeds, Editor of the Conglomerate for the Baltimore Mineral Society 4/24

If you find a little crystal trapped inside a larger crystal, you might think you've found something, but maybe not. Maybe it's nothing. Maybe it's a negative crystal, an empty cavity inside the host crystal that has the shape of a well-formed crystal.



Figure 1 Negative quartz crystal (4 mm top to bottom). Note the irregular void to the left with a round object. The sphere does not move and seems to have some flat faces.

Kate Ruof, who has a special interest in collecting crystals with unusual habits, found a quartz crystal that contains a negative crystal. The faces of the negative crystal are flat and give the cavity the shape of a smaller quartz crystal trapped inside the host crystal. What we might think are the faces of the negative crystal are actually small interior faces on the larger, host crystal, so it is natural for them to take on the proper shape and orientation of other outer faces on the host.

Negative crystals form when something slows crystal growth at a spot on the host crystal and the rest of the crystal continues to grow around the slow spot and eventually encloses the cavity. People talk about a bit of dust slowing crystal growth or even bacteria. Whatever the cause, the only crystal involved is the host. The negative crystal isn't really there.

Does this mean that a negative quartz crystal must have the same handedness of its host crystal?

That is, must a negative crystal inside a left-handed quartz crystal always be left-handed? For that matter does it make sense to say "negative quartz crystal" when there is no crystal there?

Kate's crystal is part of a necklace of seven quartz crystals that she bought a number of years ago at the Macungie show. "It was in a junk box and anything from the box was \$10, she says." She didn't notice the negative crystal until recently.

It's not fair to complain that negative crystals are nothing because there can be something in the cavity. Negative crystals can trap water or air. There are scientists who drill into these cavities and extract a bit of the water or air inside, so they can study the ancient atmosphere of the Earth. If they can estimate the age of such crystals from the ages of the geological formations in which they are found, they can build a history of Earth's atmosphere.

There are even people who search the insides of negative crystals for traces of DNA left behind by bacteria trapped as the crystal grew. Analysis of ancient DNA compared to modern DNA can reveal how changes accumulate in the DNA information as millions of years slip by and in that way reveal how evolution step by step modifies living creatures.



Figure 2 Kate says this ten-dollar necklace will turn your neck green, but the central quartz crystal (20 mm top to bottom) contains a negative crystal.

Continued next page

Shoebx continued

Look carefully at Figure 1, and you will see an irregular cavity just to the left of the negative crystal. Inside that cavity is a round object that looks like a bubble. Such bubbles are not unheard-of inside water-filled cavities, but, as Kate points out, this “bubble” does not move and appears to have a few flat faces. It isn’t clear what that round object might be.

Negative crystals can occur in all kinds of mineral crystals including topaz and diamonds. If you search the web for “Negative Crystals” you will be swamped by references to certain crystals that some people believe will make you anxious or unhappy or ill. Search for “Negative Mineral Crystals” to find the little gems hidden inside larger crystals – little gems that aren’t really there.

George A. Loud Mineral Feature

MNCA Club members noted that George Loud is now famous, as his mineral collection is advertised for sale in the latest Rocks & Minerals, as well as The Mineralogical Record. Get your copy today or at least enhance your collection while mineral supplies last. George retained his micromount collection and will be attending future MNCA meetings with us soon.

The George A. Loud Collection

THE GEORGE A. LOUD
Collection

SMOKY QUARTZ & AMAZONITE, 4.4 CM COLORADO
GOLD LLATE 1600'S!, 6 CM BRECKENRIDGE
WULFENITE, 7.8 CM, HAYSTOP MINE, ARIZONA
LUMPY GOLD, 3.5 CM, LATE 1900S SPOTSYLVANIA, VIRGINIA

9,000 specimens! Auctions of thematic selections begin in September.
SEPTEMBER: Colorado specimens, live from the Denver Show. OCTOBER: Midwest.
NOVEMBER: California. DECEMBER: Japan. JANUARY: USA Northwest.
FEBRUARY: Arizona, live from Tucson. MARCH: Midwest & Tri-State.
APRIL: Franklin & NJ. MAY: Pennsylvania. JUNE: Canada (incl. St. Hilaire).
JULY: USA Southeast and VA. AUGUST: Massachusetts & New England.
SEPTEMBER: Elmwood & Tenn., Midwest

THE ARKENSTONE ❖ MINERALAUCTIONS.COM
See website for details.

