

April 24 3-5:30pm Kings Park Library of Burke, VA

Program: Micromineral Study BR

by Jeff Guerber, Vice President

MNCA's meeting will be on Monday April 24 from 3-5:30pm in the King's Park Library meeting room. We will continue distribution of minerals from Barry Remer's collection. We'll also discuss plans for our "light weight" 49th Annual Atlantic Micromounters' Conference which is scheduled at James Madison University on June 3.



President's Message:

by David Fryauff

Important rocks...then and now. I agree that I am obsessive and compulsive, but this is a passion and not a disorder. Many years ago, when I was a much younger man, just out of Rutgers Grad school with a degree in medical entomology, I joined the Peace Corps where I could serve my home country and another nation that wanted my skills. I went off to the Polynesian Kingdom of Tonga, an archipelago of mostly low coral islands that rise up on seamounts from some of the deepest parts of the Pacific Ocean.



Mystery Micro Mineral of the Month



Locality: Soledad Mine, Taltal, Antofagasta Province, Chile. FOV = 5 mm. Photo Pete Chin

I recall a saying that the Tongan people had: "Manako maka fai ke Tofua". This translates literally as "You covet the rock from Tofua" but the meaning it conveys is that we develop strong desires for the things that are really hard, or virtually impossible to get. In Tonga it means that the (male) head of every household needed to equip his home with several of the heavy, dense, black basalt rocks that came only from the faraway and forbidding volcanic island of Tofua.

The coral rock that makes up the low, populated non-volcanic islands in Tonga is too soft for making sturdy implements like hammer stones, axe heads, and the Tongan version of a mortar and pestle that was, and still is needed in every family's home. The hand-size hammer stone, and the thick heavy stone base are also the traditional components of the "kava ceremony", once restricted to Tongan kings and nobility, but now practiced by every man in Tongan society.

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Micromineralogists of the National Capital Area, Inc.

President's Message continued

by David Fryauff

The dried clean roots of the kava plant (*Piper myristicum*) are pounded to fine powder using the smooth black basalt rocks from Tofua. The powdered kava is mixed with clear rainwater in a big wooden bowl and dispensed in smooth polished cups made from the hard inner shell of the coconut. I drank lots of kava in Tonga and never saw it done any other way. What makes me conjure up this memory and an ancient Polynesian saying? I can only think that it is triggered by my passion for collecting the rocks/minerals of the quarries we no longer have access to.

Twelve years ago, the Hunting Hill quarry in Rockville, Maryland closed its doors to mineral collectors, but before that happened, and for many decades, rockhounds, mineral collectors, and micromounters found hundreds, probably thousands of remarkable mineral specimens from that mineralogically unique quarry that sits in the heart of Montgomery County, Maryland. I never had the chance to collect there, but I am a passionate field collector and the best specimens in my collection are always the ones that I have collected myself.

Fred Parker, Jake Slagle, David Hennessey, John Ertman, and George Loud knew HH well and know the feeling. George Reimherr, Barry Remer, Jim Kostka, Jonathan Harris, and Kathy Hrechka also collected there. Maybe more than a few of you may sense why I am obsessed by this quarry where I have never collected, and by my fascination with the HH mineral specimens that have only come to me little by little, over the years, from that special and forbidden place. But take heart and please be informed!!!!

April 15, 2023, Geology Field Collecting:

National Limestone quarries #1 (Middleburg) and #2 (Mount Pleasant Mills), located about a half hour north of Harrisburg, PA are open and welcoming to mineral (and fossil) collectors on Saturday, April 15th, with check-in and safety brief at 9:15 am in the Middleburg Quarry office, 3499 Quarry Rd., Middleburg, PA 17042 (TEL 570-837-1635). Full appropriate personal safety gear is required (OSHA-approved industrial type G helmet, steel-toed boots,

shatter-proof eye protection, heavy gloves, long pants, and proof of EFMLS club membership/affiliation). This is a joint activity of the Gem, Lapidary, & Mineral Society of Montgomery County MD and the Southern Maryland Rock & Mineral Society. Those who wish to go must RSVP by April 6th with Sam Linton cooldragonshirts@yahoo.com.

Mystery Micro Mineral of the Month

by Aloha Pete Chin, Honolulu, Hawaii

Guanacoite crystals. Soledad Mine, Taltal, Antofagasta Province, Chile. FOV = 5 mm.

Previous Meeting Minutes

3.27.2023

by Bob Cooke, secretary



The Micromineralogists of the National Capital Area (MNCA) met at Kings Park Library, Burke, Virginia on March 27, 2023. Members present were Bob Cooke, Jeff Guerber, Dave Hennessey, Kathy Hrechka, John Kress, David MacLean and Michael Pabst. We were joined by guest Craig Moore.

At 4:45 PM Jeff convened the business meeting. Past President David MacLean was recognized. Michael Pabst gave a Treasurer's report and confirmed that all routine business actions for EFMLS membership, insurance and taxes have been completed. The February meeting minutes were approved as published in the Mineral Mite.

Michael reported that about a dozen people have signed up for the Atlantic Micromounters Conference on June 3rd at James Madison University in Harrisonburg, Virginia. Presentations, tours and mineral swaps/giveaways will be from 10:30 to 3:30 in JMU's new campus area. No group meals or overnight accommodation are included. Bob announced he will bring a box of back issues of Rock and Minerals magazine to the April MNCA meeting. These magazines were donated by Lance Kearns of JMU. Members may select issues to augment their personal collections. The meeting adjourned at 5:20 PM. Additional portions of Barry's collection will be distributed at future meetings.

Prior Program Reviewed 3.27.2023

by Bob Cooke

“Diamond Prospecting Murfreesboro, Arkansas”
 Kathy presented a slide show and talk on her diamond prospecting at Crater of Diamonds State Park in Murfreesboro, Arkansas and on her tour of the quartz mining operation at Ron Coleman Mining in Jessieville, Arkansas. Members also viewed the distribution of minerals from the Barry Remer collection. Because of time constraints, only those minerals which Barry acquired from George Reimherr / George Fletcher were made available.



Kathy gave full credit to Glen W. Worthington, Murfreesboro, Arkansas who provided photos of the naturally occurring diamonds for her program. Power Point Screenshots by Kathy Hrechka

Micromineralogists of the National Capital Area, Inc.

Atlantic Micromounters' Conference

by Michael Pabst, Treasurer

For 2023, the 49th Annual Atlantic Micromounters Conference will be held on Saturday, June 3 at James Madison University in Harrisonburg, Virginia. The conference is sponsored by the Micromineralogists of the National Capital Area (MNCA). Website: dcmicrominerals.org.

