Micromineralogists of the National Capital Area, Inc.

MNCA Website www.dcmicrominerals.org

The Mineral Mite

Vol. 55 – No. 3 Washington D.C. – A Journal for Micromineralogists March 2022

March 23 Time: 7:30 pm Zoom

Program: The Hogg Mine: A Tale of Two Machine Digs

Presenter, Bill Stephens, Professional Geologist

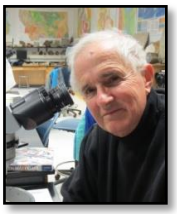
Abstract- The Hogg Mine (a.k.a. The Hogg Estate, the Oxford Mine, Mineral Processing Mine, Foley Mine) is located approximately 1.2 miles south of Smith's Cross Roads south of the Town of Lagrange in Troop County Georgia. The Hogg Mine has been commercially mined for Beryl and co-produced Kaolin, Quartz (silica), and scrap mica as by-products since WWII. Today it is open to collectors.
Details and Bill's biography are on the next page.

Mystery Micro Mineral of the Month

Clue: octahedral crystals on quartz, Sonora, Mexico.
FOV =1.5 mm by Pete Chin, Honolulu, Hawaii

Turn to next page for answer.

President's Message:



by Dave MacLean

The risk of contracting covid-19 is a less but not zero. I suggest we meet on March 23 by zoom again.

NVMC is in the process of organizing two field trips; Fairystone State Park in Southwest VA for staurolite six hours away with an overnight and on a different day the Mineral Museum at JMU in Harrisonburg, VA We have been invited to join NVMC on these trips.

Our club's micromineral conference will be virtual on Zoom from 1-5pm Sat April 2 with two speakers: Dr. Robert Hazen, and Alec Brenner.

Kathy Hrechka gave an interesting overview of the Tucson show at the convention center for our February meeting. She showed a significant number of displays of thumbnails in the apatite group. She said the talks were interesting. I am glad to see significant interest and presentation relating to thumbnails and micro minerals at Tucson.

48th Annual Atlantic Micromounter's Conference April 2, 2022 1-5pm Zoom

by Kathy Hrechka, chair

1pm - Dr. Robert Hazen, Carnegie Institution
3pm - Alec Brenner, Harvard University

Details for this year's conference can be found on pages 8-10. There will be no micromineral auction, rather some entertaining quizzes pertaining to geology. Sign up to receive Zoom link "contact".
www.dcmicrominerals.org

The Hogg Mine: Two Machine Digs

Records of commercial production, and when production began, are sketchy and conflicting, but interest in the rose quartz and deep blue aquamarine produced at this mine began at least as early as the 1950's.

Gem production at this mine occurred both during later commercial operations and intervening collector driven mining. The mine has an elongate lensoidal quartz core containing world class cabochon grade star and facet grade rose quartz as well as less common cabochon and even facet grade aquamarine. The mine is also famous for large well-formed beryl crystals. Chris Painter acquired the lease from a new property owner several years ago and operates the mine for collecting on weekends. Chris formerly had a "machine dig" once a year (invitation only) late in the summer followed by a "Dig after the Machine Dig" on the Saturday following the machine dig which was open to the public for a fee ($35/per person). Chris now has guided digs and private machine digs by appointment during the week. This is the story of the Mine, the Man and my two Machine Digs along with update from our recent visit with Chris after the Tucson show 2022.

Biography: Mr. Stephens is a licensed professional geologist in Delaware, North Carolina, Virginia & Pennsylvania. Mr. Stephens holds a Bachelor of Science and a Master of Science in Geology from the University of Pittsburgh. Mr. Stephens owns and operates Stephens Environmental Consulting, Inc., a full-service environmental consulting, surveying, and civil design engineering corporation he started in 1995. SECI serves the Mid-Atlantic-Capitol Cities Region and beyond. Bill has been collecting gems and minerals since the age of 11 and continues to collect every chance he gets.

Bill is the past VP of Programs for the Delaware Mineralogical Society (DMS), was elected President of the PA Chapter of Friends of Mineralogy (FM-PA) in 2021 and is a member of several other clubs on the East Coast including MAGMA, GMSL, LCFMC. Bill is also EFMLS Region IV RVP, and 1st VP. Bill is working diligently to bring more benefits to EFMLS & FM members including free presentations and website improvements.

A Young fellow holding up 2 Beryl Crystals he just found in this pit.

View of the quartz core. Chris breaking large chunks of rose quartz off the top of the core with the machine.

Examples of cut and rough star rose quartz and aquamarine from the mine. Courtesy Chris Painter.

Mystery Micro Mineral of the Month

by Pete Chin, Honolulu, Hawaii

Answer: **Cliffordite**, green octahedral crystals on quartz. San Miguel Mine, Moctezuma, Municipality, Sonora, Mexico. FOV =1.5 mm *photo by Pete Chin*

Remember, 2022 Dues are Due

MNCA Membership dues for 2022
$15 (single) or $20 (family)
MNCA - Michael Pabst, Treasurer
Please update your email and preferred contact information with Michael. Details are on page ??

Previous Program Review: 2/23/22

by Kathy Hrechka, editor

Tucson Gem and Mineral Show 2022, Great Geology Adventure: Kathy Hrechka shared her adventures of the 2022 Tucson Gem & Mineral Show "The Show That Glows – Featuring the Apatite Supergroup". She focused on the TGMS Micromount Symposium, as well as main lectures, exhibits, and dealers at the convention center. Note: the fluorescence room was such a success, that TGMS decided to repeat that event in the future.

What impressed her the most were the friendly TGMS volunteers as well as geo friendships. Dr. Peter Megaw, show chair announced next year's theme "Silica" May the quartz be with you, to be held February 9–12, 2023.

Kathy shared photos of her visit of the newly opened University of Arizona Alfie Norville Gem and Mineral Museum located at the old Pima County Court House. She promoted the Mineral Talks Live interview of Dr. Eric Fritz, museum director narrating a walking tour of the museum for Blue Cap Productions - MTL episode 57.

