



MNCA Website www.dcmicrominerals.org

The Mineral Mite



Vol. 53 – No. 6 Washington D.C. – A Journal for Micromineralogists June 2020

Meeting Canceled June 24 Time: 7:30 p.m. – 10 p.m.
Long Branch Nature Center, 625 S. Carlin Springs Rd. Arlington, VA 22204

No Program – No Meeting

by David Fryauff, Vice president

The June meeting for MNCA has been **canceled** because of the rapid spread of the coronavirus. Experts report that the only effective defense against the virus is “social distance”. We will resume MNCA meetings this fall.



President's Message:

by Dave MacLean

As I think about our cancelled meeting on June 24 and our meetings in Fall, I do not know about the availability of the Long Branch Nature Center LBNC and the local status of the Pandemic virus. Many of us are 60-80 years old. The demonstrated consequences of a Covid-19 infection in persons over 60 years are evident.



Photo of the Month



Perhaps we need to investigate holding all or some meetings online via zoom, WebEx, or other online platform. I have attended Bible study classes, family gatherings, and board meetings on Zoom and WebEx. Which of us can figure out how to view micros through a microscope, which we bring to a meeting for all to look at? I assume we can receive micro photos on Zoom or WebEx.

Our usual meeting attendance is 10-15 persons sometimes less. Perhaps we can meet at one of our homes if the LBNC is not available. Comments please on how we as micro mineralogists can share online what we see thru a microscope at our online meetings. As we emerge from our lockdowns at home, please observe precautions and stay well.

Photo of the Month

Silver, Guanajuato, Mexico. FOV 2 mm. Photo by Michael Pabst, using Macro lens and Raynox lens, stacking 20 images.

Previous Meeting Minutes: 5/24/20

by Bob Cooke, Secretary

There were no minutes to record as the May meeting was canceled, while the nature center was closed due to the coronavirus pandemic.



Previous Program Reviewed 5/24/20

by Bob Cooke, Secretary
No meeting to review.

Museums - Virtual Tours

***Smithsonian [Natural History Museum](#)** virtual tour, including the Hall of Geology, Gems, and Minerals. The resolution is amazing as you zoom in. On the Smithsonian Natural History Museum map, on the upper right, choose the second floor. Then choose one of the 25 well-placed viewpoint dots on the brown side (on the right). Each dot gives a 360-degree view with zoom-in options. For (dozens? hundreds?) more perfect close-ups, visit the museum's [GeoGallery](#).

***Yale Peabody Museum of Natural History [David Friend Hall](#)** virtual tour, at the: Enjoy a 6-minute up-close video of some of the Hall's spectacular specimens.

***[Geology Museum](#) South Dakota School of Mines & Technology** virtual tour at the, O'Harra Building. Explore the exhibits in the museum. Watch a cool fast-motion 1 minute 20 second video about [putting together a Mosasaur](#) skeleton and tour the rest of the [campus](#).

***James Madison University's Mineral Museum** has posted [wonderful images](#) of important samples in its collection.

Reprinted from The Mineral Minutes, May 2020 edition of the Mineralogical Society of the District of Columbia MSDC.

GeoWord of the Day and its definition:

electron microscopy Determining and identifying the structure of substances by using the *electron microscope*.

gallite (gal'-lite) A metallic gray tetragonal mineral of the *chalcopyrite* group: CuGaS_2 .

magnesiohögbomite-2N2S A metallic black trigonal mineral of the *högbomite* group: $(\text{Al,Mg,Fe,Ti})_{22}(\text{O,OH})_{32}$. The structure is interpreted in terms of two nolanite modules and two spinel modules.

sylvanite (syl'-van-ite) A metallic grayish-white monoclinic mineral: AuAgTe_4 . It often occurs in implanted crystals resembling written characters. Not to be confused with *sulvanite* or *sylvinitite*. Also spelled: *silvanite*. Syn: *graphic tellurium*; *white tellurium*; *yellow tellurium*; *goldschmidtite*.