The conference will start at 10:30 am, so that people from the DC area or similar distances can drive to Harrisonburg on Saturday morning without losing much sleep. There are many inexpensive motels in Harrisonburg if you want to arrive on Friday or stay over on Saturday night.

Dr. Elizabeth Johnson, Professor and Curator, will give a talk about the Phil Cosminsky and Fred Keidel micromount collections at 11:00, then we will break for lunch. (We will offer guidance on dining.) In the afternoon we will visit the *stunning* James Madison Mineral Museum, mixed with viewing and trading micromounts till about 3:30. For a preview of the JMU museum, look at the article in the *Mineralogical Record*, volume 51, page 703, September-October 2020. There are also some photos and information on the JMU website:

<https://www.jmu.edu/mineralmuseum/index.shtml>.

Because of JMU rules, we cannot have dealers or an auction, but we can trade, and there will be giveaways. There will be no fee for the conference. Please reply to michaeljpabst@yahoo.com if you plan to attend.

Harrisonburg is also a treat for friends and family. On Saturday, folks can visit the impressive Virginia Quilt Museum in downtown Harrisonburg:

<https://www.vaquiltmuseum.org>. Also on Saturday, if you like quilts or chocolate or antiques or jerky or toys and much else, visit the Dayton Market: <https://www.thedaytonmarket.com>.

The beautiful Edith J. Carrier Arboretum at JMU is near the mineral museum and is open every day from dawn to dusk:

<https://www.jmu.edu/arboretum/index.shtml>.



Rhodochrosite. Sweet Home Mine, Alma, Colorado. FOV 12 cm. JMU specimen. Photo by Michael Pabst



Turquoise. Lynch Station, Virginia. FOV ~10 cm. JMU specimen. Photo by Michael Pabst.



Phil Cosminsky's micromineral gold & diamond microminerals at JMU, Harrisonburg, VA. Permission granted to Kathy by Dr. Lance Kearns. Photo by Kathy Hrechka 2010.

**Sylvanite Krennerite Calaverite
Petzite Auostibit**

by Michael Pabst PhD, Treasurer

Last month we saw some beautiful specimens of Gold, both large and small. The gold in these specimens is not pure gold but contains a variable amount of silver. If the silver is more than about 20%, the specimens are sometimes referred to as “Electrum” (Au,Ag). There is a complete series between Gold and Silver as crystallized minerals, so the ratio of gold to silver can be anything. Pure gold has a specific gravity of 19.3 g/cm³, but gold specimens may be as low as 15 g/cm³ due to the presence of silver (10.5 g/cm³).

In addition to mixing with silver, gold can form definite stoichiometric compounds with other elements, particularly antimony, selenium, and tellurium. There are some gold minerals that have only been found in thin sections rather than in crystals, and we will skip those. We will describe some crystallized gold minerals below.

Sylvanite. Sylvanite is silver gold telluride AgAuTe₄. The ratio of Ag to Au is close to 1:1. So Sylvanite has a definite atomic structure; it is not a random alloy. Sylvanite is soft (Mohs 1½-2), heavy (specific gravity 8.16 g/cm³), with metallic luster that can look either shiny or black depending on the light. Sylvanite crystallizes monoclinic *2/m* – prismatic, $\beta = 145.35^\circ$. The volcanic island of Viti Levu, Fiji, in the South Pacific, gives us some beautiful sculptural crystals of Sylvanite, like the specimen below:



Lower left column: Sylvanite with smaller silvery Tellurium crystals. Emperor Gold Mine, Vatukoula, Viti Levu, Fiji. FOV 6 mm. Photo by Michael Pabst, with stereo microscope, stacking 24 images.

There are a similar photos of Sylvanite and Tellurium from Fiji on Mindat, taken by Uwe Haubenreisser: <https://www.mindat.org/photo-1067351.html>, and by Christian Rewitzer: <https://www.mindat.org/photo-89043.html>. These photos helped me to identify Tellurium in my specimen.

Krennerite. A related gold silver telluride is Krennerite Au₃AgTe₈. Krennerite is orthorhombic *mm2* – pyramidal. Specific gravity: 8.62 g/cm³. Hardness 2-3. It is silvery white and shiny. I don't have a specimen of Krennerite, but here is a photo from Mindat, taken by Brian Kosnar: <https://www.mindat.org/photo-532231.html>.

Calaverite. Calaverite is also a gold telluride AuTe₂. Calaverite is monoclinic $\beta = 90.3^\circ$. Specific Gravity 9.1 -9.4. Hardness 2½-3. Calaverite is a yellowish white metallic mineral.

Twenty years ago, when I lived in Denver, I had a chance to buy for \$350 a hand-sized specimen from Cripple Creek, Colorado that was dotted with Calaverite crystals. Because of my usual financial ineptitude, I thought that I could not afford to buy it. I am sure that it is now worth 100 times \$350. But I do have one modest specimen of Calaverite from Cripple Creek shown below.

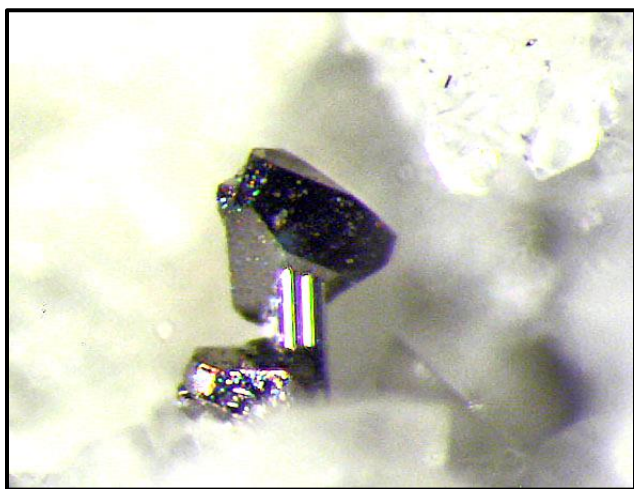


Calaverite crystal hiding in a nest of Quartz and Calcite. Cripple Creek, Teller County, Colorado.

Sylvanite continued

Photo p4, lower right column *Calaverite* crystal hiding in a nest of Quartz and Calcite. Cripple Creek, Teller County, Colorado. FOV 1.5 mm. Photo by Michael Pabst, using stereo microscope, stacking 6 images.

Petzite. Petzite is another gold silver telluride Ag_3AuTe_2 . Petzite crystallizes isometric 4 3 2 – gyroidal, a rare crystal class. Hardness 2½-3. Specific gravity 8.7 g/cm³. It usually looks gray or black. I have never seen a specimen of Petzite for sale that I liked; it's usually ugly. Here is an interesting photo by Van King showing a specimen with both Petzite and Gold attractively tossed together: <https://www.mindat.org/photo-1050710.html>. There is also a photo of Petzite and Sylvanite taken by Brent Thorne: <https://www.mindat.org/photo-558587.html>. I tried to improve this photo with Photoshop, but the crystals are tiny, and my skill is limited. The result is shown below:



Petzite and Sylvanite, Cripple Creek & Victor Gold Mine, Eclipse Gulch, Teller County, Colorado. FOV 0.7 mm. Photo by Brent Thorne 2013, edited by Michael Pabst.

