



MNCA Website dcmicrominerals.org
The Mineral Mite



Vol. 52 – No. 3

Washington D.C. – A Journal for Micromineralogists

March 2019

March 27 Time: 7:30 p.m. – 10 p.m.

Long Branch Nature Center, 625 S. Carlin Springs Rd. Arlington, VA 22204

**Program: Cornish Mineral Legacy by
Dr. Robert Bowell on Dvd**

Dr. Robert Bowell was a featured speaker at the Dallas Mineral Collecting Symposium in August 2018. The theme for the symposium was history of mineral mining and collecting. Cornwall has been (and currently is reemerging as) an active center of hard rock mining for more than 4,000 years. This presentation will explore the legacy of "Cousin Jack" (as Cornish miners were called) and the rich inheritance associated with the country.

Photo of the Month

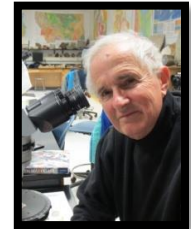


Snow crystal from Fort Collins, Colorado by Scott Braley using his Olympus OM-D EM-5 Mk II camera. Article pp 6-7

President's Message:

By: Dave MacLean

On March 16-17 at the Montgomery Fairgrounds in Rockville, we again can enthral all who look thru a microscope or loupe at the wonders of small minerals. It seems that persons with sustained interest in the "little minerals" are relatively few. I can remember my wife showing neighborhood children in St. Peter, MN what one can see with a 10X loupe of minerals, bugs, seeds, etc. How can we capture and promote the curiosity of children and grow it through adulthood?



**Atlantic Micromounters' Conference
April 5-6, 2019**

Speaker, Dr. Robert Lauf of Tennessee

Author Extraordinaire, Dr. Lauf's topics include:

- *Electron Microscopy: The Final Frontier of Magnification
- *Mineralogy of Uranium and Thorium
- *Orthosilicates

Dr. Lauf biography page 8

Michael Pabst PhD will present

- *Rare Earth Minerals on Saturday evening.

Holiday Inn, Alexandria, Virginia - Fee \$30.

Friday 6 – 9:30pm & Saturday 8:30am – 9pm

Conference registration may be found on our club website at www.dcmicrominerals.org.

Micromineralogists of the National Capital Area, Inc.

Previous Meeting Minutes: 2/27/18

By Bob Cooke, Secretary

President Dave MacLean called the meeting to order at 8:05 PM. Dave recognized guests Tom and Julia Burke. Eleven MNCA members were present: Robert Clemenzi, Bob Cooke, Dave Fryauff, Erich Grundel, Dennis Hedrick, Dave Hennessey, Kathy Hrechka, John Kress, Dave MacLean, Michael Pabst and Barry Remer. Minutes of the January 2019 meeting were approved as published in the Mineral Mite.



Michael Pabst gave a Treasurer's Report. (Mike just returned from a trip to Tucson and the club still has its money in the checking account – all is well.)

Membership Dues are due for 2019

Single = \$15. Family = \$20.

Payable to MNCA - Michael Pabst, Treasurer
270 Rachel Drive Penn Laird, VA 22846

Dave reminded the club of our commitment for a micromount demonstration table at the GLMS-MC Mineral Show on March 16 & 17. Volunteers are signed up for all time slots, but Dave solicited additional volunteers to help instruct children.

Kathy discussed preparations for the Atlantic Micromounters Conference on April 5/6 (Friday/Saturday). She discussed a list of volunteer requirements and filled all positions. (Special thanks to Karen Pabst who was volunteered in absentia for several duties.) No mineral dealers were confirmed yet, but Kathy would be contacting Al Pribula and Don Smoley.

Dave Fryauf distributed chromite crystals that he brought from Barren Hills, Baltimore County, Maryland. Erich Grundel offered samples of kimberlite (without diamonds unfortunately).

Upcoming mineral shows were announced for:

*Mar 2/3 Delaware Mineralogical Society, 4727 Concord Pike (Route 202), Wilmington, DE

*Mar 16/17 GLMS-MC Montgomery County Fairgrounds, Gaithersburg, MD

*Mar 23/24 Franklin County Rock & Mineral Club, Hamilton Heights Elementary, Chambersburg PA

*Mar 30/31 Philadelphia Mineralogical Society, LuLu Temple, Plymouth Meeting, PA

*The 43rd Leidy Microscopical Society MICROMOUNT SYMPOSIUM will be held on March 8/9 (Fri/Sat) at the Advent Lutheran Church, 45 Worthington Mill Rd, Richboro, PA 18954. For reservations send check for \$20.00 payable to Don McAlarnen, 916 Senator Rd, East Norriton, PA 19403 (610) 584-1364.

