



MNCA Website [dcmicrominerals.org](http://dcmicrominerals.org)

# The Mineral Mite



Vol. 50 – No. 2

Washington D.C. – A Journal for Micromineralogists

February 2017

50 Years 1967 - 2017

**February 22 Time: 7:30 p.m. – 10 p.m.**

**Long Branch Nature Center, 625 S. Carlin Springs Rd. Arlington, VA 22206**

## Program: Minerals of Japan

Kathy Hrechka will share her recent airline travels to the National Museum of Nature and Science in Tokyo, Japan. She flew over the Comstock Seamount, through the Aleutian Trench, and past the Emperor Seamounts in business class, to bring you her geology program in a Power point format.

Check out some of her travel photos on page 3 & 4.

**Workshop:** Dave Fryauff will bring micro material.



## President's Message:

By: Dave MacLean

President's message

It appears that everybody who came to JMU on 28 January had a good time. Thank you, Lance and Cindy. I hope we can visit again in 2018



I was fascinated with the variety of minerals in the JMU museum and the localities where found such as Iceland.

Michael, thank you for showing us what sharp photos you can obtain with your new camera and computer hook up.

Kathy, thank you for sharing your micro photos of snowflakes at below freezing temperatures at our 25 January meeting.

Again, we have the opportunity to demo at the GLMSMC show Saturday and Sunday 18 and 19 March at the Montgomery County Fairgrounds. We still have open two hour slots so please sign up.

Last year many children came to look through the microscope at the minerals on the turntable.

\*\*\*\*\*

## Atlantic Micromounters' Conference

March 31–April 1, 2017

Featured speaker:

**Dr. Michael A. Wise, Geologist at the National Museum of Natural History Smithsonian, Washington D.C.**

Details p. 12

## Photo of the Month



**Insect in Amber Photomicrography by Paul Smith  
1997 Christmas card from Paul & Jennie**

## Membership Dues are Due: 2017



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

## Previous Meeting Minutes: 1/25/17

By: Bob Cooke, Secretary

President Dave MacLean convened the meeting at 8 PM January 25, 2017. Nine members were present. Minutes of the November 30 meeting were approved as printed in the Mineral Mite. (At the December 19 meeting/Holiday party there were insufficient members for a quorum; all business was deferred to the January meeting.)

Michael Pabst presented the Treasurer's Report.

### Old Business:

\*Kathy Hrechka stated the Dr. Michael Wise of the Smithsonian Institution has agreed to be the featured speaker at the 44th Annual Atlantic Micromounters' Conference on March 31 and April 1.

\*Kathy relayed that management at NanoScience Instruments continues to be interested in working with MNCA to better describe the capabilities of their Phenom scanning electron microscope for mineral analysis. Michael Pabst volunteered to assist in coordinating the effort.

\*Elections, deferred from the December meeting, were conducted. The candidates identified by the Nominating Committee were not opposed by additional nominations from the floor. The election results for 2017 officers are President: Dave MacLean; Vice President: Dave Fryauff; Treasurer: Michael Pabst; and Secretary: Bob Cooke.



### New Business:

\*MNCA members agreed to support a micromount demonstration table at the Gaithersburg mineral show sponsored by the Gem Lapidary Mineral Society of Montgomery County on March 18 and 19. Dave MacLean circulated a sign-up roster.

\*MNCA members agreed to pursue options to acquire name tags. Members are encouraged to submit name tag designs at the February meeting for selection of a final design.

### Announcements

\*Dave Fryauff, in his role as Field Trip Chairman for the GLMS-MC, invited MNCA members to join a field trip to the Gettysburg Teeter Quarry in April. \*The MNCA visit to the Geology Department and Mineral Museum of James Madison University is scheduled for January 28. Club members will meet in JMU Memorial Hall room 7135 at 9 AM. Members should notify Bob Cooke if they intend to attend. NOTE: Due to Professor Lance Kearns retirement in 2017, as this may be the last JMU trip.

\*NVMC has invited MNCA members to join in a visit to the George Mason University Geology Department on February 18 sponsored by Professor Julia Nord. Meet in GMU Exploratory Hall room L505 at 10 AM. \*George Reimherr's medical condition continues to decline. He was in the hospital over the Holidays but has been discharged under hospice care to his home. George is receiving visits with prior coordination.