There is also a selenium analog of Petzite called Fischesserite Ag_3AuSe_2 , which is very rare; it seems that gold prefers tellurium. Here is an electron micrograph of a purported tiny crystal of Fischesserite from Mindat, provided by Matthias Boehringer: <https://www.mindat.org/photo-1112849.html>.

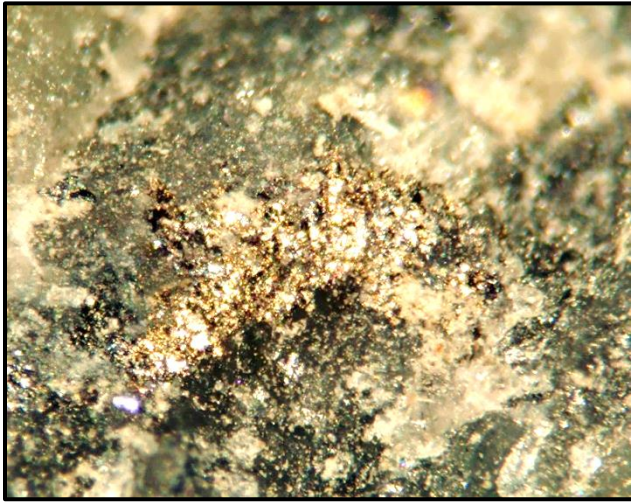
Aurostibite. Aurostibite is gold antimonide AuSb_2 . Aurostibite crystallizes isometric $m\bar{3}$ – diploidal; it is a member of the Pyrite Group. Reported to be silvery white metallic, although my specimen has a gold color tone. Hardness 3; specific gravity 9.98 g/cm³. Aurostibite has not yet been found in good crystals. This is a little surprising, because some other noble metal members of the Pyrite Group do form good crystals, for example, Sperrylite PtAs_2 .

An unattractive mineral is Aurostibite. I have never seen well crystallized Aurostibite, even in photos. But for some reason, it is relatively expensive for a micromount. The allure of gold! Mentioning Aurostibite here is a gesture toward inclusivity of ugly minerals. The best photo of Aurostibite on Mindat is probably that by the great photographer Stephan Wolfsried: <https://www.mindat.org/photo-771554.html>. But even his photo is not aesthetic because no crystal faces can be discerned. I have a specimen of Aurostibite, which is also not aesthetic. Here is a partial overview of my specimen, followed by a close-up.



Aurostibite. Krásná Hora nad Vltavou, Příbram District, Central Bohemian Region, Czech Republic. FOV 7 mm for upper photo, and 2 mm for lower photo. The upper photo shows a nicely glued-down arrow, pointing at the Aurostibite, which is reassuring, because it would be hard to find it if you could not trust the arrow.

Sylvanite continued



Aurostibite. Krásná Hora nad Vltavou, Příbram District, Central Bohemian Region, Czech Republic. FOV 2 mm. Close-up of where the arrow is pointing in previous photo. Photo by Michael Pabst, taken with stereo microscope. stack of 26 images.

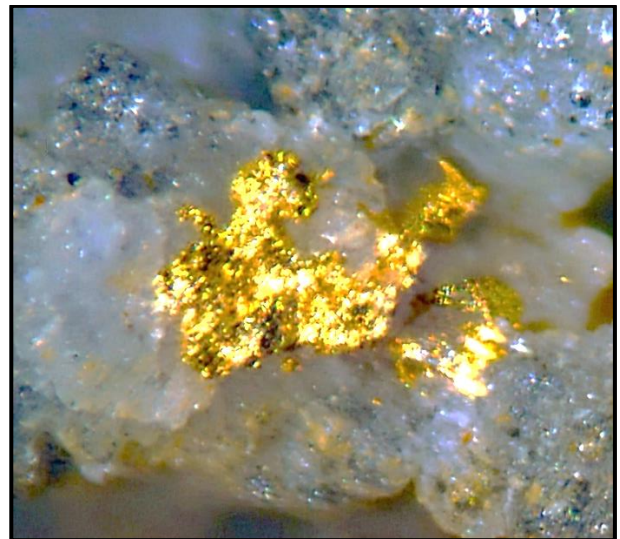
The lower photo *of* Aurostibite is a close-up of where the arrow is pointing. Photos by Michael Pabst, taken with stereo microscope. I used a high intensity fiber optic halogen light, that gives a warmer color than the specimen would have in sunlight or in Stephan Wolfried's photo.

After these ugly gold minerals, let us end with an attractive gold specimen from the Gold Hill District that sits in the mountains above Boulder, Colorado. I visited Gold Hill in my younger days when it was a town for those desiring a non-urban alternative lifestyle. Then, as now, all the streets are dirt roads. Gold Hill is the site of the first gold discovery in Colorado, leading to the Colorado Gold Rush of 1859, which in turn led to the establishment of the Denver Mint.



Gold. Stump Mine, Gold Hill District, Boulder County, Colorado. FOV 3.5 mm. Photo by Michael Pabst, using stereo microscope, stacking 19 images.

Or maybe we should end with a tiny gold specimen from near the summit of St. Patrick Mountain, the highest point in Ireland. This specimen came from George Reimherr's friend George W. Fletcher of Chesterfield, England.



Gold on Quartz. Lecanvey Prospect, Croagh Patrick, Mayo County, Connacht, Ireland. FOV 1 mm. Photo by Michael Pabst, using stereo microscope, stacking 8 images.

I hope you have enjoyed this Golden Interlude between the cobalt and nickel minerals of past articles, and the iron minerals in upcoming articles. There are many beautiful iron minerals to look forward to.