Email: donmcalarnen@outlook.com

Dave Fryauff intends to organize field trips to Manassas Quarry in late March and to National Limestone Quarry in April. Details to be announced. Meeting adjourned at 8:35 PM.

Editor's note: Our Atlantic Micromounters' Conference registration and program are posted on our club website www.dcmicrominerals.org; main page and events. Members have received a registration via US postal mailing.

Previous Program Reviewed: 2/27/19

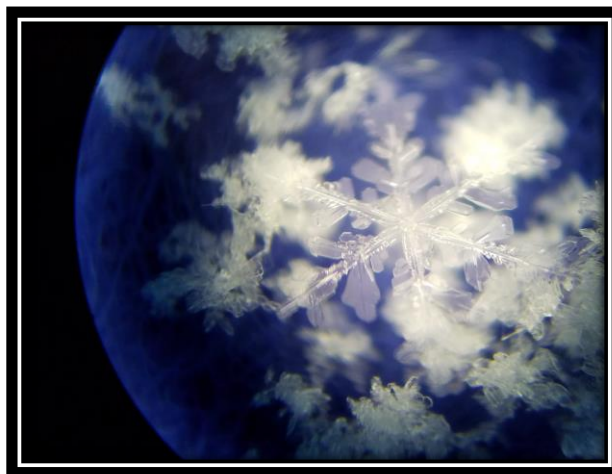
By Bob Cooke, Secretary

Snow Crystal Photomicrography 101

Kathy Hrechka shared her joy of photographing snowflakes, including the unfortunate melt. While using her microscope along with two cameras, she has managed to capture each snowfall in Virginia for the past four years. Her findings defy scientific research, based on temperature.



Workshop: club members brought micros for social sharing.



Groutite and Ramsdellite

By Michael Pabst PhD, Treasurer

Groutite and Ramsdellite are two more manganese oxide minerals that are black, but softer than the last month's Manganite and Pyrolusite. Groutite has a Mohs hardness of 3.5 - 4, and Ramsdellite is 3. In practical terms, it would be hard to test the hardness of such tiny crystals without advanced instruments. The manganese oxide minerals frequently occur as radiating masses of fine needles or other massive forms. Testing the hardness of such masses is difficult, because plowing a furrow through a group of needles doesn't reveal the hardness of the individual needles. So, a scratch test could lead to a low apparent hardness. Both Groutite and Ramsdellite are orthorhombic *mmm*.



My sample of Groutite comes from the Blackwater Mine, Monument Valley, Apache County, Arizona. The black crystals of Groutite sit upon orange petrified wood.



Groutite, Blackwater Mine, Monument Valley, Apache Co., AZ. FOV 3 mm. Photo by Michael Pabst. Stack of 11 images taken with stereomicroscope and processed with CombineZP and Photoshop.

Here is a link to Mindat of a photo by Christian Rewitzer of Groutite from the Blackwater Mine, Monument Valley, Apache Co., AZ: <https://www.mindat.org/photo-114104.html>. It is so much easier to take a spectacular photo when you have a spectacular specimen, and of course good photo gear and great skill.

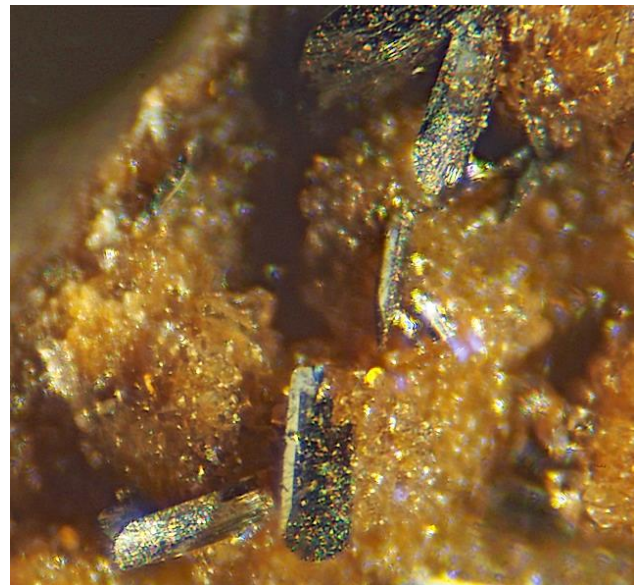
From Mindat, here is Ramsdellite from Lake Valley District, Sierra County, NM:

<https://www.mindat.org/photo-155047.html>. This Mindat photo is of an interesting specimen with a brownish color from the New Mexico Bureau of Mines Museum. Here below is my Ramsdellite for the same locality:



Ramsdellite, Lake Valley District, Sierra County, NM. FOV 7 mm. Photo by Michael Pabst. Stack of 19 photos taken with stereomicroscope.