The official opening ceremony for the museum was held on February 3, 2022, with Dr. Robert Hazen as the featured speaker. The museum originally opened to the public in 2021. *Photo credits, Kathy Hrechka*

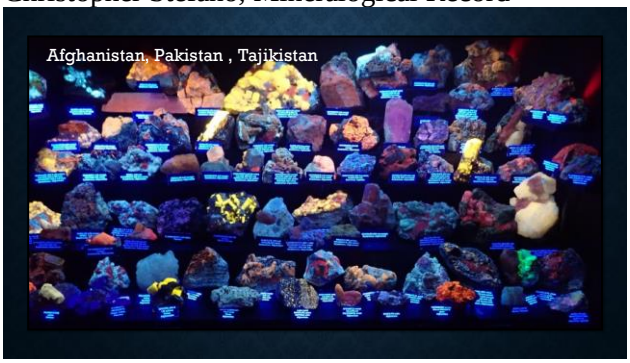
Micromineral room

Tribute cases to Richard W. "Dick" Graeme III

Dr. John Rakovan, Miami U, Oxford, Ohio

Tucson Gem and Mineral Show 2022

Christopher Stefano, Mineralogical Record

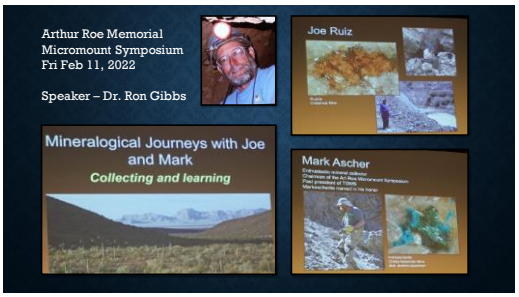


One of seventy-four exhibits of "Fluorescence"

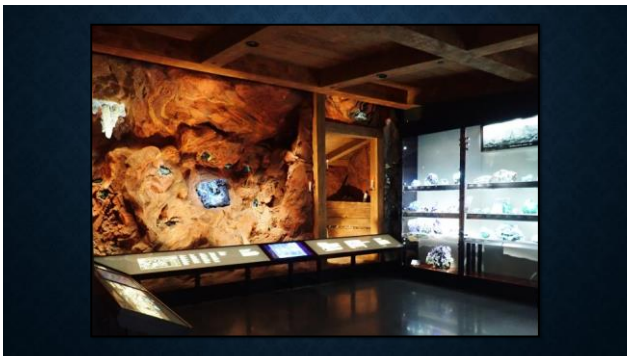
Arthur Roe Memorial Micromount Symposium speakers Fri. Feb 11, 2022

Brent Thorne, Salt Lake City, UT "Tellurium Minerals of the Tomb-stone District, Arizona"

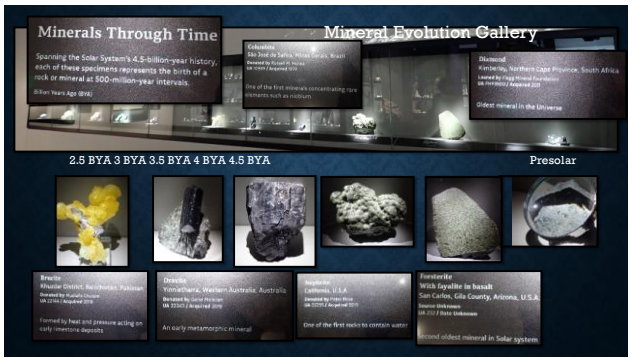
Ron Gibbs, Tucson, AZ "Mineralogical Journeys with Joe and Mark"



UA Alfie Norville Gem & Mineral Museum

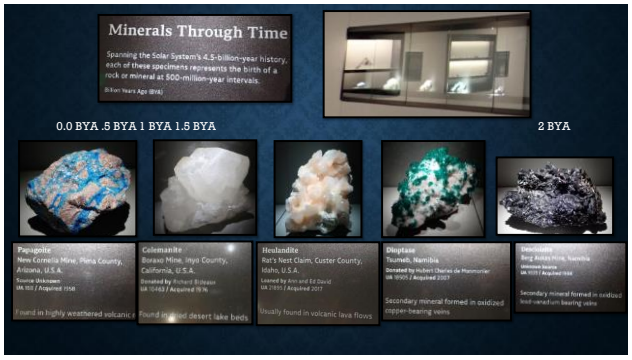


Recreation of Stope at Bisbee, Arizona



Mineral Evolution: Presolar - 2.5 BYA

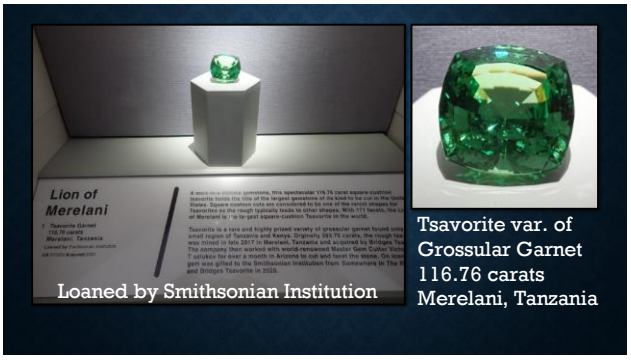
Wulfenites from Arizona



Mineral Evolution: 2BYA - 0.0BYA

Calcite, Malachite on azurite, Wulfenite

Dr. Robert Hazen's Trilobite exhibit



Smithsonian's Tsavorite variety of Grossular Garnet 116.76 carats from Merelani, Tanzania

Tucson 2022: John Ebner, our Great Grandfather of Micromounting

by Kathy Hrechka, Editor

This year's Tucson Gem and Mineral Show was an extraordinary event, thanks to John Ebner. He was the first person to greet me outside the micromounters room at the convention center and told me that he had recently celebrated a milestone birthday — his 90th — to which I responded by singing "Happy Birthday to You." (In truth, I felt that I owed him 90 years' worth of songs!)

John first became interested in minerals in the 1950s, after he completed four years of service with the Navy. He met a stamp dealer who also was a mineral collector. The dealer asked John if he collected minerals; John said he didn't know anything about them. The dealer said he was starting a mineral club and wondered whether John would be interested. John checked with his wife, Janet, to see if she would be interested in joining together. She wasn't, but 13 years later, in 1969, John and his older son joined a mineral club in New Jersey. Ten years later, he joined the Tucson (Arizona) Gem and Mineral Society (TGMS).

I first encountered John at the Baltimore Micromounters Symposium, an event he began attending in 1981. He was known for creating historical micromineral collections, which he brought down in his car from his New Jersey home for display at the symposiums. More recently, thanks to Zoom, he has been able to attend the BMS from Arizona.

Through the years, John has entered numerous micromineral exhibits. He was awarded 1st place in the slide competition category at the TGMS show in 1988 and 1990. He also won 1st place at a show in Cincinnati, Ohio, for the eponymous Rakestraw collection of microminerals. The Rakestraw collection was the collection which for many years has been claimed in mineral documents as being in the hands of a family in Pennsylvania, which was not true. When the Smithsonian asked John to appraise it, he jumped at the chance to correct the mis-information. After appraising it and transferring it the Harvard (the great grandson's wishes) Carl Francis, the Museum Curator at Harvard allowed John to exhibit it at the Cincinnati Show, The Rochester Symposium, and the New Jersey Show for 27 years, while it was in his possession. In 1997 John was inducted in the Paul Desautels Micromounters Hall of Fame, which is sponsored by the Baltimore Mineral Society of Maryland.