Amber of Dominican Republic

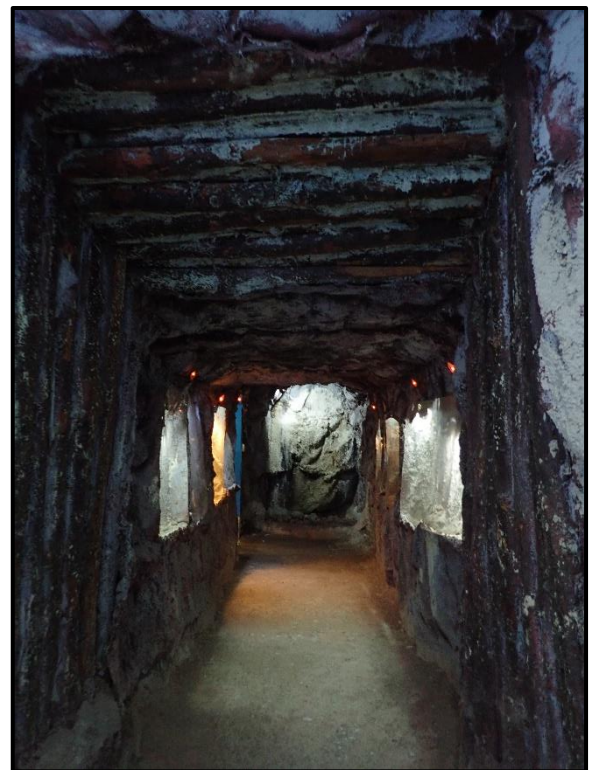
by Kathy Hrechka, editor/webmaster

I had a recent adventure to visit the famous Amber Museum in Puerto Plata, Dominican Republic. While amber is not a mineral, it's creatures trapped in resin come to life under the microscope. The island has two localities of amber mines. One is in the Northern Range (Puerto Plata-Santiago), operated by horizontal tunnels made in rocks. The other is in the Eastern Cordillera, (El Valle-Hato Mayor), operated in open vertical mine in sand or clay. The Dominican Republic is home to some of the world's most valued amber due to its transparency revealing many fossilized inclusions of creatures and plants.

This precious fossilized tree resin earned worldwide fame in Steven Spielberg's Jurassic Park when scientists in the movie recreated dinosaurs from the DNA found in a mosquito, trapped in Dominican amber. I recall, paleontologist Jack Horner was hired to verify the science for the original 1993 feature film.

“Amber is an organic derivative composed of $C_{10}H_{16}O$ of about 25-40 million years of vegetable origin, insoluble in water. It melts at 300 centigrade. At 100 centigrade evaporates form acid and its hardness is 2-3 Mohs. Amber is fossilized resin of prehistoric plants: *Hymenaea protera* of the leguminous family *sas*. Today there is the descending tree originating from the same family known as “algarrobo or *hymenaea courbaril*”. Other trees formed huge amounts of resin, such as *meliceae*, *llauraceae*, *thymelia ceae*, *hippocretacea* and other types of legumes. The resin falling to the soil contained flowers, insects, fragments of wood, pollen, organic materials, small animals: lizards, frogs, spiders, and ants”. *Museum exhibit with some Spanish words.*

“Amber's physical and chemical aspects: Amber is composed of carbon (C), hydrogen (H), and oxygen (O). These elements are easily combustible. The chemical formula is $C_{10}H_{16}O$. The ancient Greeks called amber electron by its ability to carry electricity. If a piece of amber were rubbed with a woolen cloth, this would attract small objects like paper”. *Amber Museum exhibit*



The entrance guides you into the museum, through a recreated underground horizontal mine shaft.

Amber continued



Educational exhibit showing the prehistoric formation of tree resin prior to the fossilization of amber.

An exhibit panel with a dark blue background. At the top, there are three flags: the Dominican Republic flag, the Spanish flag, and the United States flag. Below the flags, there is text in Spanish and English. The Spanish text reads: "Las mismas se formaron por una segregación grande de resina que se acumulo al pie de un árbol. Durante décadas de búsqueda de ámbar dominicano se ha encontrado piezas de hasta 28 libras de peso." The English text reads: "They were formed by a large segregation of resin accumulated at the foot of a tree. For decades search of Dominican amber pieces found up to 28 pounds." There are three small images: a dark, irregularly shaped nodule of amber encrusted in limestone (top right), a dark, irregularly shaped nodule of amber encrusted in limestone (middle left), and a close-up of a reddish-brown, crystalline structure (bottom right). At the bottom of the panel, a single, large, irregularly shaped, light-colored nodule of amber encrusted in limestone is displayed on a white surface.

Exhibit of a nodule of amber encrusted in limestone.

Amber continued



“Lizard from pre-historical era according to testing this piece. There are only twelve fossil lizards in the world, which three are exhibited in the Dominican Republic.” Amber Museum exhibit



“Hymenoptera is one of the most numerous orders of insects, with some 153,000 species described (132 families, 8432 genera). It includes bees, bumblebees, wasps, and ants. The following specimens contain a bug, scorpion, and a bee.” Amber Museum exhibit

“A variety of flies great interest has been found in Dominican amber, and the same is true with mosquitos, buy they have no blood of dinosaurs! There are many relatives of the mosquito in our amber. There are a large number (thousands) of these with dozens of varieties. They are the joy of specialized scientists”. *Amber Museum exhibit*



Amber continued



Dragon fly on left, jewelry top right, & chess board below. Photo credits Kathy Hrechka



Smithsonian Mosquito DNA Discovery

by Kathy Hrechka

While volunteering at the Museum of Natural History, I recalled an excitement amongst educators, in 2013 when a scientist from the paleobiology department identified DNA in the belly of a mosquito, fossilized in shale.



46-million-year-old fossilized mosquito, found in Montana, contains the blood of an unknown ancient creature. Photo credit, Dale Greenwalt

The rock-encased specimen was originally excavated in the Kishenehn Formation in northwestern Montana, near Glacier National Park. A retired biochemist named Dale Greenwalt who's been working to collect fossils in the Western U.S. for the Smithsonian Museum of Natural History declared that it is the first time a fossilized mosquito with blood in its belly was found. Greenwalt, began volunteering at the museum in 2006, cataloging specimens for the paleobiology department.



Kishenehn Formation in northwestern Montana, near Glacier National Park. The mosquito was originally discovered in the 1980s by an amateur fossil hunter, a geology graduate student named Kurt Constenius.

<https://www.smithsonianmag.com/science-nature/a-fossilized-blood-engorged-mosquito-is-found-for-the-first-time-ever-1749788/>

EFMLS Wildacres May 15-21, 2023

Speaker-in-Residence: Helen Serras-Herman - 2023
We are very fortunate to have another fabulous Speaker-in-Residence for the 2023 Wildacres Session: Helen Serras-Herman is an acclaimed gem artist with 40 years of experience in unique gem sculpture and jewelry art. Her award-winning, one-of-a-kind, distinctive artwork has been exhibited worldwide and published in over 300 trade magazines and books.



Classes listed below with instructors:

- *Chainmaille, Jim Hird
- *Faceting, Bernie Emery
- *Gem Tree Art, Linda Boronczyk
- *Intarsia, Chuck Bruce
- *Mineral ID, Mike Wise
- *Silversmithing, Richard Meszler
- *Soapstone Carving Ken Valko
- *Wire Wrapping Jacolyn Campbell

If you have any questions, please contact either John Milligan, Registrar, at jmilligan@stny.rr.com or 607-201-4985 or Mark Kucera, Director, at mark_j_kucera@yahoo.com or 914-423-8360.