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

We need to return to our meetings!



Micromineralogists of the National Capital Area, Inc.

Silver

by Michael Pabst PhD, Treasurer

With this article, we investigate a new metal, Silver. We will start here with metallic silver, in various forms, and from various localities. In later articles, we will look at minerals where silver is a prominent cation. Silver and Gold form a complete series, and almost all specimens of Silver or Gold have a significant amount of both elements. Silver is also commonly associated with Copper. All three elements are in the same column of the Periodic Table. Mercury and Bismuth are common impurities.

In my limited collection, I have three types of metallic silver: The first type features ribbons of silver, arranged in flamboyant and asymmetrical Rococo style. The second type features arborescent arrangements of octahedral crystals. The third type are casts in Silver of now absent Calcite or Quartz or another matrix.

A nice Rococo example comes from Dzhezkazgan, Karaganda, Kazakhstan. I call this one “The Lute Player”. (It is just what I see after starring at the photo too long.)



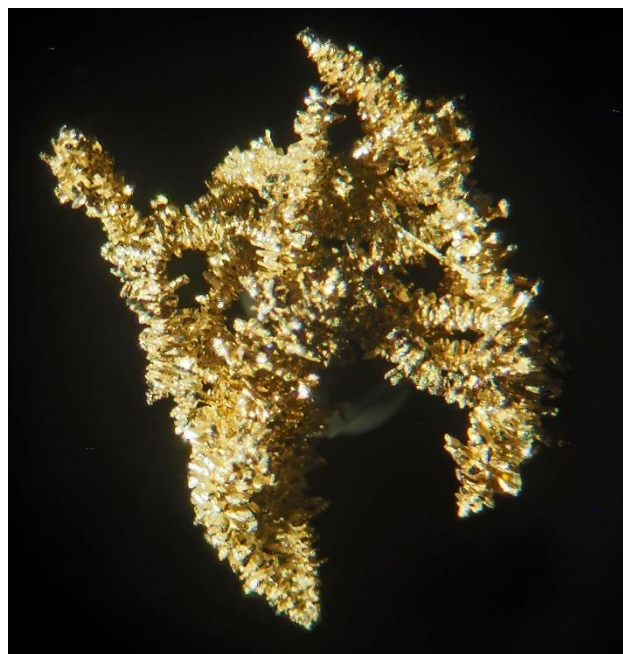
Silver in ribbons from Dzhezkazgan, Kazakhstan. FOV 6 mm. Photo by Michael Pabst, using Olympus OM-D E-M5 Mark II camera, with 60 mm macro lens + Raynox DCR-250 supplementary lens, stacking 18 images.



The chemical symbol for Silver (Ag) comes from the Latin “Argentum”, which comes from the Greek “ἄργυρος” (argyros). In Spanish, the name is “Plata”; in German, “Silber”; in Dutch, “Zilver”; in French, “Argent”.

Silver crystallizes in the Isometric System $m\bar{3}m$ – Hexoctahedral, often as octahedrons forming arborescent growths.

An arborescent example comes from the Endeavor Mine, Cobar, New South Wales, Australia:



Silver in arborescent form from Endeavor Mine, Cobar, New South Wales, Australia. FOV 3.5 mm. Photo by Michael Pabst, using stereo microscope, stacking 5 images.

Silver is extremely ductile and can form wires that are only one-atom thick.

I also have some Silver specimens from the famous silver-mining town of Guanajuato in Mexico:

continued next page

Silver continued



Silver in ribbons from Guanajuato, Mexico. FOV 5.5 mm. Photo by Michael Pabst, using 60 mm Macro lens and Raynox lens, stacking 22 images.



“The Rabbit” Silver crystals from Guanajuato Mine, Guanajuato, Mexico. FOV 3.5 mm. Photo by Michael Pabst, using 60 mm Macro lens and Raynox lens, stacking 23 images.



Silver, Guanajuato, Mexico. FOV 2 mm. Photo by Michael Pabst, using Macro lens and Raynox lens, stacking 20 images.