\*Dave Fryauff is coordinating a group purchase of micromount boxes from Sauktown Sales <http://www.sauktown.com/Supplies.htm>. Contact Dave at [fryauffdj@gmail.com](mailto:fryauffdj@gmail.com) if interested.

\*Michael and Karen Pabst invited members to visit their home after the JMU trip on January 28. Michael will be demonstrating his newly acquired photographic equipment. The meeting adjourned at 8:30PM.

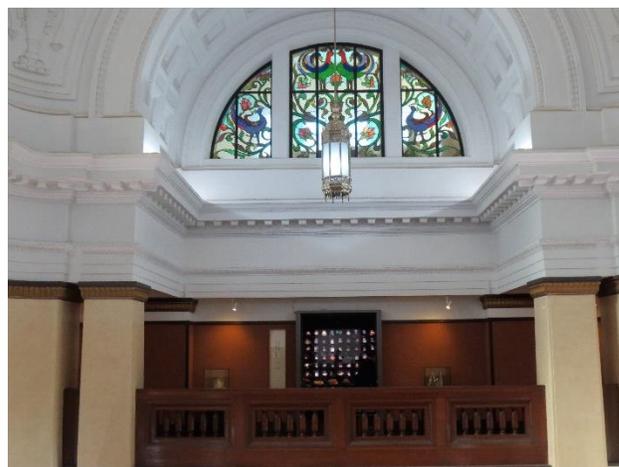
## Previous Program Reviewed: 1/25/17

By: Bob Cooke, Secretary

Kathy Hrechka presented "Snow Crystals 101: A Lesson in Snow Crystal Photomicrography".

## The National Museum of Nature and Science in Tokyo, Japan

Minerals in Japan: Minerals and rocks are important not only for their economic value, but also as materials that can tell us about the behavior of the elements from Earth's beginnings until the present. While not occupying much surface area, the Japanese Islands is home to a rich variety of minerals. This fact tells us that Japan is a complex composition of small geological units, as well as a home to the kind of intense tectonic and volcanic activity that is rarely seen anywhere else in the world.

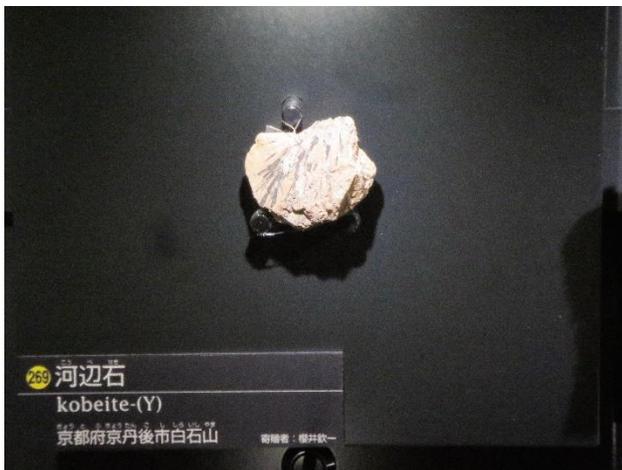
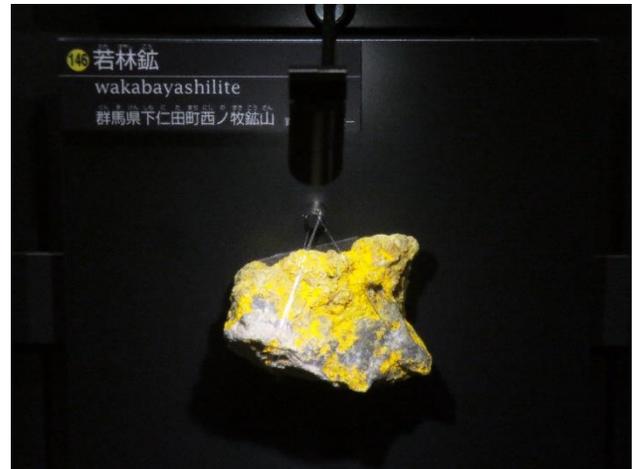