Here is a closeup of some single crystals of Ramsdellite from the same specimen.



Ramsdellite on brown Quartz, Lake Valley District, Sierra County, NM. FOV 2 mm. Photo by Michael Pabst. Stack of 3 photos taken with stereomicroscope.

Groutite and Ramsdellite continued

Altogether, there are about thirty manganese oxide minerals: Jeffrey E. Post, Manganese oxide minerals: Crystal structures and economic and environmental significance, Proc. Natl. Acad. Sci. USA, Vol. 96, pp. 3447–3454, March 1999. (from the Department of Mineral Sciences, Smithsonian Institution, Washington, DC 20560-0119)

What have we learned about manganese oxide minerals? Some shiny black specimens are stunning and beautiful. I wish you could see some of my micros under the scope in 3D. Distinguishing among manganese oxides can be difficult. You had better pay attention to the labels and the localities, because it is hard to tell them apart by their appearance, except for hexagonal Gaufreyite and cubic Bixbyite. They are all black or brownish black, and they have black or brownish black streak. Hardness is difficult to measure, and many have similar hardness. If you find a new locality, you will need x-ray diffraction to establish identity.

It is time to move away from black manganese minerals, because we are tiring of black, and black crystals are often hard to photograph. So, next time we will look at a **pink** manganese mineral, the manganese silicate Rhodonite. Alas, my Rhodonite specimens are also hard to photograph, being so small and delicate. Look for next month's article to see how my photos come out.

2019 Tucson Gem and Mineral Show

By Michael and Karen Pabst

Once again, the Tucson Show was a visual feast for mineral lovers. Although we were shopping primarily for minerals for photomicrography, we are always thrilled to see the spectacular museum quality specimens that are for sale. We try to collect only micro minerals, because if we collected everything, then we would be hoarders, not collectors. However, if we were to win the lottery, and so could ignore the little price stickers with so many zeros? Because we never buy lottery tickets, we are thankful that the high-end dealers display their treasures so beautifully

for people like us who rarely buy an expensive specimen.

We started at the Westward Look Show, which takes place at a resort on the north side of Tucson. There were about 50 dealers in about 50 hotel rooms, with beautiful professional displays of fine minerals. What a treat! The minerals are displayed better than in most museums. Often the little stickers say P.O.R., meaning Price On Request.



Michael and Karen Pabst at the Westward Look Resort.

One of the best locations to see museum quality minerals is **Fine Minerals International**, that has its own building in the old town of Tucson, near the old Pima County Court House, which is being converted into the new University of Arizona mineral museum. They were very gracious to us, allowing me to photograph their minerals for my personal use. I don't think they would mind if I shared a photo of a Chinese Cinnabar with you.

Tucson continued



The main official Tucson Gem and Mineral Show is loaded with breathtaking displays of fine minerals from dealers and museums and collectors. This year's theme was Wulfenite, with my favorite being an old time Wulfenite with Diopside from the Mammoth-St. Anthony Mine, at Tiger, AZ.



Add in the Southwestern food, like Chili Rellenos and Carne Seca, and the warm weather in February, and the exotic plants of the Sonoran Desert, it is no wonder that the Tucson Show is the world's greatest mineral show.



GeoWord of the Day and its definition:

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

ahlfeldite (ahl'-feld-ite) A brownish-pink monoclinic mineral: $\text{NiSe}^{4+}\text{O}_3 \cdot 2\text{H}_2\text{O}$. It is isostructural with clinochalcomenite and cobaltomenite.

cryptotexture the textural characteristics of frozen, fine-grained organic and mineral earth materials cemented together with ice.

niobokupletskite A beige to brown triclinic mineral of the *astrophyllite* group: $\text{K}_2\text{Na}(\text{Mn}, \text{Zn}, \text{Fe})_7(\text{Nb}, \text{Zr}, \text{Ti})_2\text{Si}_8\text{O}_{26}(\text{OH}, \text{O}, \text{F})_5$. It is the Nb analogue of kupletskite.