For 250 years, Guanajuato produced 1/3 of the world’s Silver. It was the richest city in Mexico, allowing the construction of magnificent public buildings and a major University. Guanajuato is still a beautiful city. Currently, one prominent mining company in Guanajuato is Great Panther. They report mining 591,000 ounces of Silver in 2019, and 11,600 ounces of Gold.

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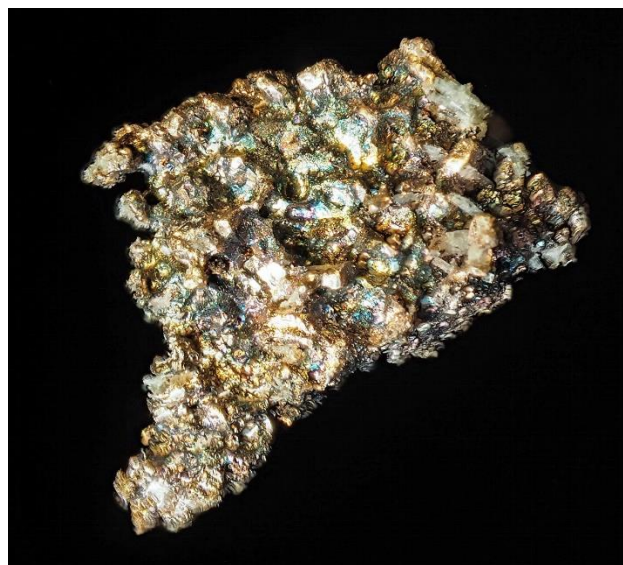
Silver continued



“The Dog”. **Silver**, variety Kongsbergite, Imiter Mine, Morocco. FOV 12 mm. Photo by Michael Pabst, using Macro lens + Raynox lens, stacking 23 images. The shape of the Silver appears to be determined by the matrix, like a cast.

“Kongsbergite” is a variety of Silver containing about 5% of Mercury (Hg). Kongsberg in Norway is a premier locality for large and aesthetic Silver specimens. See for example: www.mindat.org/photo-153909.html.

Kongsbergite is distantly related to dental amalgam, which is formed from 50% Hg, 25% Ag, and various amounts of Sn, Cu, and Zn.



“The Bouquet”. **Silver** with minor white Barite on the right side. Cobalt, Ontario, Canada. FOV 6 mm. Photo by Michael Pabst, using Macro lens + Raynox lens, stacking 18 images.



“The Pineapple”. Arborescent **Silver** on a matrix specimen from El Bonanza Mine, Port Radium District, Great Bear Lake, Mackenzie District, Northwest Territories, Canada. FOV 12.5 mm. Photo by Michael Pabst, using Macro lens + Raynox lens, stacking 23 images.

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Silver continued

Silver has the highest conductivity of electricity and heat of any metal. Those of us born with silver spoons must be careful of hot soup. In our house, we normally use stainless steel spoons and forks, because we can throw them in the dishwasher. But on special occasions, we bring out Grandmother's silverware, and the difference in conductivity is noticeable. Another bonus is that silverware self-sanitizes.

As a native metal, Silver is less abundant than Gold. So, during some periods of history, silver was more valuable than gold. Now, with a lot of Silver being produced as a byproduct of copper, gold, lead and zinc refining, together with reduced use in photography, silver is less valuable than gold. (On June 2, 2020, silver was \$15.59 per ounce, gold was \$1709.00 per ounce.)

Silver is unreactive as a metal, which is why it is found lying about in Nature. Silver in minerals is usually Ag^{+1} . Silver has one electron in its outermost shell, and all the other electrons are in fully filled inner shells, so silver is happy to donate one electron but not more. Silver does not like to form many stable compounds. Some silver compounds, once formed by chemical artifice, are so unstable as to be explosive, like silver amide or silver azide or silver⁺² oxide.