Mineral Gallery entrance on second floor

### Meteorites which have fallen on Japan



National Museum of Nature and Science in Tokyo, Japan



● 球粒隕石

球粒隕石は落下する隕石の大多数、87%を占める岩石質の隕石である。「球粒」(chondrule)と呼ばれる直径数mmの丸い粒がたくさん入っている。球粒の間は非常に細かい鉱物の結晶で埋められており、多くはここに鉄とニッケルを主成分とする金属を含む。日本の岩石質の隕石はすべて球粒隕石である。

気仙隕石の球粒

球粒の偏光顕微鏡写真  
(全体の幅は約3mm)



Photos courtesy of Kathy Hrechka

## Macquartite

By Michael Pabst

Macquartite is a chromium mineral that also contains copper and lead:  $\text{Cu}_2\text{Pb}_7(\text{CrO}_4)_4(\text{SiO}_4)_2(\text{OH})_2$ . Like Dioptase, it is a copper silicate, but a rare and complex copper silicate, one of only two copper silicates that contain chromium. The other is Iranite:  $\text{CuPb}_{10}(\text{CrO}_4)_6(\text{SiO}_4)_2(\text{OH})_2$ , which we examined in an earlier article. My specimen of Macquartite comes from the type locality: Mammoth-St. Anthony Mine, Tiger, Pinal County, Arizona. So far, the type locality is the only known source of Macquartite.



Macquartite is monoclinic  $2/m$ , with  $\beta = 91.8^\circ$ . That  $\beta$  is close to  $90^\circ$ , so if you could clearly see the individual crystals, they might look orthorhombic. But, at least with my specimen, the crystals are too small and fuzzy to analyze the habit visually. (Is “fuzzy” a proper term in mineralogy?) There is a remarkable photo in Mindat by Vincent Bourgoïn, with a field-of-view of only 0.45 mm, that shows nice prismatic crystals: [www.mindat.org/photo-599085.html](http://www.mindat.org/photo-599085.html).

Macquartite was named in honor of Louis Charles Henri Macquart, born in Rheims in 1745, died in Paris in 1808. Macquart provided the samples of Crocoite from Berezovsk, Russia used by Vauquelin in discovering the element chromium. (There are more details in Mindat: [www.mindat.org/min-2514.html](http://www.mindat.org/min-2514.html).) The Macquartite in my specimen rests in a vug in the matrix below a surface decorated with Dioptase crystals.



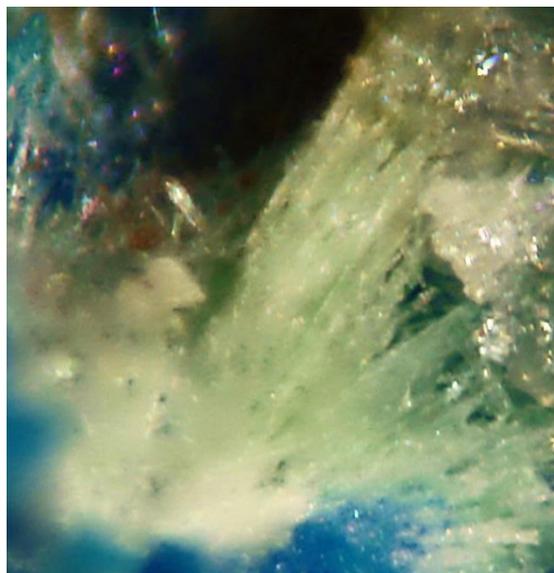
**Macquartite** (yellow) and **Dioptase** (green) from Mammoth-St. Anthony Mine, Tiger, Pinal County, AZ. FOV 8 mm. Photo by Michael Pabst.

Here is a close-up photo of the Macquartite:



**Macquartite** crystals in a vug from Mammoth-St. Anthony Mine, Tiger, Pinal County, AZ. FOV 2 mm. Photo by Michael Pabst.

The closest cousin to Macquartite is Wherryite, another copper silicate that is also found at the Mammoth-St. Anthony Mine. Wherryite has the same formula as Macquartite, except the Cr is replaced by S:  $\text{Cu}_2\text{Pb}_7(\text{SO}_4)_4(\text{SiO}_4)_2(\text{OH})_2$ . In other words, Wherryite is a copper lead silicate *sulfate*, whereas Macquartite is a copper lead silicate *chromate*. Wherryite, like Macquartite, is rare, tiny, and fuzzy. Wherryite is green, making a nice contrast with yellow Macquartite to end this article.