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

**MNCA Volunteers Needed Mar 16-17
Micromount Demo Booth - GLMSMC**

The Gem, Lapidary, and Mineral Society of Montgomery County MD., Inc. is holding its 55th Annual GLMSMC Gem, Mineral and Fossil Show at the Montgomery County Fairgrounds in Gaithersburg, Maryland on March 16 & 17, 2019.

Saturday 16th 10:00 A.M. to 6:00 P.M.

Sunday 17th 11:00 A.M. to 5:00 P.M.

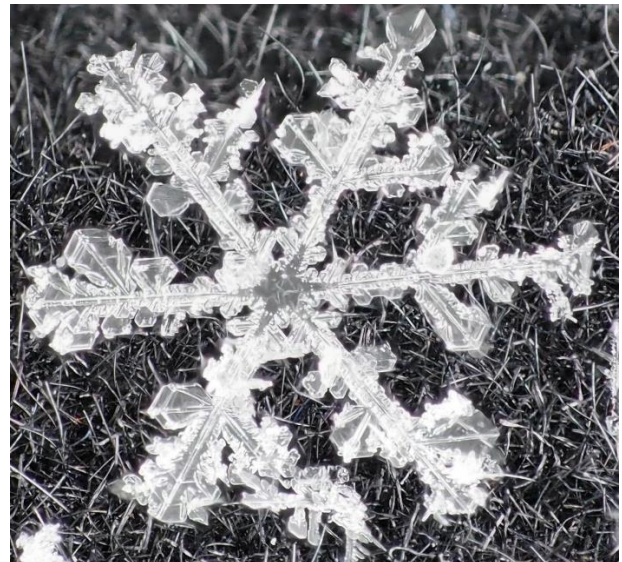
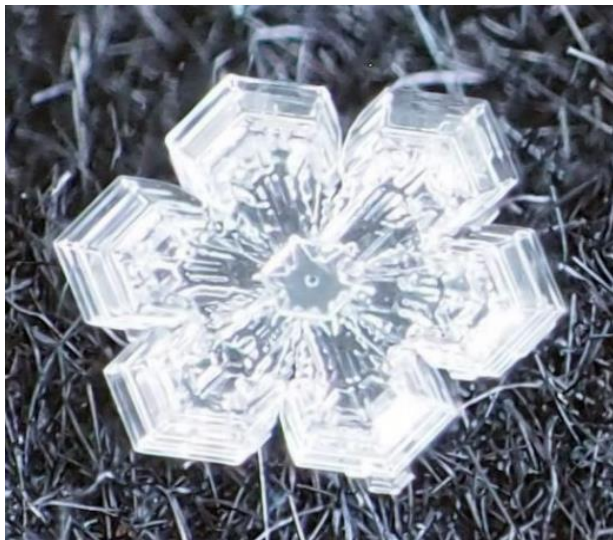
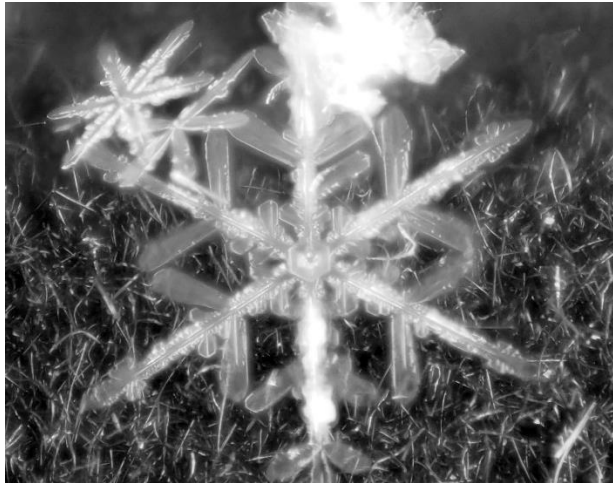
MNCA volunteers are free. Admission is \$6.00, ages 12 and older. Free for Children (11 and under), Free for Scouts in Uniform. Plenty of Free parking. More than 20 dealers will have gems, minerals, fossils, meteorites and crystals for sale. Enjoy demonstrations, over 40 exhibits, raffle, door prizes, free workshop, free specimens for kids, and/or get more information about specimens from your own collection. Those under 18 can dig for free specimens in the kid's mini-mines!