Jul/Aug 2024
Vol. 91, No. 4

ROCKS & MINERALS
For Everyone Interested in Minerals, Rocks & Fossils

Topaz from Southern Africa
Smithsonite from New Mexico
Collecting the iconic rhinoceros trilobite

TUCSON Treasures!

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THE MINERALOGICAL RECORD
JULY-AUGUST 2024 • VOLUME 55 • NUMBER 4 • 530

NATIONAL
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NATURAL
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BECOME A VOLUNTEER

Who can volunteer?

- Anyone 18 years and older
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- Enjoys interacting with a diverse audience

What does volunteering require?

- Attend all training sessions:
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APPLY NOW

For more information and to apply please contact:

NMNHVolunteer@si.edu
(202) 633-1083

Accepting applications now

Micromineralogists of the National Capital Area, Inc.

Micro Club Zoom Session - Australia

Micro Club Zoom Host: Steve Sorrell resides in Melbourne, Australia and hosts various geology persons of interest at his micromount meeting each month on Zoom. You can sign up for Steve's programs, while enjoying friendly faces within our geology community around the globe.



Micromount Club Zoom Meeting 2024-008.
Wednesday 18th September at 6am. [Australia]
Polymorphs, presented by Frank Loman.

There will not be a session in October.

Micromount Club Zoom Meeting 2024-009.
Wednesday 20th November at 6am. [Australia]
Minerals from the Eifel, Germany, presented by Henk Smeets.

Micromount Club Zoom Meeting 2024-010.
Wednesday 18th December at 6am. To be advised.

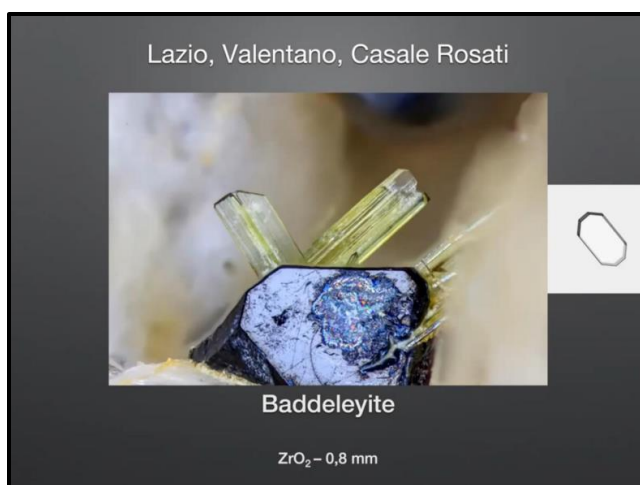
You can register for these sessions at crocoite.com. Once registered, you will receive an email and the opportunity to save the Zoom session to your Google, Yahoo, or Outlook calendar, and this will be in your local time zone.

The Micromount Club Facebook group has been meeting on Zoom regularly, hosted by Steve Sorrell in Australia. Meetings are now scheduled monthly. Most previous presentations up to #24-05 are available through the Volume 58-08 Page 15 of 22 Aug 2024 followinglink:

<https://www.youtube.com/playlist?list=PLwdOHCjmducFKcDw8d2qgAoEEEB0M7vht>.

Micromount Club Zoom Meeting #24-06 was on Tuesday 16th July at 4 pm EDT. It was entitled "From Aosta to Sicily, a Mineralogical Journey through Italy, Part 2", presented by Henk Smeets. Here is the link: <https://www.youtube.com/watch?v=562hCbbxWRg>.

The three screen shots located in the right-hand column are a sampling from Henk Smeets's program.



MNCA Editor's note: thanks to Steve Sorrell from Melbourne, Australia, we have been connecting with new mineral friends around the world for the past three years. I have learned that he is a master photomicrographer, as well as an author of mineral books and a talented mineral artist.