**Wherryite** (light green) with blue **Diaboleite** from Mammoth-St. Anthony Mine, Tiger, Pinal County, AZ. FOV = 0.5 mm. Photo by Michael Pabst.

Lastly, here is a Mindat link for a beautiful photo by Daniel Evanich of a fine specimen of Wherryite on Diaboleite: [www.mindat.org/photo-788113.html](http://www.mindat.org/photo-788113.html).

## Micromineralogists of the National Capital Area, Inc.

### MNCA Field Trip to James Madison U Dr. Kearns - Saturday January 28, 2017

By Kathy Hrechka

Dr. Lance Kearns invited our club to visit him and Cindy one last time, before he retires this spring. Dr. Kearns gave us a personal tour of the museum which he created. We had social time to view many minerals and micromounts. Dr. Julia Nord from George Mason University attended too. We surprised Dr. Kearns with a retirement party during lunch, with twenty-two geology friends in attendance.



Dave Hennessey & Ed Fischer



Cindy Kearns & Dr. Julia Nord



David Fryauff VP MNCA



Dave MacLean, President MNCA



Tom Tucker

Micromineralogists of the National Capital Area, Inc.

MINERAL MUSEUM

James Madison University at Harrisonburg, VA

The room is slightly over 600 square feet in size, hosting sixteen display cases plus a special Ultraviolet display room. Security for the specimens is provided by a multilevel state-of-art security system. Generous gifts from individuals and mineralogical societies around the region allowed for a complete purchase of the mineral display cases. The Grand Opening took place October, 2007. MNCA & NVMC donated one mineral case together.



Michael Pabst photography



Dr. Kearns: MNCA/NVMC donated case

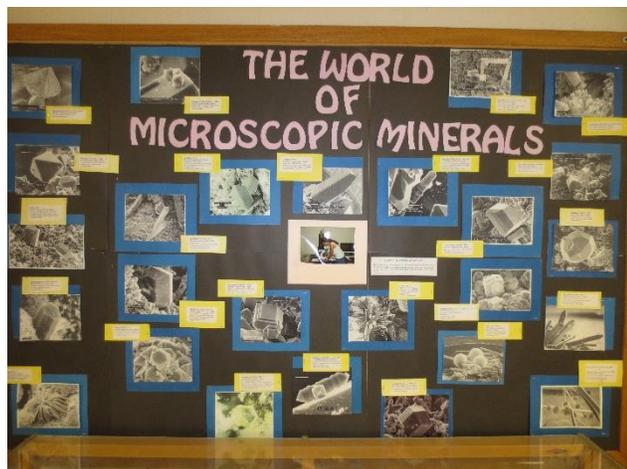


Hutch Brown, Editor NVMC & Sue Marcus



“Minerals of Virginia” case  
Photos courtesy of Kathy Hrechka

*Dr. Kearns, Congratulations on your upcoming retirement of forty - one years at James Madison University in the geology department. We wish you and Cindy all our best. Please come visit us in the Washington D.C. metropolitan area, as we invite you to be our guests. MNCA Members*



Bulletin Board outside Dr. Kearn's classroom JMU

\*\*\*\*\*



### GeoWord of the Day and its definition:

**nebulite** (neb'-u-lite) A *migmatite* characterized by indistinct inclusions ( *schlieren* or *skialiths* ) (Dietrich and Mehnert, 1961). Rarely used. Adj: nebulitic.

**rare-element pegmatite** Rare-earth- and rare-metal-bearing pegmatite formed under conditions of lower amphibolite metamorphism (~2 to 4 kilobars pressure) peripheral to granitic intrusions.

**rhodostannite** (rho-do-stan'-nite) A metallic reddish tetragonal mineral:  $Cu_2FeSn_3S_8$  . It may contain appreciable Ag.