Unlike copper, silver does not form any silicate compounds, so, for example, there is no Dioptase analog for silver. In fact, there are no natural silver silicates listed in Mindat. However, silver does form compounds with sulfur. An important silver ore is the silver sulfide, Acanthite, Ag_2S , which we will examine in the next article.

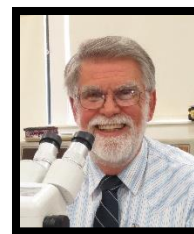


Michael & Karen Pabst

Shoobox Adventures 97: A Guest Box

Photos and text by Mike Seeds, Editor BMS

When people come to visit, we sit down and talk. There are refreshments, and stories about relatives such as what Aunt Mavis did in that restaurant, and careful comments about politics. It's nice but eventually someone will say, "What about those little rocks? Can we see them?" Then I lead the group down into the basement, and it does not go well.



One problem is that only one person at a time can look through the microscope at a time. I have to explain how to adjust the separation between the eyepieces, which knob focuses, which knob zooms, and please don't touch the minerals, and I have to explain for each visitor because all the rest are busy yakking. It is slow and people lose interest waiting their turn.

Another problem is that I can never find really striking minerals to show them. I have got over 5400 micromounts filed in 40 drawers, but no matter what drawer I open, all the minerals are black or brown. My visitors are nomins (people who do not know much about minerals) so I need to show them something flashy, but I can never seem to find something under pressure. They probably think I am nuts for collecting little brown smears and wee black specks.



Fig. 1 A guest box of 40 minerals ready for viewing. continued next page

Shoebox continued

So, I made a guest box. I found an empty jewelry box, and I filled it with 20 of my most flashy minerals. There's brochantite, and fluorite, and a gold nugget, and a diamond crystal and a spinel crystal and so on. I included lots of color and lots of different forms. Even a nomin would find it fascinating, surely. Now when a visitor sits down, I put the guest box under the 'scope. Each of the minerals is named by a label that is easily visible through the eyepieces, but I have a grid of labels inside the box lid in case they want to know more. So now I can show my guests some nice minerals.



Fig. 2 The lid holds a photocopy of the labels on the bottom of the boxes.

Of course, they still have to wait their turn, but I have a fix for that too. A few months ago, Baltimore Mineral Society member Bernie Emery brought a digital microscope to a meeting. It was not expensive, and it was fabulous. A month later, I saw more of them at the Tucson Gem and Mineral Show, and I bought one. Now I can seat a guest (the one least likely to drop things) and put the guest box under the digital microscope and allow the guest to move the box to view mineral after mineral. Everyone in the group and see the images in full color on the 5-inch (nearly 13 cm) monitor. I could even use cables to send the image to a TV set or a computer screen if I needed a bigger display.

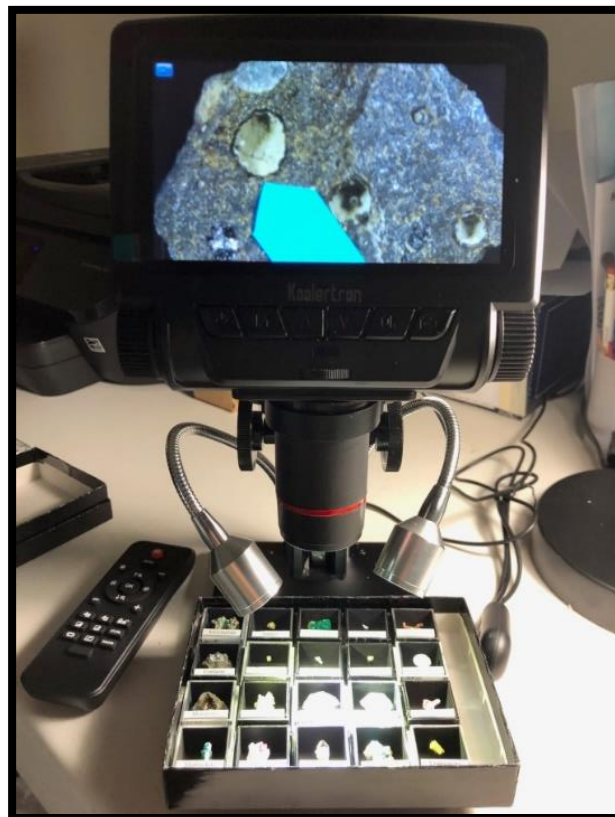


Fig. 3 This digital microscope has its own lights and a big color screen.