Snow Crystals of Colorado

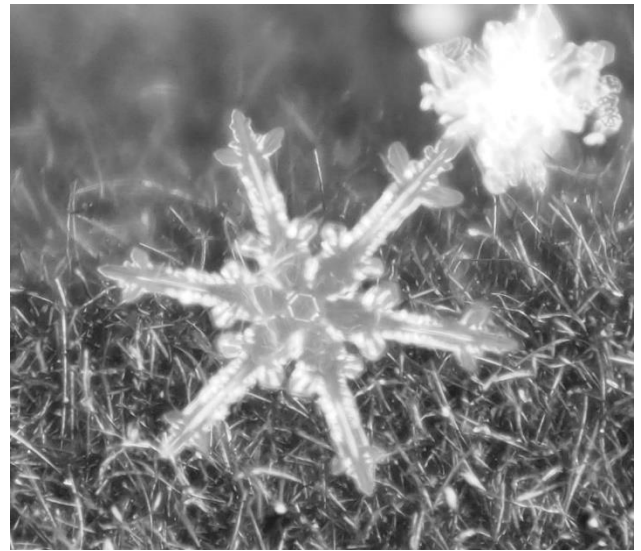
By Scott Braley, former MNCA member

I set up my Olympus OM-D EM-5 Mk II camera outside, catch a few flakes, and snap as many pics as I can before I get too cold. My Olympus 40-150 with a Pro Lens 1.4x Teleconverter Raynox 250 auxiliary lens camera has focus bracketing.

The camera is set up on a tripod, cued up with in-camera focus bracketing. Most pictures are a stack of 5-15 shots, stacked with Zerene. I do not use a microscope. I use a piece of the black felted paper attached to a small board which is stored outside to equal ambient temperature. I was looking for the blackest stuff I could find, didn't realize at first that it would appear so much like grass.



Snow Crystals continued



**Atlantic Micromounters' Conference
April 5-6, 2019**

Speaker, Dr. Robert Lauf of Tennessee

Author, Robert Lauf holds a Ph.D. in Metallurgical Engineering from the University of Illinois. His scientific career included over twenty years at Oak Ridge National Laboratory, where he conducted research on topics ranging from nuclear fuel, coal by-products, materials synthesis, microwave processing, sensors, optical materials, and biomineralization. He has been granted fifty U.S. Patents for his inventions, many of which have become successful industrial products. He is now a Registered Patent Agent and technology consultant.



Conference topics include: Electron Microscopy: The Final Frontier of Magnification, Mineralogy of Uranium and Thorium, and Orthosilicates

Michael Pabst PhD of Virginia will present Rare Earth Minerals on Saturday evening.

Polarizing Adaptor for the Stereo Microscope: Dr. Lauf wrote an article about optical Mineralogy, which featured a Motic polarizing kit to be used with a stereo microscope. He revealed that this device is useful for thin section, as well as sand grain analysis. He also stated, "the use of this low-cost polarizing kit can open up a lot of interesting possibilities for the mineral collector to use the tools of optical mineralogy to gain insights into his or her collections." He will demonstrate this invention at the conference. His article was featured in Mineral News volume 31, April 2015 published by Tony Nickischer of Excalibur Minerals.

Graphite from Ticonderoga, New York: Dr. Lauf visited the Lead Hill mine and recovered a variety of specimens, particularly graphite single crystals in marble. These were of interest for radiation damage studies, which led him to write an article for The Mineralogical Record, volume 14, January-February 1983. He will provide that publication along with Ticonderoga graphite.

Hubeite from Hubei, China: While at Oak Ridge National Laboratory, he received samples of an unknown mineral assemblage from a new find in China. The Rocksmiths acquired it and wanted to know what it was. Microanalysis and XRD indicated it to be a new mineral. Jaye Smith had also sent pieces to several other folks. All involved collaborated on the description of hubeite, which was published in The Mineralogical Record, volume 33, November-December 2002. A sample of hubeite from Hubei, China originally studied along with a signed copy of the article will be offered at the conference.

The Making of a Rockhound Bob Lauf

My story is, I think, typical of collectors of my generation. Growing up in Chicago, I visited all the museums regularly because my folks considered it a cheap way to entertain five kids and cultivate a love of knowledge. It worked on both scores!

On one visit to the Field Museum, I bought a bag of unidentified rocks for probably 25¢ and a copy of the Golden Guide to Rocks and Minerals. From then on, I became obsessed with not just buying specimens, but learning about them and cataloguing my ever-growing collection. Before the days of Interstate Highways, vacations consisted of driving around back roads and sightseeing. We stopped at every rock shop and the occasional roadcut, collected geodes in Keokuk, looked for fossils in Coal City, and bought agates at the Lake Superior Agate Museum.