Sponsored by the Eastern Federation of Mineralogical and Lapidary Societies [The Eastern Federation of Mineralogical and Lapidary Societies \(efmls.org\)](http://www.efmls.org)

Micromineralogists of the National Capital Area, Inc.

MNCA Demonstrates at GLMS-MC

by David Fryauff, President

Thanks to everyone, Kathy Hrechka, Tom Tucker, Bob Cooke, Dave MacLean, and David Fryauff from our MNCA group who helped with the Micromounters' Demonstration table at the Gem Mineral & Lapidary Society of Montgomery County, Maryland show which was held at the Gaithersburg Fairgrounds on March 17 & 18. Over 2,000 people came to see exhibits, demonstrations, and shop for rocks. We had a very nice setup of twenty mounted microminerals on a turn style wheel under the club microscope. Everyone was excited about the different colors and crystal forms of these representative microminerals.

Tom Tucker, our resident professional geologist, and past president demonstrated the way we search for and trim down, and mount specimens of the 15+ microminerals found in vugs of basalt from Sugar Grove, WV. There were lots of nice giveaway specimens from some other famous localities such as Mont Saint-Hilaire, Quebec (aegirine, analcime, microcline, etc.), Pugh quarry, Ohio (fluorite, calcite), our nearby Vulcan Manassas Va. traprock quarry (prehnite, pumpellyite, zeolites), and the Mammoth Mine in Presidio Co., Texas ("Mystery Minerals").

Kathy donated 100 mineral and fossil publications promoting Diamond Dan Publications, who provides geology STEM to our youth. She also brought two shower curtains of Periodic Table of Elements to promote "Science is Fun"! The large one hung from the floor to ceiling where families could learn about home products derived from native elements, while the other one was our table covering. Dave Hennessey was a mineral vendor, with affordable rocks and minerals, to spark interest in our natural world.

It was a busy time but it was great to see the wide eyes and delighted smiles of kids and adults seeing rare and perfectly crystalized microminerals, through a microscope, for the first time in their lives... Who knows, maybe some/one of them will join us someday.



MNCA demo table Saturday: Bob Cooke, David Fryauff, Dave MacLean, and Kathy Hrechka



Dave MacLean ready to share our microminerals. "Minerals" by Diamond Dan publication giveaways donated by Kathy Hrechka

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Micromineralogists of the National Capital Area, Inc.

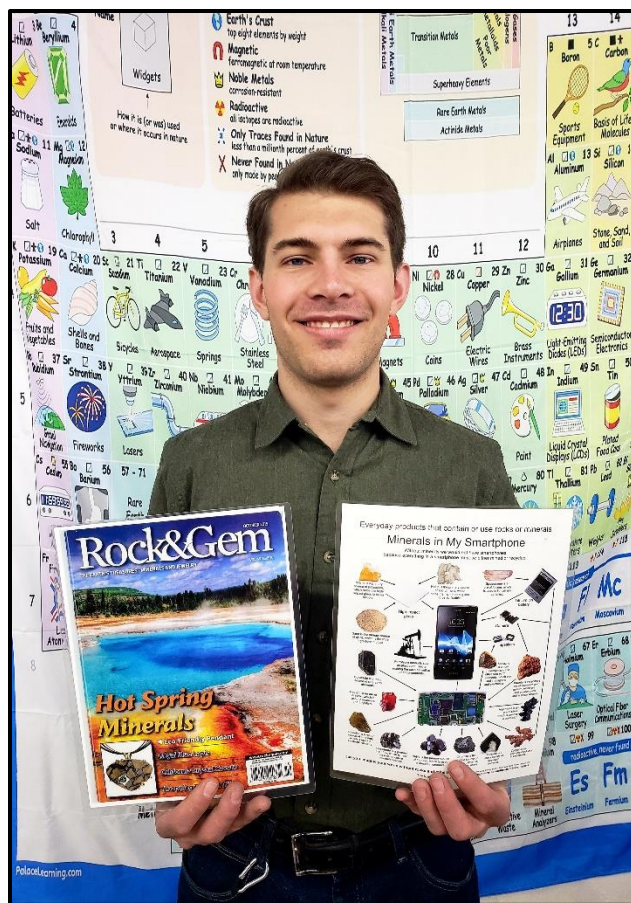


MNCA demo Sunday: David Fryauff & Tom Tucker



Dave MacLean inspires youth with microminerals.

Kathy Hrechka's mystery rock/minerals from 1985, door prize GLMS-MC. While I was exiting the show, I heard my name called over the loud-speaker. I just won an unidentified rock/mineral. Since I was new to the area, it gave me a reason to return to the demonstrators with microscopes for identification. I just wanted to embrace like-minded new friends. I joined MNCA and enjoyed collecting micro-minerals including at the Rockville quarry. Grateful for Fred Schaefermeyer, who became my geo mentor for over thirty years, I wonder where I would be if my name was not called for this door prize years ago.



Eagle Scout, Conrad Smith, designer of "Minerals in My Smartphone" was featured in Rock & Gem magazine.

MNCA promoted him at our demo table, as he is a member of the host club. Conrad is studying Biotechnology with his fiancé Savannah. They both work as associate scientists in the Life Science Division for Millipore Sigma doing contract Testing Services. Conrad is assigned to the Molecular Operations Laboratory, while Savannah is assigned to Next Generation Sequencing.

Since Savannah embraced viewing microminerals at our booth, I gave her some ideas of how to find microminerals within Conrad's rock/mineral collection. Their wedding may be planned for April 2024, and her wedding ring may not feature a faceted diamond. We look forward to Conrad's surprise ring for his new bride.

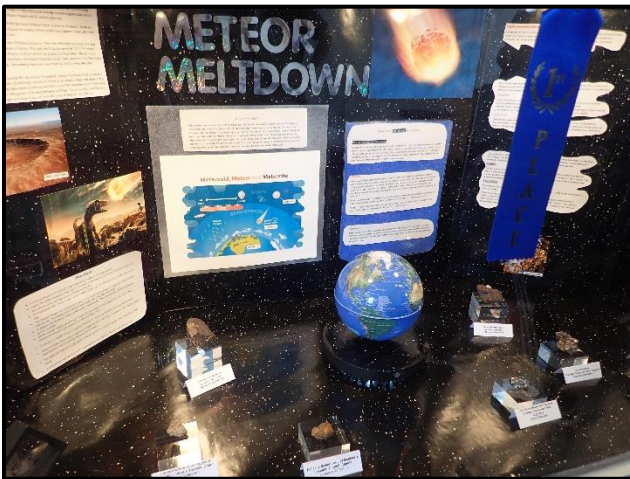
Micromineralogists of the National Capital Area, Inc.