This works well for basement visitors. Nominis enjoy the color and crystals, and I can glance at the screen and explain what they are seeing. And 20 minerals are easily the limit for nominis. If someone is really interested, I love opening a drawer and showing off tiny crystals from Namibia or rare minerals from Siberia. I got a million of them. Well, not quite a million, but I am working on it.



Mike Seeds Baltimore Conference 2014

How I Became a Micromounter

by Eric Brosius, RMCLBC Newsletter Editor

The Leidy Microscopical Society wishes to promote micromounting to anyone interested in mineral collecting and the natural world in general. Therefore, following is my story on how I became a micromounter:



My story on becoming a micromounter began not long after I joined the Rock & Mineral Club of Lower Bucks County back in the 1990s. I had gotten away from mineral collecting in the field and was pursuing my hobby by collecting at mineral shows. The biggest show that was talked about was the Franklin, NJ show which was where I was introduced to the micromounting world of mineral collecting. John Ebner and another micromounter whose name escapes my memory, had John's display of "Micromounts by Micromounters" along with several microscopes set up to view micromounts. Even though I was introduced to the micro world I shrugged it off for what I thought were some more spectacular specimens that you could see in your hand.

Jump ahead to the next spring when the Rock & Mineral Club of Lower Bucks County held its spring "Micromount Show" in March that was organized from its inception by Ralph Thomas. The show featured an area of older men and women selling, trading and making micromounts. But the show also had an area devoted to larger sized specimens which I once again was attracted to. The looking at "mineral crumbs" in little cardboard or plastic boxes, as another collector put it, did not seem appealing.

Club collecting outings to some now long closed locations such as a collecting trip to the Millington Quarry in New Jersey that was organized by Ralph Thomas and Warren Cummings kept my specimen collecting to hand size specimens. I was looking for the big on the trip but was quickly informed by Frank Leans who forced his collecting opinion on me, "You have to look for the small."

As I became more involved with the Rock & Mineral Club of Lower Bucks County, I was coerced into becoming the Activities Chairman by then club President Lee Fisher.

I started to take notice that those larger hand sized specimens I desired were becoming more expensive at the mineral shows and becoming harder to find on local collecting trips. I had organized a collecting trip to the Kibblehouse Quarry in Perkiomenville, PA where I was once again looking for the big specimens but only found a few. In the mean time during that trip, other club members; Ralph Thomas, Lee Tori, Dick Tillett, Bill Prince, Dick Braun and a new fellow collector from another distant club, Larry Eisenberger were breaking larger rocks and accumulating small micros as they viewed their finds under hand lenses.

Another field collecting trip that I had organized through Jeri Jones of Jones Geological Services was to the Codorus Quarry in Emigsville, PA. Only a few of us from the Rock & Mineral Club of Lower Bucks County traveled the distance west to the quarry. Jeri Jones could not escort us in to collect but had decided for Larry Eisenberger to lead the group collecting. Once again, I was looking for the big but this time, I was coming up empty handed. I must have looked disappointed to Larry, after travelling such a distance and finding nothing. Larry asked if I had a hand lens. He then had me poke around a part of the quarry where a sulfide zone was exposed. "The minerals are here", he said, "You just have to look for them with a lens. They are micros." Before I knew it, I had buckets of large specimens waiting to be broken down into those tiny micro-sized spectaculars known as micromounts. At that moment I realized I had missed out on some of the best micromount collecting of exceptional collecting locations that are now inaccessible.