In college, I bought microminerals by mail from Sharon Cisneros at Mineralogical Research Co. in San Jose, at prices starting at 50¢, and went up from there. Although I studied Engineering, I remained interested in minerals, and by luck I ended up with my own electron microscope when I was at ORNL. That led to occasional papers on mineralogy, so when I retired from materials science it was only natural to think about writing books. Sharon had gotten me interested in uranium minerals early on, so it was natural that this was the topic I started with. The elegance of silicate structures and how they are organized came to me through the extensive books by Deer, Howie, and Zussman, so that has become a major focus of my later work.

Photographing Small Objects: Wiffle

By Hillar Ilves PhD

To place an object in a desirable place and orientation, under a macro lens or microscope objective, requires it to be moved on a stage left/right, and front/back. And, it needs to be able to rotate about all three axes. The only degree of freedom left is up/down, and that is done with the instrument moving the lens along that axis, on a copy stand or microscope stand. Well, how do I best achieve a 5-DOF stage?



Long ago I placed a metal ring on the table and put a plano-convex glass lens on the ring, curved surface seating in the ring. Placing the object to be photographed (or just plain viewed) on the flat surface of the lens gave me exactly what I needed - 5-DOF.

Now, Jim Averill was in contact with someone in New England, who makes rigid, hollow, plastic Wiffle-balls and acquired some to get a nice 4-inch diameter sized sphere. This he cuts in half. A machinist provided him with some 4-inch disks, one metal to which a magnet will cling, and two of plastic, one white and one black. He used "Sugru" a novel material which is glue-putty (this material was news to me!) and with it attaches the metal disk to the plastic Whiffle-ball hemisphere. And here is a neat enhancement he has added. He daubs three tiny disc magnets on the white and black plastic disks with Sugru. Now one can have a white or black background for one's specimen, and the plastic disk, holding the specimen can be slid along the metal disc for x and y linear movement.

What a neat creation! And, as I mentioned earlier, he gave me one as a gift. I'm delighted and have used it with various experiments I've been doing with his K-2 tele-microscope.

It recently occurred to me that one can add one enhancement. Maybe Jim has already incorporated it; I have not made those precise measurements. Consider that the object is actually sitting above the center of the spherical surface, and how much depends of course on the height of the specimen. If one deals with some statistically average height specimen, one could cut the

hemisphere such that its center is ABOVE the stage and now falls on the specimen's surface. For planar specimens this is much less critical, but for very 3-D objects like micro-mineral specimens this enhancement may be welcome.



Mineralogical Society of America Centennial (1919-2019) Symposium

The Next 100 Years of Mineral Sciences June 20-21, 2019

MSA will hold a celebratory Centennial Symposium on June 20-21, 2019 at the [Carnegie Institution for Science Building](http://www.carnegie.edu), located at 1530 P St NW, Washington, DC 20005.

Fourteen theme colloquia will offer a vision for exciting new directions in mineralogy, geochemistry, and petrology as MSA begins its second century. Each theme colloquium will include two 20-minute presentations by invited speakers followed by five minutes of moderated audience discussion.

Lunches will be included with your registration fee, and attendees are invited for a private evening reception in the Janet Annenberg Hooker Hall of Geology, Gems, and Minerals in the US National Museum of Natural History, Smithsonian Institution.

We thank the Gemological Institute of America for sponsoring this evening reception. Please join us for this once-in-a-century event!

http://www.minsocam.org/MSA/Centennial/MSA_Centennial_index.html Submitted by Herwig Pelckmans



The Chesapeake Gem & Mineral Society Auction - March 8 7:30pm

Friday, March 8th, 2019
7:30 pm (viewing at 7pm
Westchester Community
Center, 2414 Westchester
Avenue, Oella MD 21043



Items found are Gemstones,
Cutting rough, Jewelry,
Minerals, Fossils, Books,
Magazines, and Lapidary

Directions:

From the north: Take I-695 to US 40 west (exit 15B). Turn left on N. Rolling Rd. Turn right at Old Fredrick Rd. (You will pass through 1 roundabout). Turn right on Oella Ave. Turn left on Westchester Ave. Westchester Community Center is on the right.