"Michigan Copper" by Ken Reynolds



"Mineral Easter Eggs" by Germaine Broussard



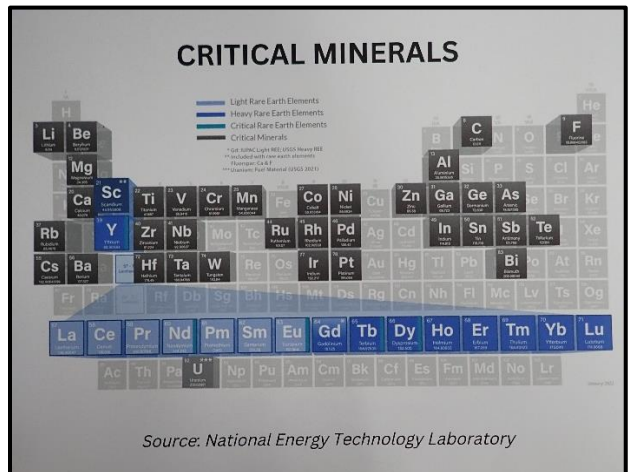
"Meteor Meltdown" – Junior exhibit First Place 2023 Lillian Turner Award.



"Northern Virginia Trap Rock Quarries" by Thomas Hale & Andy Dietz – Friends of Mineralogy Virginia Chapter & Virginia Mineral Project



"Wonders of Sand" by David Balenson



"Critical Minerals" Friends of Mineralogy Virginia Chapter & Virginia Mineral Project booth

Photo credits Kathy Hrechka & David Fryauff

47th Annual Micromount Symposium Leidy Microscopical Society Review

by Steve Stuart, Editor CMMA

The Leidy Microscopical Society convened their 47th Annual Micromount Symposium on Friday, March 10th and ended it on Saturday, March 11th. Half day Friday (noon to 6 pm) and full day Saturday (9 am to 6 pm). It was held at the Advent Lutheran Church in Richboro, Pennsylvania, north of Philadelphia. It is a very spacious facility, allowing plenty of room for social distancing. Presentations were given in the chapel with pews for seating.

Brittany A. Cymes, Ph. D. “Microscopy of Solar Wind Particles Trapped in Lunar Surface Minerals”:

Friday’s highlight was a Zoom presentation by Brittany A. Cymes, Ph. D. on “Microscopy of Solar Wind Particles Trapped in Lunar Surface Minerals”. She is a NASA scientist currently working at the Johnson Space Center in Houston, Texas. Her principal focus is analyzing newly released Apollo 17 samples with advance microscopy and energy dispersion analysis. These techniques are far beyond the SEM-EDS analysis we might be used to seeing.

Some of her images show individual atoms in the lunar minerals. The lunar surface is coated with dust (regolith) produced by the impact of micrometeors over billions of years. Also impacted the surface regolith are hydrogen and helium ions from the solar wind. These ions can alter the surface chemistry of the regolith minerals and become implanted in them. They can also trigger changes in surface chemistry, producing new species. The samples were curated under very low temperature conditions, and some of the changes are lost as the samples are studied under room temperature. Part of her research is to develop techniques to maintain a lower temperature for the analyses and quantify the volatilization of hydrogen and helium that had been infused into the samples. A very technical but very interesting talk!

Also, there was a silent auction on Friday afternoon and snacks and drinks were available to sustain the attendees. The giveaway tables started to fill up and attendance grew as the afternoon wore on.

Robert Carlton, Ph.D. on “Mineral Analysis for the Micro-Mineral Collector”:

Saturday’s activities included two more silent auctions and an afternoon presentation by Robert Carlton, Ph.D. on “Mineral Analysis for the Micro-Mineral Collector”. His focus was on use of spectrographic and polarizing microscopes along with refractive index determinations to distinguish between mineral species of similar appearance. His case study was on matulaite from the Bachman Mine in Hellertown, Pennsylvania. Similar species included in his study were afmite, kokokoboite, crandallite and wavellite.

Overall, another thought-provoking and interesting talk! Volume 57-03 Page 4 of 20 March 2023 A more formal lunch was brought in consisting of subway sandwich section, salads, chips, and fruit. There was plenty left over for attendees to take with them for the ride home after the symposium ended. Attendance did pick up over Friday and included several dealers offering a wide range of micromounts. Giveaway stocks increased as well. The symposium started to break up around 4:30 pm as some attendees had long drives back home. I left around 5 pm for my 1:15 drive to Bethlehem.



Picking through Don Smoley’s stock are Dr. Robert Carlton, Don McAlarnen and Christel Hoffman

Continued next page.

Leidy continued



Dealers Bob Johnson and Victor Sapienza shared a table. To the right are John Ferrante and Leonard Porcelli.



Calcite with pyrite from the Weaverland Quarry, Lancaster County, Pennsylvania, USA. About 4 mm FOV. Off the giveaway tables at the Leidy Microscopical Society meeting on March 11, 2023. 12 likes.



"Church Service" conducted by Dr. Robert Carlton

My contribution to the symposium was to take photos of some of my findings using my Pixel 6 smartphone and a microscope mounting adapter, and posting them to the Facebook Micromount Club group page, with the lead-in "Live from Leidy". It was amazing to see the global response to my photos from Europe, USA, Viet Nam, Australia, etc. It brought the Leidy Microscopical Society name to a wide audience. Here are some examples.



*Live from the Leidy Microscopical Society meeting in Richboro, PA. Here is a **fluorite** from the Weaverland Quarry in Lancaster County, Pennsylvania. About 2 mm FOV. 13 likes.*

Continued next page.

Micromineralogists of the National Capital Area, Inc.



Live from Leidy! **Prehnite** from the O & G Southbury quarry in Woodbury, Connecticut, USA. About 2 mm FOV. 39 likes!



Vanadinite from the Apache Mine, Gila County, Arizona, USA. About 2 mm FOV. Another giveaway at the Leidy Microscopical Society meeting on March 11, 2023. 70 likes!

Attendance peaked at 15 on Friday and 20 on Saturday. Here is a collage image of attendees created by Don McAlarnen, Treasurer of the Leidy Microscopical Society. Note that the person in the third row, third in, is Victor Sapienza.

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Volume 57-03

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March 2023

Micromineralogists of the National Capital Area, Inc.



Canadian Micro Mineral Association 59th Spring Symposium May 5-7, 2023

by Frank Ruehlicke

The CMMA invites you to attend their 59th Spring Symposium the first weekend of May in Ontario's Niagara Region. The Symposium features a great lineup of presentations, a silent auction, Saturday evening banquet with a live auction, giveaways and more! Register by April 5th to guarantee your spot!