Before I knew it, Ralph Thomas had invited me to a meeting of the Leidy Microscopical Society where I was introduced to an organization that owns one of the best collection of micromounts in the world, "The Frank Keeley Micromount Collection". The Society also has a fantastic group of extremely knowledgeable individuals that have collected and mounted some of the most spectacular micro specimens in the mineral world. This group is always willing to share specimens, tips and tricks of micromounting to all who are willing to listen. They are not a group of older gentlemen and ladies who look at mineral crumbs in little black boxes as one uninformed collector put it but highly skilled, knowledgeable, and refined collectors.

continued next page

Micromounter continued

The membership list of the Leidy Microscopical Society members over the years reads like a who's who in the mineral collecting world and science world in general.

So, you have now decided to become a micromounter after reading last month's "The Top Ten Reasons to Try Micromounting". To start, you probably are part way there. You already have collected specimens that probably contain micromount material on or in them. You probably already have a hand lens and hammer. All you need to do is break up some of that material and extract perfect little crystals that hide in the crevices and vugs. Clean them up and mount them in a micromount box. The mineral hobby will take on a whole new meaning as you start looking for the spectacular small, perfecting your micromounting skills and discussing the hobby with a great group of fellow collectors. Thank you, Larry Eisenberger, for opening my eyes to the small!



"BIGGER ISN'T ALWAYS BETTER but, the smaller is definitely more spectacular"!



2016 Leidy Microscopical Society display at the Philadelphia Mineralogical Society Mineral Treasures & Fossil Fair at the Lulu Temple, Plymouth Meeting, PA

Reprinted with permission from the June 2020 issue of the Rock Chatter, newsletter of the Rock & Mineral Club of Lower Bucks County, Pennsylvania

Scott Duresky - Rutherford Mine for the Virginia Mineral Project

Dear friends of the Virginia Mineral Project, The May newsletter for the VMP is included on pages 10-11. I have included an additional page this month to share with you a piece of the updated strategic plan for the book due to the impact of COVID-19. You will also find that we have two NEW virtual VMP events coming up. We will start slowing down our events to once or twice a month as summer plans begin and vacation starts for many.

The **Rutherford Mine Presentation** was released. I highly recommend sharing this with your respective clubs as it was highly informative and one of our states most important mineral localities!



Scott Duresky photo by Kathy Hrechka

YouTube Channel: <https://www.youtube.com/channel/UCVXiDsPBpOIZ2Qw3L8XH3VQ/>

We continue to work towards our goals despite the COVID-19 environment. Please keep an eye out for another important update come June on the official announcement of our very own Friends of Mineralogy Chapter here in Virginia. I and many dedicated rock hounds across Virginia have been working on this as a new step in preserving and promoting our states mineral heritage. You will not want to miss out!

Reach out to me if you have any questions or concerns!

Best Regards,

Thomas N. Hale
Founder, Virginia Mineral Project (VMP)
President, Friends of Mineralogy Virginia Chapter
Phone: (540)529-4506
Email: Virginiamineralproject@gmail.com

VIRGINIA MINERAL PROJECT

-May Report-

State of the Project

Throughout the month of May, the VMP continued to host its virtual community events as a way to stay connected during COVID-19. Each meeting was a success, with average numbers hitting 35 and peaking at 62 Zoom participants. These numbers reflect typical club meetings.

May was also a very important month for the progress of the Friends of Mineralogy Virginia Chapter (FMVA) which has now been incorporated and officially a chapter under the national organization. The VMP will continue its work towards a publication as a subcommittee within this new state-wide nonprofit. You can expect official news and information on the new mineralogy organization in June.

Outside community events, interviews and photography have been hindered due to COVID-19. The VMP has now developed a five-year strategic plan which highlights how we will work moving forward, post COVID-19 delay.

Thanks to the community members that have attended these virtual events. Several clubs across VA are now looking into this as we move forward into the summer. If you are still unsure or your organization would like to learn more about these virtual programs, I would be happy to assist!

A special thanks to Scott Duresky and his presentation on Rutherford Mine and the microlite reclassification. It was a huge success and has caught the attention from the larger mineral community.

Looking to June...