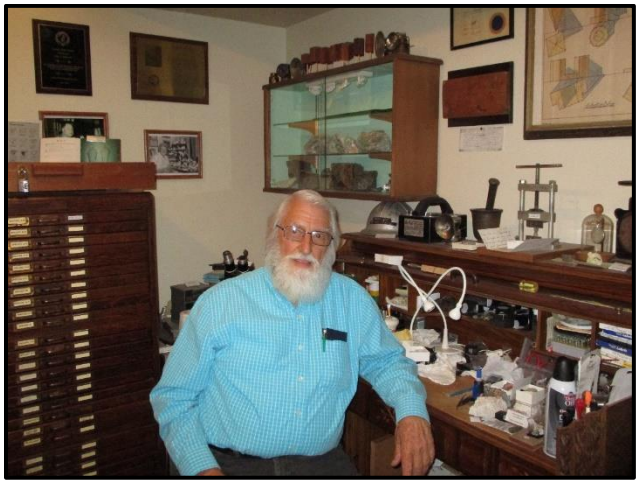
In 2010, John and a friend drove across the country to Tucson, Arizona. Five years later he purchased a home in Tucson — one that has evolved into an historical micromineral museum. Part of his collection contains over 420 specimens mounted by the persons for whom they are named. In addition, he has more than 90 microscopes, including 16 from members of the Micromounters Hall of Fame, along with 10 plaques presented to Hall of Fame members upon induction.

When he wasn't collecting (and displaying) microminerals, John worked for the U.S. Postal Service for 24 years. Post retirement, he became a commercial driver for 29 years. In addition to his Navy service, he earlier worked part-time at his father's carpet business from junior high school through college and beyond.

John was married for 55 years to Janet DeBow, with whom they had two daughters and two sons. Janet passed away in 2008. They have three grandsons and one granddaughter, as well as four great-grandsons (one in college) and one great-granddaughter. That qualifies John to be the best great-grandfather ever!

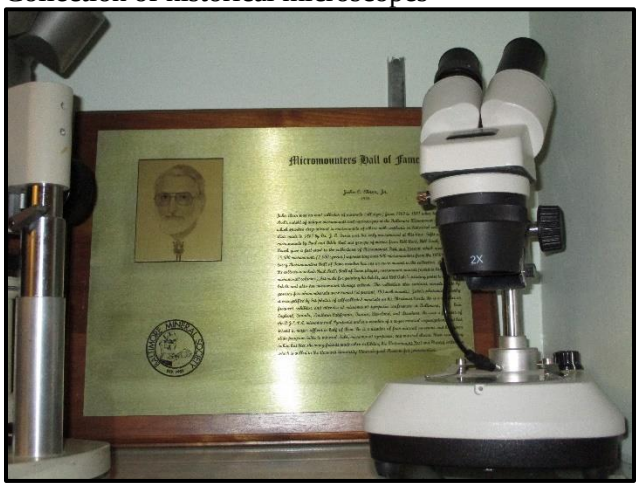
Happy 90th Birthday John!

Tucson: John Ebner's Museum

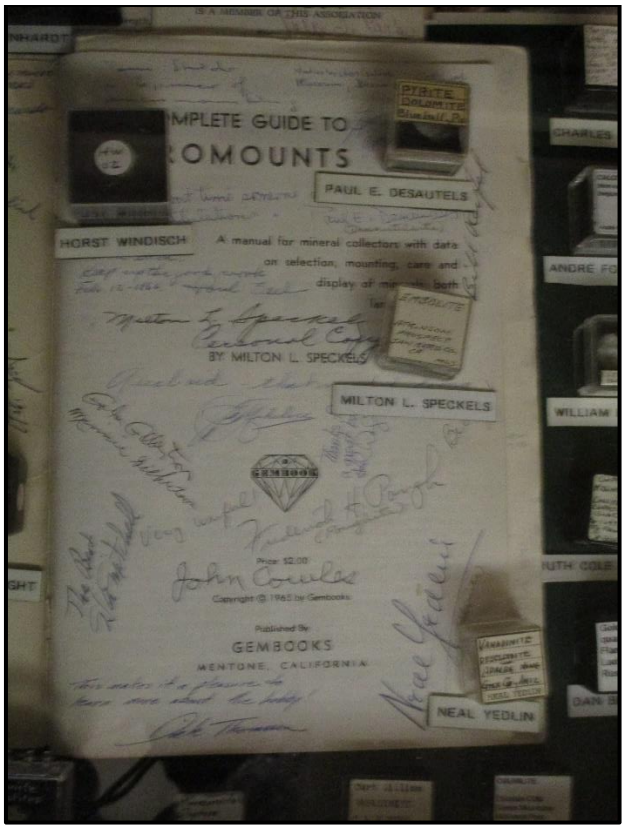


John Ebner in his micromineral office

Collection of historical microscopes



John Ebner: Micromounters Hall of Fame, BMS



Historical micromineral collectors' signatures

Cynthia Payne: Micromounters Hall of Fame, BMS
Cynthia was our charter member for MNCA.

Atlantic Micromounter's Conference April 2, 2022 1-5pm virtually on Zoom

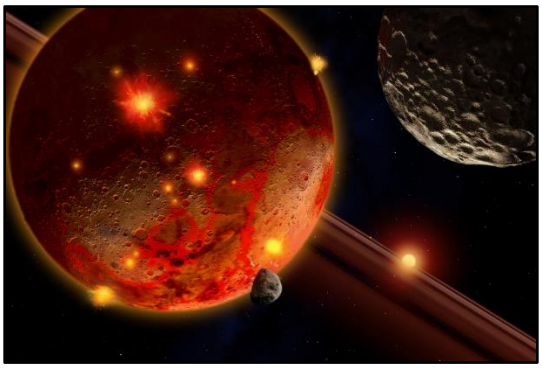
by Kathy Hrechka, chair

Presenter: Dr. Robert Hazen Senior Scientist at the Carnegie Institution for Science and Robinson Professor of Earth Science, Emeritus, at George Mason University

Title: "Mineral Informatics: Visualizing the amazing mineral kingdom "

Abstract: "Every mineral specimen holds incredible amounts of information – each mineral is a time capsule waiting to be opened. "Mineral informatics" is an emerging approach to understanding the story of Earth, which is a 4.5-billion-year saga of dramatic transformations, driven by physical, chemical, and biological processes. Sequential changes of terrestrial planets and moons are best preserved in their rich mineral record. Earth's "mineral evolution," began with a score of different mineral species that formed in the cooling envelopes of exploding stars.