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

### Friendly Request for Amber / Copal Research Samples for Jorge Santiago-Blay, PhD

For years, Dr. Joseph B. Lambert (Northwestern University, Department of Chemistry) and I have been studying plant exudates (resins, gums, and phenolics), copal (partially polymerized resin), and amber (fossilized resin) as part of my research program with the Paleobiology Department, Smithsonian Institution, National Museum of Natural History. Links to some of our recent papers are included below for reference and I will be happy to send the pdf of a few other papers, if requested.

<https://blaypublishers.files.wordpress.com/2016/11/lambert-et-al-2016-leb-43215-2321.pdf>

<https://blaypublishers.files.wordpress.com/2016/02/lambert-et-al-leb-34-japanese-amber.pdf>

<https://blaypublishers.files.wordpress.com/2015/07/lambert-et-al-nmr-monocot-exudates1.pdf>

<https://blaypublishers.files.wordpress.com/2015/01/leb-24-1-30-lambert-et-al.pdf>

I am interested in expanding our analyses of these materials and I am reaching out to as many gem and mineral clubs in the United States as possible to request small samples of plant exudates, copal, and amber with good geographical and botanical provenance data. We only need samples of about 100 milligrams (approx. the volume of a new eraser on a school pencil) in our NMR studies. If you have samples and would like us to analyze them (for free), please contact me at [blayj@si.edu](mailto:blayj@si.edu) or at [blayajorge@gmail.com](mailto:blayajorge@gmail.com).

Please, do not send samples at this time. If we think that your samples are new to our analyses, I will contact you and provide mailing instructions. Thank you for your consideration of this request.

Sincerely and gratefully,

Jorge Santiago-Blay, PhD      Email [blayajorge@gmail.com](mailto:blayajorge@gmail.com)



**IN THE WORKSHOP**

**A son's poem about his father, Fred**

Ringling sawblade,  
Rumbling tumbler,  
Vibrating lapidary:  
your music.

The thought never entered that igneous substance,  
but it's more than a hobby with you,  
quickenning the process,  
the cutting ... the polishing.

The energy you expend  
nature uses in a day,  
equal result—

the excitement exacted  
with each new facet  
in your metamorphic world.

I never saw you so intense,  
the impression etched inside  
as on some black granite head-stone.

Coarse-grained number five grit never marred your  
surface;  
only time has weathered the soft into the  
rugged;  
each ancestral part contributes another grain,  
the geode and its hidden amethyst.

With memories of Amelia, Virginia,  
the mineral bank--  
you and I the thieves--  
my crystalline structure  
strains for the same corundum temper.

Apprentice-like, I emulate the country rock,  
eroded, but not fractured,  
as solid as Mt. Airy--  
your purpose more than two bookends.

The medium is you,  
splitting fragments, buffing edges.

Under your eyeglass,  
finding a crack brings dismay,  
then determination;  
starting again  
raw material to final product;  
and the awe it brings is always there,  
the rock cycle.

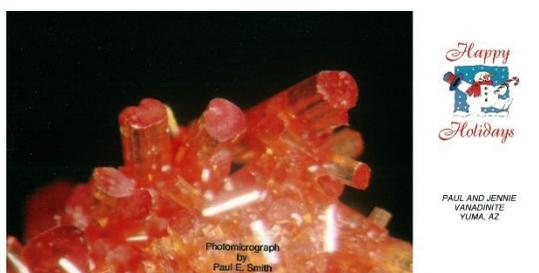
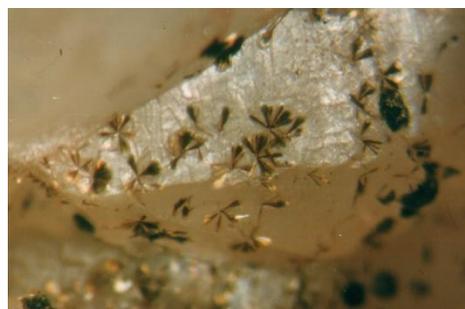
When you meet that revolving diamond blade of the  
Gem-Maker,  
it will be the same for you.

Mark Jeffery Schaefermeyer  
Tampa, FL; 3/17/75  
Published in Gryphon, II:2  
November, 1975

In memory of his father, Fred

Micromineralogists of the National Capital Area, Inc.