Featured Presenters:

Raymond McDougall, Quinuvica, Peru

Quentin Wight, Microminerals of Mont Saint-Hilaire

Dr. Aaron Lussier, Caging the Devil: Mineralogy and Nuclear Waste

We would love to see MNCA members in person at our Symposium but for those who can't make it, our presentations will be live via Zoom. Registration for the Zoom link will open in early April.

[QUICK LINK TO SYMPOSIUM INFO](#)

Desautels Micromount Symposium 2023 October 6-8, 2023, Baltimore, MD

by Mike Seeds, PhD, conference chair & editor BMS

Hi everyone, You and I belong to a special mineral club. 66 years ago, the Baltimore Mineral Society held the first micromount mineral symposium in the world. For the first time on planet Earth, people gathered to talk about minerals and swap little specimens. Since then, lots of clubs around the world have held their own conferences, but it started with your club. This year our 67th Paul Desautels Micromount Symposium will take place on October 6-8 at the Natural History Society of Maryland on Belair Road.

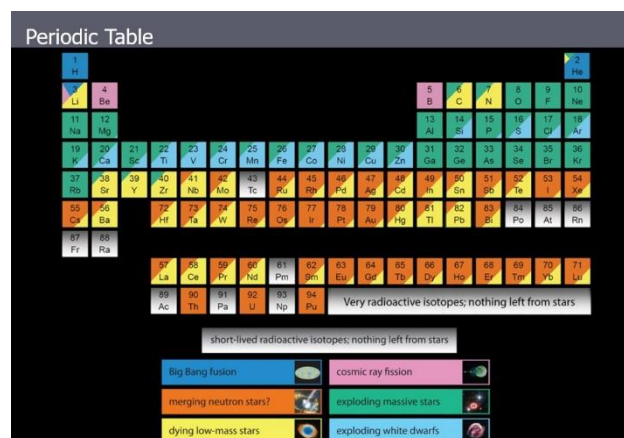
Don't stop reading. You may not be a micromounter but remember that micromounters are mineral collectors. There will be giveaway tables full of rock from well-known quarries and mines plus some locations you have never heard of. There will be three talks on minerals and collecting independent of the size of the rock. There will be dealers selling specimens of common minerals and rare minerals. Most of all there will be people who love mineral collecting anxious to exchange notes and ideas. Anyone who loves minerals would find a micromount symposium lots of fun. And you don't need a microscope; a 10X loupe will serve you well.

We are still planning the program, but we want to alert you to the dates and the new location. Please mark your calendar, spread the word, and plan to come share the fun. We will have Micromounters Hall of Fame Induction, mineral talks, silent, and voice auctions, sales, giveaway tables, and trading.

Details to be Announced: Mseeds@fandm.edu

Note by Kathy Hrechka.

Gratitude to our dear friend, Dr. Mike Seeds emeritus professor of physics and astronomy at Franklin and Marshall College in Lancaster, Pennsylvania, from 1970 until his retirement in 2001. He is the author of over fifty textbooks, now available for sale on the internet.



Dr. Mike Seeds "Universal Star Formations"

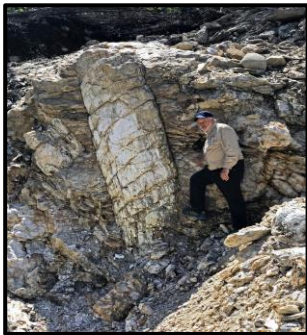
Dr. Mike Seeds was a featured speaker at the Atlantic Micromounters' Conference on April 10, 2021. He explained how elements in the periodic table originated within star formations of our universe.

Mineral Talks Live April 5 @ 1pm ET

Speaker: Skip Simmons

“William “Skip” Simmons received his BS from Duke University, MS from University of Georgia, and PhD from the University of Michigan. He was the Director of the Mineralogy, Petrology and Pegmatology Research Group in the department of Earth and Environmental Sciences at the University of New Orleans, New Orleans, LA where he taught mineralogy and petrology for forty-two years.

He is the author or co-author of the description of twenty-three new minerals and five discreditations. His research record includes over five hundred published papers in mineralogy, including ten books, nineteen book chapters, nine encyclopedia articles, and two patents. The new mineral simmsonite is named in his honor in recognition of his work on granite pegmatites and their mineralogy. He is a Fellow of the Mineralogical Society of America and was awarded the Charles A. Salotti Earth Science Education award for Excellence in Earth Science Education. Skip and his wife Karen were also honored by the dedication of V54 of The Canadian Mineralogist (2016), a tribute to William B. ‘skip’ simmons and Karen Louise Webber. He was the recipient of the 2022 Carnegie Mineralogical Award”.



Skip Simmons standing by a Giant spodumene crystal in the Plumbago North Pegmatite, Maine. Photo-graph courtesy of Skip Simmons.

Register in advance for this webinar:

<http://go.mineraltalkslive.com/register>

After registering, you will receive a confirmation email containing the link joining the webinar.



MINERALOGICAL & GEOLOGICAL MUSEUM
AT CORNELL UNIVERSITY



SMP

The Mineral Mite April 2023

Micromineral News Australia Zoom

April 18, 2023 @ 4:00 pm ET (check time change)
(April 19, 2023, 06:00 AM in Canberra, Melbourne, Australia)

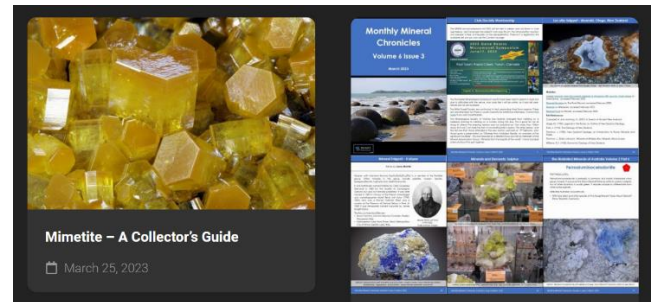
“Minerals of the World”, presented by Henk Smeets. Henk is an enthusiastic amateur mineral collector for 33 years, who resides in the Netherlands. “I love taking field trips with friends. Together we have visited a lot of collecting sites all over Europe. Micro-mounts are my passion. I have lots of material from Europe to trade - so if you have good stuff to trade, then don't hesitate to contact me. All the photos on the site are made by myself. I feel no need to copyright anything, so the photos can be used for any friendly cause. In which case mentioning my name and/or website would be highly appreciated”. TOMEIK MINERALS
<https://www.tomeikminerals.com/about-me/>

Steve Sorrell resides in Melbourne, Australia and hosts various geology persons of interest at their 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.



Register for this and other future Zoom sessions here: <https://crocoite.com/index.php/2021/07/the-micromount-club-zoom-sessions/>

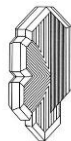
steve@sorrellpublications.com



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 artist.