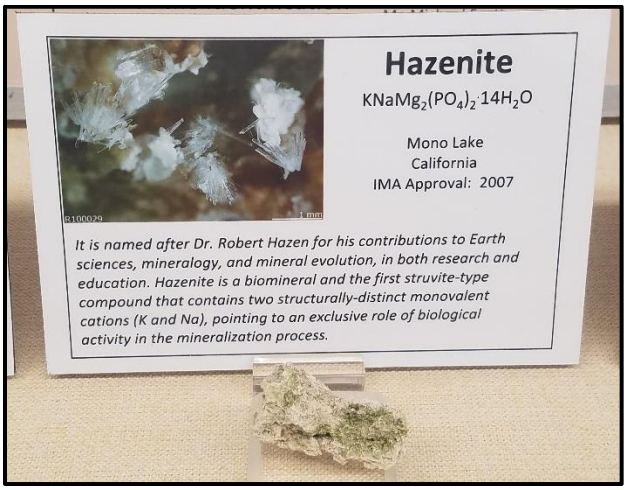
Dust and gas from those stars clumped together to form our stellar nebula, the nebula formed the Sun and countless planetesimals, and alteration of planetesimals by water and heat resulted in the 300 minerals found today in meteorites that fall to Earth. Earth's evolution progressed by a sequence of chemical and physical processes, which ultimately led to the origin-of-life. Once life emerged, mineralogy and biology co-evolved, as changes in the chemistry of oceans, the atmosphere, and the crust dramatically increased Earth's mineral diversity to the more than 5700 species known today."



Making Earth

Short Biography: "Robert M. Hazen, Senior Scientist at the Carnegie Institution for Science and Robinson Professor of Earth Science, Emeritus, at George Mason University, received degrees in geology from MIT and Harvard. Author of more than 450 articles and 25 books on science, history, and music, his recent book *The Story of Earth* (Viking-Penguin) was finalist in the Royal Society and Phi Beta Kappa science book competitions. Hazen has been recipient of numerous awards, including the 2021 IMA Medal, the 2016 Roebling Medal of the Mineralogical Society of America, and the 2012 Virginia Outstanding Faculty Award. In 2020 he was elected Foreign Member of the Russian National Academy of Sciences.

The biomineral "hazenite" was named in his honor. Since 2008, Hazen and his colleagues have explored "mineral evolution" and "mineral ecology"—new approaches that exploit large and growing mineral data resources to understand the co-evolution of the geosphere and biosphere. In October 2016 Hazen retired from a 40-year career as a professional trumpeter, during which he performed with numerous ensembles including the Metropolitan Opera, Royal Ballet, and National Symphony."



Hazenite, Mono Lake, California IMA approval 2007, named after Dr. Robert Hazen. It is located at the University of Arizona Mineral Museum in Tucson. *Photo credit: Kathy Hrechka, Tucson 2018*

Check out Dr. Hazen's website.
https://hazen.carnegiescience.edu

continued next page

Hazen Named Fellow of the International Society for the Study of the Origins of Life (ISSOL) Robert Hazen was elected Fellow of ISSOL, the leading scientific society dedicated to understanding life's origins. This honor recognizes Hazen's research related to the varied roles of minerals in life's origins, as well as his studies of the coevolving geosphere and biosphere. From the ISSOL website: "The selection is based on a member's demonstrated exceptional and sustained contributions to the origin of life and/or astrobiology through scientific research, educational activities, or service to the Society or to this scientific community. Nominees must be members of the society. New Fellows are chosen from a panel of seven Councilors.

Hazen named 2021 recipient of the International Mineralogical Association's Medal of Excellence. Robert Hazen is the 2021 winner of the IMA Medal of Excellence, which recognizes lifetime contributions to the field of mineralogy. He is the tenth scientist so named since the Medal's inception in 2008. The award recognizes decades of Hazen's research in high-pressure crystallography, studies of minerals and the origins of life, the development of "mineral evolution" as an approach to investigating the changing diversity and distribution of minerals through 4.5 billion years of Earth history, and his work in the emerging area of data-driven discovery in mineralogy. The medal will be presented at the July 2022 meeting of IMA in Lyon, France. Hazen will also present a plenary lecture at the conference. From the IMA website:

Hazen Named One of World's Top-10 Most Influential Earth Scientists, 2021 On Earth Day 2021, the academic ranking service AcademicInfluence.com named the world's most influential Earth scientists. On that list Hazen was ranked number 2, based on a proprietary machine learning algorithm.

Hazen Elected to Foreign Membership in the Russian National Academy of Sciences, 2020 Carnegie mineralogist Robert Hazen was inducted last month as a foreign member of the Russian Academy of Sciences—the nation's highest-level scientific society, originally founded by Peter the Great. This is a rare honor for an American researcher. The ceremony, originally scheduled for the end of March, was postponed by the COVID-19 pandemic.

Presenter: Alec Brenner, PhD student at Harvard University

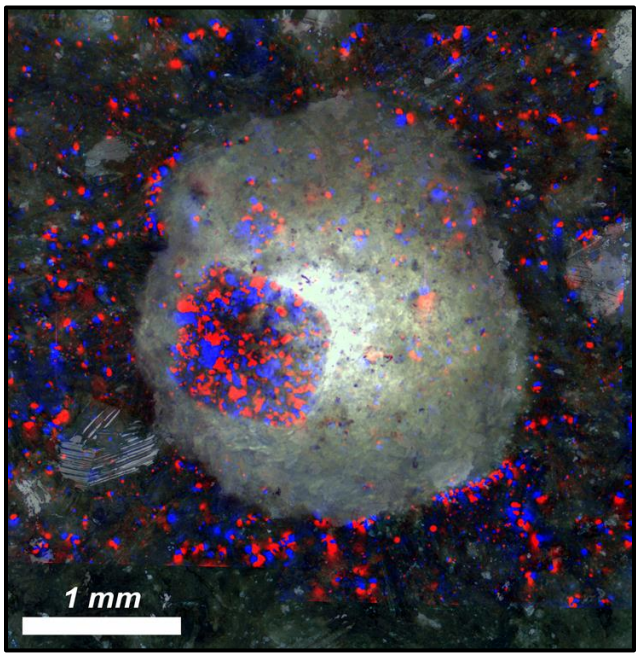
Title: "Little magnets, big geodynamics: Micromineralogy as a tool for studying Earth's magnetic field and tectonics in deep geologic time"

Abstract: "Many iron oxide and sulfide minerals are ferromagnetic, including magnetite, hematite, and pyrrhotite. This means that these minerals become magnetized when they form in a magnetic field and can then retain their magnetization when the field is changed or removed. As a result, these minerals - and the rocks they occur in - can preserve records of the ambient magnetic field in deep geologic time. Paleomagnetists study these ancient magnetic signals to understand the evolution of Earth's magnetic field and the motions of tectonic plates through it, among other applications.