June is an important month as things begin to open up into phase two and summer begins to rear its head. Our goal was to provide during times of absence and now we need to be realistic as people make summer plans and travel opens up.

There has been some discussion around the idea of keeping these virtual events as we move into the future. On the off months of the Friends of Mineralogy Virginia Chapter meetings, we are working out a plan to keep informal and community sessions open for people to come and enjoy. These would not all be full presentations but would be special topics and conversations for the community.

It's Not All About the Rocks!?

I just wanted to briefly highlight the amount of enjoyment we had from this meeting. Rocks are not our only passion and it was truly a great experience getting to learn about people's other hobbies and even some shared interest outside rocks! I would highly recommend this be a topic at local meetings.

Geology 365 Tutorial



Date: June 17th @ 7pm

RSVP

Scufflin Acres Amethyst



Date: June 24th @ 7pm

RSVP

Virtual Presentations Currently on YouTube

- Minerals of the Allah Cooper Mine, Louisa, Virginia
- Network Analysis of Virginia's Mineralogical Systems
- Richmond Vivianite Locality
- Collecting Quartz Crystals in Saltville, Virginia
- The Historic Rutherford Mine Pegmatite (Releasing June 3)

YouTube

Classic Mineral Localities of Virginia

5-year Strategic Plan

Due to COVID-19 and the inability for travel, data collection for 2019 was less than originally hoped for. We are still needing individuals with specimens and collections to send in their stories as they relate to our classic locations and would like to encourage photographs, even if temporary, of specimens you feel should be put in the publication. During times like these, it is imperative that we continue to work towards the end goal and push through any hurdles that may present themselves. The VMP has developed a new timeline for the development of a new publication on Classic Mineral Localities of Virginia.

This five-year strategic plan highlights the goals and objectives of the Virginia Mineral Project (VMP) and the Friends of Mineralogy Virginia Chapter (FMVA) to update and publish a new book on the state's classic mineral localities. Below is a section from the plan highlighting the objectives and first year localities.



Objectives for 2020-2021:

- Complete ten locality sections of the book and have them ready for editing and proofing.
- The previous years localities will then be sent to editors and volunteers for review.
- The format of these locality reviews mean that they can, if necessary, act as single publications in the future.
- Creative changes to individual reports can occur past the editing phase but it does mean that the report should be 95% completed in its design and format by the end of the year.
- Photographs can change, but there should be an understanding of what the image is trying to convey and what we are looking for if new photographs come up.
- Co-authors and assistants on the chapters can continue their work past the one-year mark if they need.

1st Year Locality Report Overview

1. Vivianite Richmond Discovery
2. Andalusite Discovery "The Brick Yard", Campbell County
3. Chestnut Ridge, Bath County
4. Goochland Quartz Crystal Discovery
5. Scufflin Acres Amethyst, Prince Edward County
6. Allah Cooper Mine, Louisa County
7. Fairy Stone National Park, Patrick County
8. Limonite Cubes, Albemarle County
9. Saltville Quartz Crystals, Smyth County
10. Peter's Mountain, Iridescent Hematite

Please email us if you have stories, photos, specimens, etc. from these locations!

Micromineralogists of the National Capital Area, Inc.



American Federation of
Mineralogical Societies

(AFMS)
www.amfed.org



Eastern Federation of
Mineralogical and
Lapidary Societies

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

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

2020 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.

The A.F.M.S. Newsletter is normally published monthly except January, July, and August by the American Federation of Mineralogical Societies. Each Regional Federation Club is entitled to receive three (3) copies of the AFMS Newsletter. These are usually sent to the President, Federation Director and Editor. Subscription Information, Distribution Questions and address changes should be sent to the AFMS Central Office.

Rock&Gem



The Rock & Gem magazine is recognized as the official magazine of the AFMS.