Crystal System Word Search

ANGLE	ORIENTATION
AXIS	ORTHORHOMBIC
CRYSTALLIZATION	PARALLEL
CUBIC	PERPENDICULAR
FACE	SYMMETRY
HEXAGONAL	SYSTEM
ISOMETRIC	TETRAGONAL
LENGTH	TRICLINIC
MONOCLINIC	TRIGONAL

Answers can be found on page 19.



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.

2024 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

[Rock & Gem Magazine Archive : Free Download, Borrow, and Streaming : Internet Archive](#)



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.

September 2024 Local Geology Club Meetings

2: Northern Virginia Mineral Club NVMC
Meeting 7:30pm on Zoom
www.novamineralclub.org

4: Mineralogical Society of the District of Columbia MSDC
Meeting 7:30pm on 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

18: Baltimore Mineral Society BMS meeting
www.baltimoremineralsociety.org

30: Micromineralogists of the National Capital Area, Inc. MNCA
Meeting 3 – 5:30pm Kings Park Library, Burke, VA
www.dcmicrominerals.org

October 2-6, 2024

Natural History Society of Maryland
6908 Belair Rd, Baltimore, MD 21206

November 23 & 24, 2024

Northern Virginia Mineral Club Show
Dewberry Hall, Johnson Center
George Mason University-Fairfax Campus
Hours: Sat 10am-6pm & Sun 10am-4pm

The Mineral Mite September 2024

Micromineralogists of the National Capital Area, Inc.



Geo Word of the Day and its definition

atlasovite (at'-las-ov-ite) A dark brown tetragonal mineral: $\text{KCu}_6\text{Fe}^{3+}\text{Bi}^{3+}\text{O}_4(\text{SO}_4)_5\text{Cl}$.

bederite A vitreous dark brown to black orthorhombic mineral: $\text{Ca}_2\text{Mn}^{2+}\text{Fe}^{3+}_2(\text{PO}_4)_6 \cdot 2\text{H}_2\text{O}$. A member of the *wicksite* group.

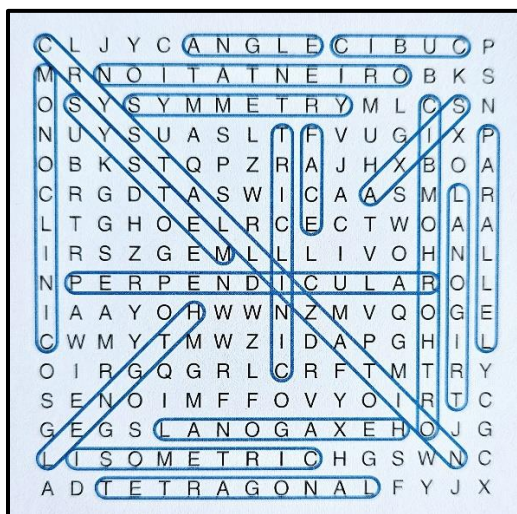
bindheimite (bind'-heim-ite) An earthy yellow, brown, white, gray, or greenish cubic secondary mineral: $\text{Pb}_2\text{Sb}_2\text{O}_6(\text{O},\text{OH})$. A member of the *stibiconite* group.

goethite (goe'-thite) A yellowish, reddish, or brownish-black orthorhombic mineral of the *diaspore* group: $\alpha\text{Fe}^{3+}\text{O}(\text{OH})$. It is trimorphous with lepidocrocite and akaganéite. Goethite is the most common constituent of many forms of natural rust or of limonite, and it occurs esp. as a weathering product in the gossans of sulfide-bearing ore deposits. Also spelled: *göthite*. Syn: *allcharite*; *xanthosiderite*.

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.

Crystal System Word Search answers



The Mineral Mite September 2024

Micromineralogists of the National Capital Area
www.dcmicrominerals.org

We are temporarily meeting at Kings Park Library in Burke, 3-5:30pm (forth Monday or Wednesday) 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 2024

\$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
- * Pete Chin
- * Bob Cooke
- * Erich Grundell
- * Mike Seeds
- * Scott Duresky
- * Kathy Hrechka