However, Earth's oldest preserved rocks have traditionally been considered inappropriate for paleomagnetic work. Billions of years of metamorphism, deformation, and tectonic events have erased most of their magnetic records, obscuring our view of early Earth's magnetic field and plate tectonics. This is especially true before about 3 billion years ago, coinciding with the evolution of some of the first life on Earth.

Fortuitously, my work in the lab of Prof. Roger Fu has identified volcanic rocks in Western Australia that retained 3.2-billion-year-old magnetizations. I will discuss our data from these rocks, which document the oldest described reversal of Earth's magnetic field, as well as large plate motions of the underlying of crust. Of particular interest to micromounters are our magnetic microscopy observations. Using a state-of-the-art magnetic microscope developed by Prof. Fu, we have directly mapped the magnetized signals in our rocks at micron scale (0.001 mm). By closely examining the textures and mineral populations associated with the magnetic minerals in our samples, we have established that they became magnetized when the rocks were chemically altered by hot seawater during a hydrothermal event 3.2 billion years ago. This alteration removed original magnetic minerals and grew new ones via a complex sequence of co-occurring metamorphic reactions.

Raman spectroscopy, electron microscopy, traditional petrographic analyses, and in-situ geochronology further constrain the timing and thermal conditions of this alteration. Our newfound understanding of how these ancient rocks became magnetized paves the way for new studies of Earth's earliest magnetic record."

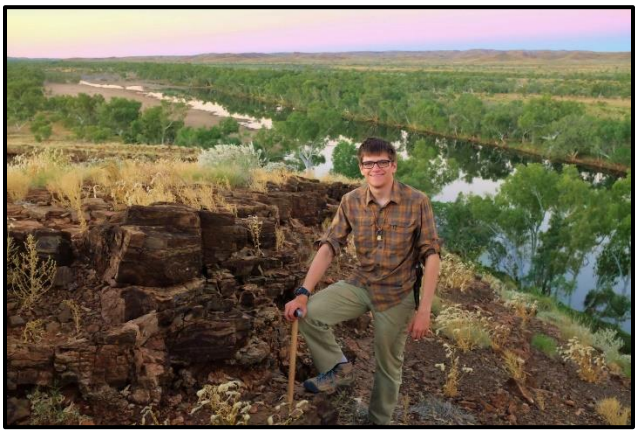


In this image, a microscopic magnetic field map (red and blue hues) is overlaid on an optical image of a gas bubble, or "vesicle" (light-colored circle in the center) within a 3.25-billion-year-old lava flow. The vesicle was quickly infilled by clays, zeolites, plagioclase, and calcite, and the plagioclase hosts millions of strongly magnetized magnetite microneedles (dark region with intense reds and blues slightly left of center).

Biography: "Alec Brenner is a fervent rockhound and native of McLean, Virginia. He is also a fifth-year PhD student at Harvard University, where his research focuses on the mineralogical basis of magnetism preserved in Earth's oldest rocks. This in turn informs his reconstructions of tectonics, core circulation, and surface processes on the early Earth. This research has thus far included field work in rocks about three billion years old in Australia, South Africa, and Minnesota.

Alec first got interested in minerals after finding prehnite from the Vulcan Manassas Quarry in the gravel of his elementary school parking lot. He continued rockhounding and fossil collecting with the Northern Virginia Mineral Club, which he joined in 2007. While attending Thomas Jefferson High School for Science and Technology (TJHSST), Alec's interiography collaborations were with micropaleontologists and planetary scientists at the US Geological Survey, the Smithsonian Institution, and NASA's Goddard Space Flight Center. He attended the California Institute of Technology (Caltech) for his undergraduate studies, earning a BS in Geology in 2017. There, he found his true loves, including his now-wife Netgie and his current specializations in paleomagnetism, deep-time Earth history, and mineralogy.

Alec currently lives in Arlington, Massachusetts, where he hikes atop the rocks of the Avalonian terrane, counts the days until he can resume field work in Australia (pictured), and dotes on his tabby cat Sienna. A special thanks to Prof. Roger Fu, Alec's academic advisor at Harvard's Paleomagnetics Lab, for funding and contributing his expert guidance to the work presented here. Alec also thanks his parents Sara and Paul Brenner, who tirelessly supported his odd fascinations with rocks and drove him to so many NVMC meetings and field trips as a kid."



Alec Brenner, field working in Australia

Nickel Minerals: Ahlfeldite, Népouite, Zaratite, Gillardit

by Michael Pabst PhD, Treasurer

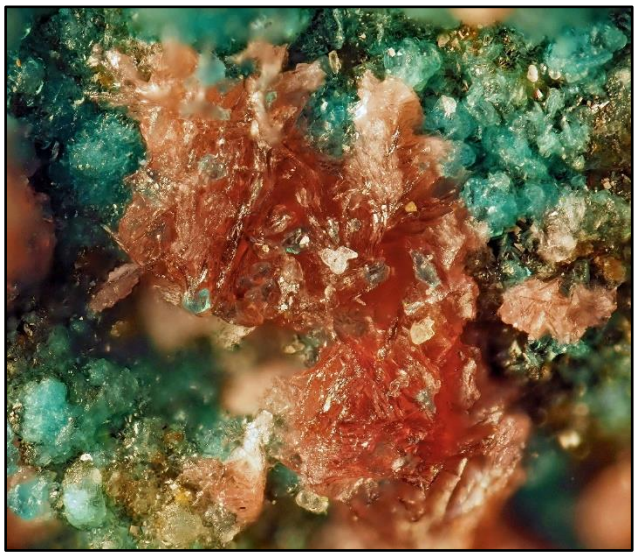
Annabergite, which was featured last month, might be the prettiest nickel mineral, but there are some other secondary nickel minerals worth a look.

Ahlfeldite. Ahlfeldite is nickel selenite, $NiSeO_3 \cdot 2H_2O$. Ahlfeldite can be found in good micro-crystals, as seen in first photo and in the closeups that follow. In the last article about Annabergite, $Ni_3(AsO_4)_2.8H_2O$, I mentioned that a small percentage of cobalt can change the green color of nickel minerals to tan or even pink.

This cobalt-induced pinkish color is often seen in Ahlfeldite. My specimen features a pleasing combination of pink Ahlfeldite and blue Chalcomenite, which is the corresponding copper selenite, $CuSeO_3 \cdot 2H_2O$. The white mineral is likely Alfredopetrovite, aluminum selenite, $AlSeO_3 \cdot H_2O$. The specimen is from the El Dragón Mine in Bolivia:

Ahlfeldite (pink) and **Chalcomenite** (blue). El Dragón Mine, Antonio Quijarro Province, Potosi, Bolivia. Specimen is 9 mm wide. Photo by Michael Pabst, using macro + Raynox lenses, stacking 75 images.