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:
June 2020 All Canceled**

3: Mineralogical Society of DC–MSDC meeting
Smithsonian NMNH, Constitution Avenue lobby
7:30 pm to head up to the Cathy Kerby room **Xld**
www.mineralogicalsocietyofdc.org

8: The Gem, Lapidary and Mineral Society of Montgomery County, Maryland - GLMS-MC
7:30 pm - Rockville Senior Center, 1150 Carnation Drive, Rockville, MD **Xld**
www.glmsmc.com

19: The Gem, Lapidary and Mineral Society of Washington, DC - GLMS-DC meeting
7:00-10pm – Chevy Chase Community Center, 5601 Connecticut Ave., NW, Chevy Chase, MD **Xld**
www.glmsdc.org

22: Northern VA Mineral Club – NVMC meeting
7:30-10pm - Long Branch Nature Center
625 South Carlin Springs Road in Arlington, VA **Xld**
www.novamineralclub.org

24: Micromineralogists of the National Capital Area, Inc. - MNCA meeting
7:30–10pm - Long Branch Nature Center
625 South Carlin Springs Road in Arlington, VA **Xld**
www.dcmicrominerals.org

Editor's Note: Even though our geology meetings are canceled, please visit their websites for continuing education.

Geologists are gneiss people

Micromineralogists of the National Capital Area
Meeting: The 4th Wed. of each month 7:30 -10 p.m.
Long Branch Nature Center (No meetings July & Aug)
625 S. Carlin Springs Road, Arlington VA 22204
Phone (703) 228-6535

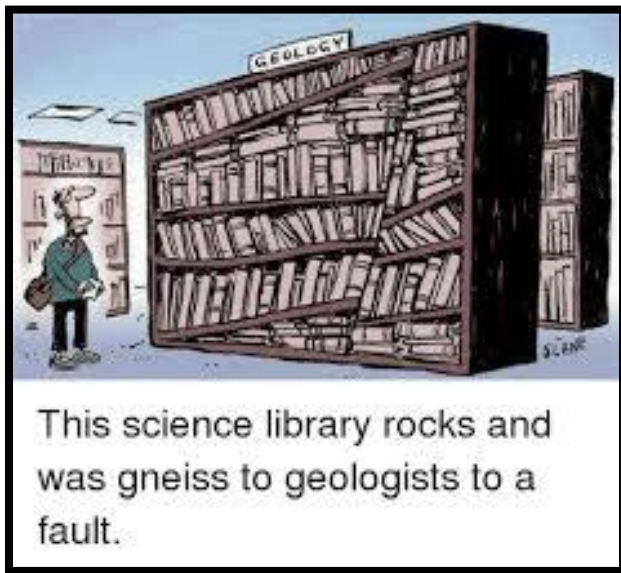
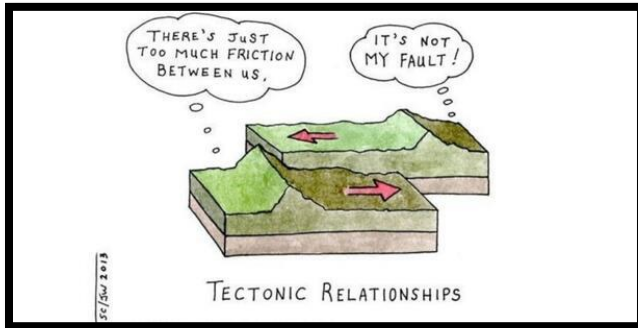
MNCA Purpose: To promote, educate and encourage interest in geology, mineralogy, and related sciences.

President: Dave MacLean
Vice President: David Fryauff
Secretary: Bob Cooke
Treasurer: Michael Pabst
Editor/Historian: Kathy Hrechka
Website: Julia 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 for 2020
\$15 (single) or \$20 (family)
Payable to 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 on 5th.
No newsletter July/August

EFMLS Editor's Award
First Place 2016 - Small Bulletins
Inducted into Editor's Hall of Fame – 2018
AFMS Trophy 2019



Member inputs:
* Dave MacLean
* Michael Pabst
* Kathy Hrechka
* Mike Seeds
* Eric Brosius
* Thomas Hale