50th Rochester Mineralogical Symposium: The eRMS 2023!
April 21 – 23, 2023 via Zoom

by Carl Miller, registrar RMS



Hello RMS Family! We are delighted to invite you to the 50th Rochester Mineralogical symposium, the eRMS 2023. The 50th RMS will be online with the same format as last year, Friday evening April 21, Saturday April 22, and Sunday April 23. We have great speakers – the full program is below.

The 50th RMS will be our final Rochester Mineralogical symposium, and we hope you will join us!

The RMS was founded specifically as an event intended to ring together enthusiastic collectors, curators, professionals, and dealers – to meet, to interact, to share – in the Thursday-Sunday format that was initiated at RMS 2 in 1974 and continued annually through RMS 46 in 2019. We won't be able to do that again. That is what was most special to many of the people who have made RMS all that it is and had been in Rochester: a full cross-section of mineral world people gathering over minerals and society, meeting and getting to know each other as new mineral friends, and then reconnecting annually as good friends. We've done our best to keep the spirit of the RMS alive and well online and thanks to all of you, this has been an excellent chapter in the history of RMS.

We know you will be disappointed we've reached the end of the RMS. We are too. We'll do our best to deliver a great last one – we look forward to you being part of it!

Friday, April 21

8:00 pm **Opening** – *Raymond McDougall*

8:10 pm **The Sudbury Basin: An Unearthly, Earthly, Metal-Rich Anomaly** – *David K. Joyce*

9:15 pm --- **VIRTUAL LOUNGE** ---

Saturday, April 22

WHAT'S NEW IN MINERALS:

11:00 am **What's New in Minerals** - *Jeff Scovil*

12:00 pm **What's New in Minerals II** – *John Betts, with Mark Jacobson, Raymond McDougall and Jim Nizamoff*

What's New from New Mexico – *John Rakovan and friends*

1:00 pm --- **LUNCH BREAK** ---

1:30 pm **The History and Minerals of the New Cornelia Mine, Ajo, Arizona** – *Les Presmyk*

2:30 pm **Chrysoberyl Knoll and Quarry Hill: The Minerals and Quarries of Haddam, Connecticut** – *Harold Moritz*

CONTRIBUTED PAPERS AND SHORT TALKS IN SPECIMEN MINERALOGY

3:30 pm **Ryerson Hill Quarry, Maine: Pegmatite Contamination and Titanium Dioxides.** *Lloyd W. Alexander, Alexander U. Falster and William B. Simmons.*

3:45 pm **Teaching Mineralogy During Covid: A Much-Needed Assist from the Mineral Collecting Community.** *Sarah Hanson.*

4:00 pm **Positive and Negative Striations on the 021 Pyritohedral Face.** *Bob Morgan.*

4:15 pm **The Azurite to Malachite Pseudomorph Process.** *Raymond Straw.*

4:30 pm **Geochemical Trends of Zoning in Heavy Minerals in the Emmons Pegmatite.** *N.K. Tolls.*

4:45 pm --- **VIRTUAL LOUNGE** ---

Raise a Glass and Sing! – *David K. Joyce*

Sunday, April 23

11:00 am **Sir Arthur Russell and his Mineral Collection** – *Roy E. Starkey*

12:00 pm **Celebrating 50 Years of the RMS**
Raymond McDougall and Steve Chamberlain

Raymond McDougall - Chair

<mcdougallray@gmail.com >

Carl Miller - Registrar <contactrms@hotmail.com>

Sarah Hanson – Technical Session Coordinator
<sarahhanson042@gmail.com>

Chris Emproto - Online Host for the eRMS 2023

Carolyn McDougall – Online Host for the eRMS 2023

Micromineralogists of the National Capital Area, Inc.



American Federation of
Mineralogical Societies

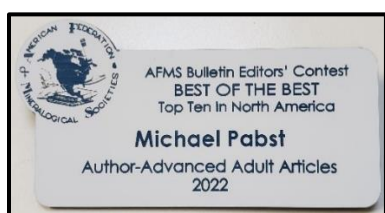
(AFMS)
www.amfed.org

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.

Congratulations Michael Pabst!

The American Federation of Mineralogical Societies Bulletin Editors Advisory Committee Awarded Michael Pabst 9th Place for his article "Cumengeite and Pseudoboleite" which was published in The Mineral Mite 2021. Michael was honored on October 17, 2022, in New Orleans, Louisiana, the location for the AFMS/SCFMS Convention. Michael received a certificate as well as a new name tag.



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.

Local Geology Club Meetings:

April 2023

3: Northern VA Mineral Club NVMC 7:30 Zoom
www.novamineralclub.org

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

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

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

**21: 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

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

Micromineral Symposia 2023:

May 5-7, 2023 Canadian Micro Mineral Association
59th Spring Symposium Brock University, St.
Catherines, Ontario Canada

June 3, 2023 49th Annual Atlantic Micromount
Symposium James Madison University 10:30am

October 6-8, 2023, 67th Annual Paul Desautels
Memorial Micromount Symposium Baltimore,
Maryland

The Mineral Mite April 2023

Micromineralogists of the National Capital Area, Inc.



GeoWord of the Day and its definition

alurgite (a-lur'-gite) A manganiferous muscovite.

brucite (bru'-cite) (a) A variously colored platy trigonal mineral: $Mg(OH)_2$. It commonly occurs in thin pearly folia and in fibrous form, as in serpentine and impure limestone. (b) A group name for trigonal minerals of composition $A(OH)_2$, where $A = Mg, Mn^{2+}, Fe^{2+}, Ni$ or Ca .

chromatite (chro'-ma-tite) A citron-yellow tetragonal mineral: $CaCrO_4$.

cobaltomenite (co-bal-to'-men-ite) (a) A red or pink monoclinic mineral: $CoSe^{4+}O_3 \cdot 2H_2O$. It is isostructural with ahlfeldite and clinochalcomenite. (b) A group name for monoclinic minerals of the general formula $ASeO_3 \cdot 2H_2O$, where $A = Co, Cu$ or Ni .

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



Newsletter inputs:

- * David Fryauff
- * Jeff Guerber
- * Michael Pabst
- * Bob Cooke
- * Kathy Hrechka
- * Pete Chin
- * Steve Stuart
- * Mike Seeds
- * Carl Miller



Micromineralogists of the National Capital Area
www.dcmicrominerals.org

We are temporarily meeting at Kings Park Library in Burke, 3-5:30pm (forth Mionday) 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 1st of each month.

The Mineral Mite will be emailed by 5th.

No newsletter July/August

Inducted into Editor's Hall of Fame – 2018

EFMLS Trophy 2021 Small bulletins