Here are some closeup shots of the Ahlfeldite and Chalcomenite crystals from this specimen:



Closeups of **Ahlfeldite** (pink) and **Chalcomenite** (blue). El Dragón Mine, Antonio Quijarro Province, Potosi, Bolivia. FOV 1 mm. Photo by Michael Pabst, using Mitutoyo 10X lens and Wemacro rail, stacking 25 images.

Here is a beautiful Ahlfeldite photo by Stephan Wolfsried: www.mindat.org/photo-701315.html. Some specimens from El Dragón are so intensely pink, I wonder if they might be closer to Cobaltomenite, $CoSeO_3 \cdot 2H_2O$. For example: www.mindat.org/photo-891393.html. Ahlfeldite can rarely be found as green crystals, where the cobalt content is low: www.mindat.org/photo-222924.html.

continued next page

Nickel Minerals continued

I have a few green nickel minerals in my collection that might be considered aesthetically challenged. These are relatively good examples of these nickel minerals, even though they do not display nice individual crystals.

Népouite, aka "Garnierite". Népouite is a silicate, $(Ni,Mg)_3(Si_2O_5)(OH)_4$. My specimen is labeled Garnierite, and comes from the Barbouilleurs Mines, Dumbéa Commune, Southern Province, New Caledonia, France. New Caledonia is a province of France located in the Pacific Ocean, in Melanesia, which is East Northeast of Australia. In earlier times, New Caledonia was noted for its nickel mines, slavery, and cuisine (cannibalism).

Népouite, aka "Garnierite. FOV 5 mm. Photo by Michael Pabst, using macro lens, stacking 25 images.

Népouite, aka "Garnierite. FOV 3 mm. Photo by Michael Pabst, using stereo microscope, stacking 20 images.

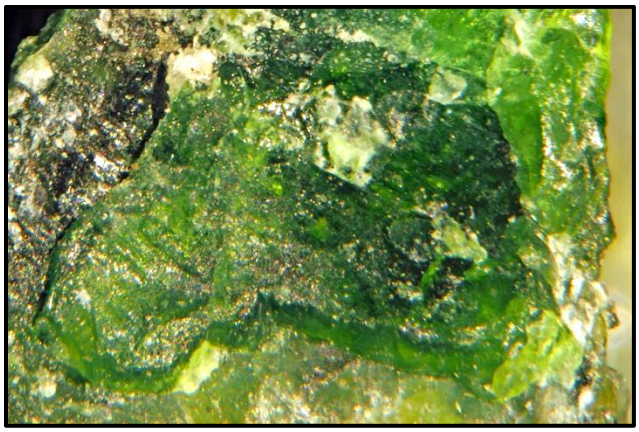
Zaratite Zaratite is a nickel carbonate mineral. My specimen of Zaratite comes from Tasmania. Zaratite is a nickel carbonate, $Ni(CO_3)(OH)_4 \cdot 4H_2O$. Zaratite is green and tends to be not well-crystallized.

Zaratite and other minerals. Lord Brassey Mine, Heazlewood, Waratah-Wynyard, Tasmania, Australia. FOV 9 mm. Photo by Michael Pabst, using Olympus 60 mm macro lens, stacking 25 images. The black mineral in the matrix is Heazlewoodite, Ni_3S_2. Lighter material looks like a Serpentine.

continued next page

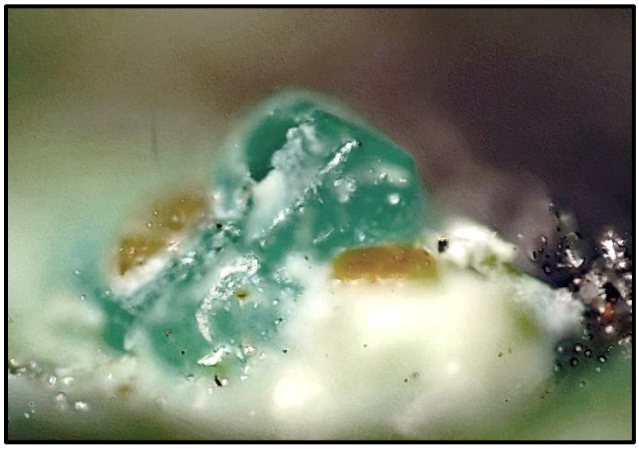
Nickel Minerals continued

A glassy area of the Zaratite specimen is pictured here:



Zaratite. Lord Brassey Mine, Heazlewood, Waratah-Wynyard, Tasmania, Australia. FOV 5 mm.
Photo by Michael Pabst, using stereo microscope, stacking 25 images.

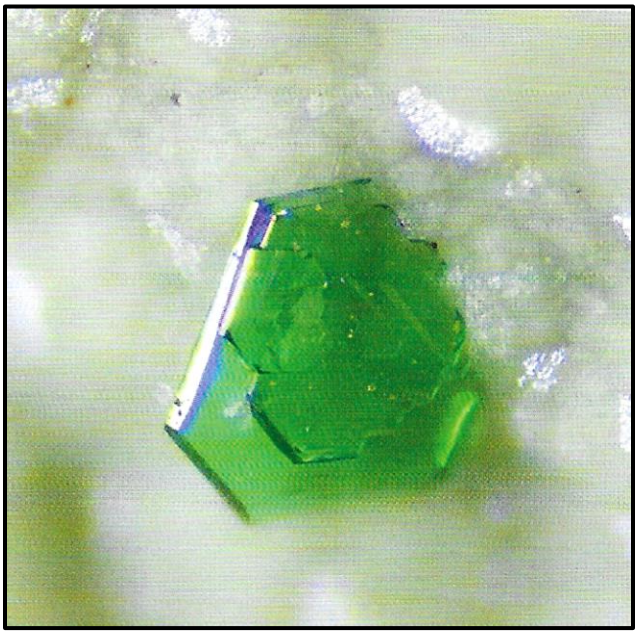
Some Zaratite might arise from a better crystallized precursor Hellyerite, $NiCO_3 \cdot 6H_2O$, which is blue. Hellyerite is said to be unstable upon exposure, converting to Zaratite. But I believe that I have found some traces of Hellyerite on my specimen as shown below:



Hellyerite? on Zaratite. Lord Brassey Mine, Heazlewood, Waratah-Wynyard, Tasmania, Australia. FOV 1 mm. Photo by Michael Pabst, using Wemacro rail with Mitutoyo 10X lens, stacking 25 images.