From the south: Take I-695 to Fredrick Rd. (exit 13). Turn left on Fredrick Road. Follow Fredrick Road approx. 2.7 miles. Turn right on Oella Ave. Turn left on Westchester Ave. The Westchester Community Center is on the right.

Need a map? You can find one on our web site.
[chesapeakegemandmineral.org](http://www.chesapeakegemandmineral.org)

Micromineralogists of the National Capital Area, Inc.

Geology club
Meetings 4th Wed monthly: no July/Aug
7:30 pm - 10pm
Long Branch Nature Center
625 S. Carlin Springs Road
Arlington, VA 22206
* Spring Symposium



www.dcmicrominerals.org

**The National Building Museum
Discover “E” Family Day - Feb 16
 (“E” for Engineering)**

By Kathy Hrechka, Editor & Conference chair

The National Building Museum held its annual Discover “E” Family Day (“E” for Engineering) on February 16th. Geology friends volunteered at the AIME “Minerals for Mining” booth; American Institute of Mining, Metallurgical, and Petroleum Engineers. Visitors were taught the importance of mining minerals for everyday use. This booth was the only participant featuring the Earth Sciences and careers in geology, mining engineering, and metallurgy, which was organized by “Miner Mike” Kaas and his wife Pat.

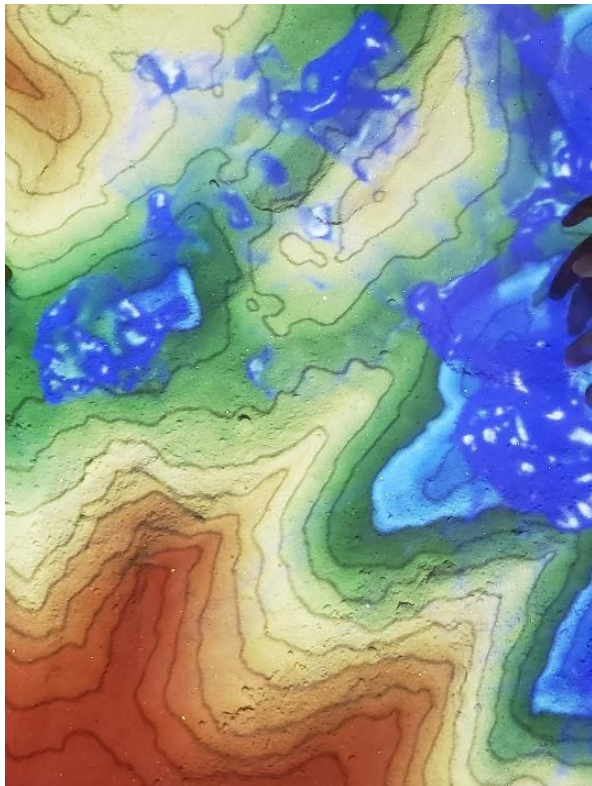
The following volunteers enjoyed interacting with the many guests; John Padan, John Lucas, Sue Marcus & Roger Haskins, Kathy Hrechka, James McNeal, Mike & Pat Kaas.



Building Museum continued

My second favorite activity was the “Augmented Reality Sandbox” sponsored by NCEES; National Council of Examiners for Engineering and Surveying. There, a Microsoft Kinect camera is placed above a sand pile, automatically gauging the distance to the sand and projecting contour lines and colors onto the scene. Cool colors indicate depressions, while warm colors identify peaks. Participants push sand around while being measured topographically.

Photos courtesy Mike Kaas & Kathy Hrechka



DEFD
DISCOVER
ENGINEERING
FAMILY DAY

23

NATIONAL BUILDING MUSEUM

Mining for Minerals

American Institute of Mining, Metallurgical, and Petroleum Engineers

MINING TAKES A TEAM

GEOLOGISTS & GEOPHYSICISTS
USE AERIAL SURVEYS TO FIND EXPLORATION TARGETS
EXAMINE TARGETS IN THE FIELD TO UNDERSTAND THE GEOLOGY
COLLECT DIAMOND DRILL CORE SAMPLES FOR CHEMICAL ANALYSIS

MINING ENGINEERS
DESIGN THE MINE BY USING GEOLOGIC DATA, ORE ANALYSES, AND COMPUTERS
CONTROL PRODUCTION TO ENSURE MAXIMUM RECOVERY OF THE ORE MINERALS

PLUS... METALLURGISTS, COMPUTER SPECIALISTS, ENVIRONMENTAL SCIENTISTS, AND MORE



Micromineralogists of the National Capital Area, Inc.