In perusing the literature, I did find one aesthetic photograph of another nickel mineral, which is pictured below:

Gillardite, $Cu_3NiCl_2(OH)_6$. Gillardite is a member of the Atacamite Group and is isomorphous with Herbertsmithite $Cu_3ZnCl_2(OH)_6$. I think that Gillardite occurs in good crystals because it is primarily a copper mineral with nickel substituting for zinc. I have tried to buy some Gillardite on the e-Rocks website several times, but I have always been outbid.



Gillardite. 132 North nickel deposit, Widgiemooltha, near Kalgoolie, Western Australia. FOV 1 mm. Photo by John Haupt. Photo on page 44 of reference below. Grey IE, Birch WD, Elliott P. New Australian type locality minerals, 2010 to 2020. *Australian Journal of Mineralogy* **21**: 33-63 (2020).

In the next article, we will look at Millerite (nickel sulfide), and at some of the alteration products from Millerite, which, happily, are green and pretty.

Friends of Mineralogy Virginia Chapter FMVA

by Thomas Hale, President

FMVA just released its monthly report (newsletter) as a wrap-up report to all the happenings over the last month. Please find a copy attached below.

The Board of FMVA would like to welcome **Brandi Moore as the newest board member**! We look forward to working with her and she has some incredible ideas which will be shared with our membership soon!

FMVA will be starting a social event program before the start of our speaker series every month. This will be open to FMVA members and affiliates only and will be a great way to get to know one another. More information is coming soon!

Several clubs are donating materials for the VTCA display case. FMVA appreciates the support and passion shown by our fellow societies to help provide teachers with useful materials for their classroom.

FMVA will be hosting a table at the upcoming Montgomery County Gem Show. Please stop by if you are in the area! We highly recommend this show. *Flyer attached below.*

Tom Girton is the POC (tagirton@gmail.com) for taking judges/readers to assist with the **Virginia Junior Academy of Science Research Symposium** in May! Please contact him so he can connect you with the proper organizers. http://vjas.org/judges.html *Open to all affiliates and members*

Our **February Speaker Series** "*The Mineral-Security Nexus*" was a major success. FMVA continues to see high engagement with audiences and RSVPs reaching 100+ individuals from across the country and world. Please make sure to check out the recordings on YouTube. February's talk will be up within the week.

Seeking remote judges for:

81st Annual Meeting of Virginia Junior Academy of Science Research Symposium

Friends of Mineralogy Virginia (FMVA) has been working with our partners at the Virginia Association of Science Teachers and the Virginia Junior Academy of Science over the last year on several educational programs. VJAS has reached out to us and would like to get volunteers who would be willing to help judge and read science fair projects. This is a great virtual opportunity for clubs across the state to give back and connect with local teachers. **All reviews and judging are online so you can do it from home.** Each club has talented members with years of experience, professional backgrounds, and educational passion. This is one small way to give back and contribute in 2022. Any questions just go to VJAS.Org for applications and examples of prior year submissions.

81st Annual Meeting of Virginia Junior Academy of Science Research Symposium
Virtual Saturday, May 14, 2022 (Day of Presentations)
Registration Information: http://vjas.org/judges.html

Primary Contact: Thomas Girton, FMVA Lead (tagirton@gmail.com)

Thomas N. Hale President, Friends of Mineralogy Virginia Chapter Inc.
Director, Virginia Mineral Project
Phone: (540) 529-4506
Email: friendsofmineralogy.virginia@gmail.com

FMVA Dues for 2022 open on January 1st. The 2022 Virginia Mineral Directory

https://friendsofmineralogyvirginia.org

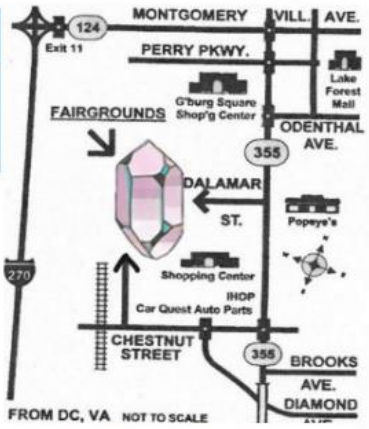
56th Annual Gem, Mineral, Fossil & Jewelry Show

Date/Time: **March 19-20, 2022 Saturday 10-6, Sunday 11-5**

Location: **Montgomery County Fairgrounds; Building #6**
16 Chestnut St. Gaithersburg MD 20877

Featuring:

Hourly door prizes	20+ vendors of minerals, beads, fossils, gems, and jewelry
Gold panning	40+ exhibits by club members, including junior exhibits
Fluorescent minerals	Two floors of everything mineral related
Raffle prizes	Mini Mine, free minerals, and activities for children
Free parking	Demonstrations of faceting, micromineralogy, jewelry making, and physics



Children (11 and under) Free! Ages 12 and over $6
Scouts in Uniform Free! 4H youth with 4H identification Free!
More info at: **www.glmsmc.com**

Show this flyer for $1off admission price
(applies to each member in your group)

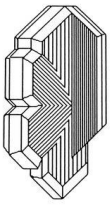
45th Annual Micromount Symposium

Leidy Microscopical Society of Pennsylvania
Friday March 11, 2022, noon to 6pm
Saturday March 12th, 2022, 9am to 6pm
Advent Lutheran Church, 45 Worthington Mill Road, Richboro, Pennsylvania 18954
Table space (for two days): $25.00 (half table) $40.00 (full table) 6ft
Visitor's Fee (no table): $5.00 Friday & $10.00 Saturday (includes lunch)

Reservations/ Admission:
Make checks payable to; Don McAlarnen,
916 Senator Rd, East Norriton, PA 19403
(610) 584-1364 Questions: Email:
donmcalarnen@outlook.com

Rochester Mineralogical Symposium April 8-10, 2022, on Zoom

by Ray McDougall, Chairman



Hello RMS Family, we are going to focus our energy on making RMS 2022 a more robust event online. We will include longer feature talks and are looking at more ways to improve social connection and have fun over the course of the event. Follow us on Facebook. It is our primary internet presence and is updated when new information is available. Thank you all for of your time and thoughtful input on this. https://www.facebook.com/RochesterSymposium/photos

31st Annual Chesapeake Gem, Mineral, Jewelry & Fossil Show April 23, 2022

New Location: **Howard County Fairgrounds**
2210 Fairgrounds Rd. West Friendship, Md 21794
Saturday, April 23, 2022, 10 AM – 4 PM
Minerals, original jewelry, fossils, rough & cut gemstones - Silent Auctions, Door Prizes - Free minerals for kids
www.chesapeakegemandmineral.org

WILDACRES – 2022 Spring Session May 16-22 in Little Switzerland, NC

forwarded by Mary Bateman, EFMLS Editor

SPEAKER-IN-RESIDENCE: We are very fortunate to have another fabulous Speaker-in-Residence for the Spring Session -- Dr. Nathalie Brandes. Dr. Brandes is a geologist, author and distinguished college professor and researcher. She is Professor of Geosciences at Lonestar College - Montgomery in Conroe, Texas, where she has been teaching for the past 17 years. In 2019, she was presented the Faculty Excellence Award in recognition of outstanding teaching methods and dedication to student success in the classroom and beyond.

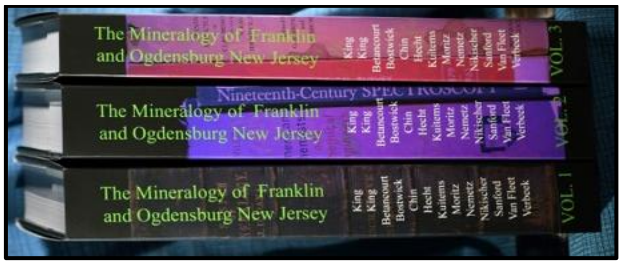
Her current research focuses on ancient mining techniques as well as the history and geology of classic mineral localities. Her Wildacres presentations will focus on the last major gold rush in the United States (Goldfield, Nevada), silver mines in Norway, Mining in the Ancient World, the History of Mineralogy, and the Geology of Birthstones.
Attached is a more detailed biography of her expertise.
CLASS SCHEDULE: Listed in Feb EFMLS News
THER INFORMATION: While the cost of the session is increasing by $10.00 for a double occupancy room, it is a modest increase and one that is still more than a bargain compared to other entities' classes and instructions. The fee includes a week of excellent instructors, room and board, a great speaker-in-residence, the ambiance, and serenity of being in the great Blue Ridge Mountains, and the comradery of fellow members of the many aspects of the hobby. This year you will have the opportunity to decide if you would like to have a single room or share it. Single rooms will have an additional charge. More information will be forthcoming as soon as it is available. In the meantime, if you have any questions, please feel free to contact one of us.

Wildacres Workshop Staff:
Suzie Milligan, Registrar at smilligan@stny.rr.com or 607-687-5108 or Mark Kucera, Director at mark_j_kucera@ yahoo.com or 914-423-8360

New: The Mineralogy of Franklin and Ogdensburg New Jersey - 3 Volumes

submitted by Pete Chin, Honolulu, Hawaii

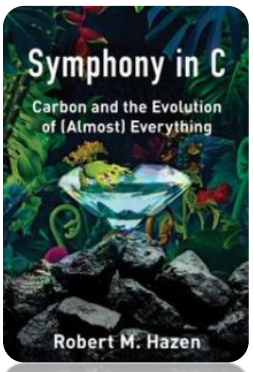
The book is, for a lack of an appropriate word, a STUPENDIUM, 1400-page, 3 volume photographic compilation of the almost every known mineral species and more from Franklin and Sterling Hill.



Full details were published in The Mineral Mite Volume 54 pp 9-10, Jan 2022.

Symphony in C: Carbon and the Evolution of (Almost) Everything

Author 2019 Robert M. Hazen



Carbon is everywhere: in the paper of this book and the blood of our bodies. It's with us from beginning to end, present in our baby clothes and coffin alike. We live on a carbon planet, and we are carbon life. No other element is so central to our well-being; yet, when missing or misaligned, carbon atoms can also bring about disease and even death. With poetic storytelling, earth scientist Robert M. Hazen explores the universe to discover the past, present, and future of life's most essential element. His book then unfolds in four movements, building momentum as he explores carbon as the element of Earth, Air, Fire, and Water. With prose that sparkles like a diamond, Symphony in C tells the story of carbon, in which we all have a part.

American Federation of Mineralogical Societies

(AFMS)
www.amfed.org

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

2022 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! **Matt Charsky** Arlington, Virginia was recently voted as 1st Vice President of the American Federation, representing the EFMLS.

University of Arizona Alfie Norville Gem and Mineral Museum at the Historic Pima County Courthouse, Is Now Open!
By S. Kaminski, Mineralogical Society of Arizona

A new gem, and mineral museum has opened in Tucson, Arizona. The University of Arizona Alfie Norville Gem & Mineral Museum (UAANGMM) is located within the historic Pima County Courthouse, an iconic and historic building of magnificent Spanish Revival architecture in the heart of Tucson
*Full article published in the AFMS News Sept 2021

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:

March 2022
2: Mineralogical Society of the District of Columbia MSDC 7:30 Zoom
www.mineralogicalsocietyofdc.org

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

?: The Gem, Lapidary and Mineral Society of Washington, DC - GLMS-DC meeting
www.glmsdc.org

16: The Baltimore Mineral Society BMS
7pm Zoom
www.baltimoremineralsociety.org

23: Micromineralogists of the National Capital Area, Inc. - MNCA 7:30pm Zoom
www.dcmicrominerals.org

28: Northern VA Mineral Club – NVMC meeting
7:00 pm Zoom
www.novamineralclub.org

Atlantic Micromounter's Conference April 2, 2022 at 1 – 5pm

by Kathy Hrechka, chair
1pm - Dr. Robert Hazen, Senior Scientist at the Carnegie Institution for Science and Robinson Professor of Earth Science, Emeritus, at George Mason University

3pm - Alec Brenner, fifth year PhD student at Harvard University

GeoWord of the Day and its definition:

mcallisterite (mc-al'-lis-ter-ite") A white to amber rhombohedral mineral: $Mg_2B_{12}O_{14}(OH)_{12}•9H_2O$. Also spelled: *macallisterite.*

All terms and definitions come from the Glossary of Geology, 5th Edition Revised.
GeoWord of the Day is brought to you by: EnviroTech!.
envirotechonline.comwordoftheday@agiweb.org
AGI was founded in 1948, under a directive of the National Academy of Sciences It is a not-for-profit 501(c)(3) organization dedicated to serving the geoscience community and addressing the needs of society. AGI headquarters are in Alexandria, Virginia.

submitted by David Fryauff, Vice President

This graphic lists all minerals that are deemed critical to both the economic and national security of the United States. Read More Here:

https://www.visualcapitalist.com/the-50-minerals-critical-to-u-s-security/

Micromineralogists of the National Capital Area
www.dcmicrominerals.org
We continue to meet remotely on Zoom.

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

President: Dave MacLean
Vice President: David Fryauff
Secretary: Bob Cooke
Treasurer: Michael Pabst
Editor/Historian: Kathy Hrechka
Website: Kathy Hrechka
AMC Conference: Kathy Hrechka

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 2022**
$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

Newsletter inputs:
*Dr. Robert Hazen
*Alec Brenner
*Dave MacLean
*Michael Pabst
*Kathy Hrechka
*Thomas Hale
*Pete Chin
*Mary Bateman
*Don McAlarnen
*Bill Stephens
*David Fryauff