**American Federation of
Mineralogical Societies**

(AFMS)
www.amfed.org

AFMS Purpose: 2018

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 other related subjects, and to sponsor and provide means of coordinating the work and efforts of all persons and groups interested therein; to sponsor and encourage the formation and international development of Societies and Regional Federations and by and through such means to strive toward greater international good will and fellowship.

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

Subscriptions are \$4.50 per year Remit payment to the AFMS Central Office Checks should be made payable to "AFMS"

Address maintenance and mailing labeling are the responsibility of the AFMS Central Office. All Central Office Steve Weinberger PO Box 302 Glyndon, MD 21071-0302

<central_office@amfed.org> 410-833-7926

Content – Letters Editorial Comments – Submissions Any communication concerning the content or format of the newsletter should be sent to the Editor: Carolyn Weinberger PO Box 302 Glyndon, MD 21071-0302 <editor@amfed.org> 410-833-7926

Deadline is the 1st of each month preceding publication (i.e. April 1 for the May issue)

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**Eastern Federation of
Mineralogical and
Lapidary Societies**

(EFMLS)
www.amfed.org/efmls

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

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

Geology Events:

March 2019

6: Mineralogical Society of DC – MSDC meeting

Smithsonian NMNH, Constitution Avenue lobby
7:30 pm to head up to the Cathy Kerby Room.

www.mineralogicalsocietyofdc.org

**11: The Gem, Lapidary and Mineral Society of
Montgomery County, Maryland - GLMS-MC**

7:30 pm - Rockville Senior Center, 1150 Carnation
Drive, Rockville, MD

www.glmsmc.com

**15: 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

www.glmsdc.org

25: Northern VA Mineral Club - NVMC meeting

7:30–10pm Long Branch Nature Center
625 South Carlin Springs Road in Arlington, VA

www.novamineralclub.org

**27: Micromineralogists of the National Capital
Area - MNCA meeting**

7:30–10pm Long Branch Nature Center
625 South Carlin Springs Road in Arlington, VA

www.dcmicrominerals.org

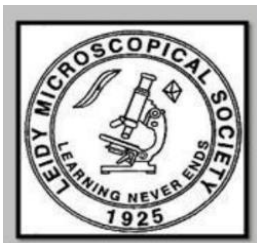
**Snow Policy: If Arlington County
schools are closed on the day of our
meeting, we are cancelled too.**

Micromineralogists of the National Capital Area, Inc.

43rd Leidy Microscopical Society MICROMOUNT SYMPOSIUM

By Don McAlarnen

****NEW LOCATION****
Advent Lutheran Church
45 Worthington Mill Rd
Richboro, PA 18954



Two Days
Friday March 8, 2019
noon to 6pm
&
Saturday March 9
9am to 6pm
(Lunch provided on
Saturday)

TABLE SPACE \$20.00
RAFFLE DOOR PRIZES

CLUB SALES TABLE - MINERALS - SUPPLIES



Reservations/ Admission: Send
Check for \$20.00 checks payable to;
Don McAlarnen,
916 Senator Rd, East Norriton, PA
19403
(610) 584-1364

Email: donmcarnen@outlook.com

*Hampton Inn, 1000 Stoney Hill Rd, Yardley, Pa.
19067 (215) 860-1700 (at I-295 & Rt. 332 exit approx.

8. Hotels:

5, miles from show)

* Brick Hotel, 1 Washington Av., Newtown, Pa. 18940
(267) 685-6443 (in Newtown, approx. 5.5 miles from
show)

*Temperance House, 5 S State St, Newtown, Pa. 18940
(215) 944-8050

*Motel 6, 265 E. Street Rd., Warminster, Pa 18974
(215) 674-2200

* Holiday Inn Express, 240 Veterans Way, Warminster,
Pa. 18974 (215) 443-4300

*Wyndham, 4700 E. Street Rd, Feasterville, Pa. 19053
(215) 364-2000

Micromineralogists of the National Capital Area

Meeting: The 4th Wed. of each month 7:30 -10 p.m.
Long Branch Nature Center (No meetings June & July)
625 S. Carlin Springs Road, Arlington VA 22204

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

Pres: Dave MacLean, dbmaclean@maclean-fogg.com
Vice Pres: David Fryauff, fryauffdj@gmail.com
Secretary: Bob Cooke, rdotcooke@gmail.com
Treasurer: Michael Pabst, Michaeljpabst@yahoo.com
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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

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