Honoring Paul & Jennie Smith:  
Holiday Cards to Lynne & Mark  
Schaefermeyer from Paul & Jennie



Editor's note: Lynne Schaefermeyer scanned their holiday cards for use in *The Mineral Mite*.

## Micromineralogists of the National Capital Area, Inc.



American Federation of Mineralogical Societies

(AFMS)  
[www.amfed.org](http://www.amfed.org)



Eastern Federation of Mineralogical and Lapidary Societies

(EFMLS)  
[www.amfed.org/efmls](http://www.amfed.org/efmls)

### AFMS Code of Ethics

\*I will respect both private and public property and will do no collecting on privately owned land without the owner's permission.

\*I will keep informed on all laws, regulations of rules governing collecting on public lands and will observe them.

\*I will to the best of my ability, ascertain the boundary lines of property on which I plan to collect.

\*I will use no firearms or blasting material in collecting areas.

\*I will cause no willful damage to property of any kind - fences, signs, buildings.

\*I will leave all gates as found.

\*I will build fires in designated or safe places only and will be certain they are completely extinguished before leaving the area.

\*I will discard no burning material - matches, cigarettes, etc.

\*I will fill all excavation holes which may be dangerous to livestock.

\*I will not contaminate wells, creeks or other water supply.

\*I will cause no willful damage to collecting material and will take home only what I can reasonably use.

\*I will practice conservation and undertake to utilize fully and well the materials I have collected and will recycle my surplus for the pleasure and benefit of others.

\*I will cooperate with field trip leaders and those in designated authority in all collecting areas.

\*I will report to my club or Federation officers, Bureau of Land management or other authorities, any deposit of petrified wood or other materials on public lands which should be protected for the enjoyment of future generations for public educational and scientific purposes.

I will observe the "Golden Rule", will use "Good Outdoor Manners" and will at all times conduct myself in a manner which will add to the stature and Public "image" of rockhounds everywhere.

Communication and Involvement  
Are the Keys to Our Success!

### Geology Events:

#### February:

**18:** MNCA and NVMC are scheduled to visit George Mason University, Fairfax, VA geology mineral museum in Exploratory Hall. Invitation by Dr. Julia Nord. Meet at 10 a.m.

Information: Bob Cooke, [rdotcooke@verizon.net](mailto:rdotcooke@verizon.net).

**20:** NVMC Meeting 7:30 - 10 p.m. Long Branch Nature Center, Arlington, VA 22206

**22:** MNCA Meeting: "Minerals of Japan" presented by Kathy Hrechka from her recent travels to Tokyo, Japan 7:30 - 10 p.m. Long Branch Nature Center, Arlington, VA 22206

#### March:

**31–April 1:** MNCA Atlantic Micromounters' Conference

**Featured speaker – Dr. Michael Wise Geologist at the Smithsonian National Museum of Natural History in D.C.**

**Location - SpringHill Suites Marriott  
6065 Richmond Highway  
Alexandria, VA 22303**

\*\*\*\*\*

*Snow Alert: MNCA Meeting is cancelled when Arlington County schools are closed on the day of our meeting.*



## Micromineralogists of the National Capital Area, Inc.

### 44<sup>th</sup> Annual Atlantic Micromounters' Conference March 31 – April 1, 2017

Presented by The Micromineralogists of the National Capital Area, Inc.

Our featured speaker is Dr. Michael A. Wise, Geologist at the Smithsonian's National Museum of Natural History. He will give three lectures. One of them will include the status of the micromount collections at Smithsonian. We are looking forward to his presence, as he knew many of our legacy club members.



Photo Dr. Michael Wise at Smithsonian

### 50<sup>th</sup> Anniversary of MNCA

Recognitions go to Jennie & Paul Smith, Fred Schaefermeyer, George Reimher, Erich Grundel, and charter member Cynthia Payne.

Location: Springhill Suites by Marriott,  
6065 Richmond Hwy, Alexandria, VA 22303  
Phone (571) 481-4441

Registration: Kathy Hrechka,  
MNCA Conference Chair kshrechka@msn.com

Details are posted on our club website: Tab Events  
Conference [www.dcmicrominerals.org](http://www.dcmicrominerals.org)

### 50<sup>th</sup> Anniversary – GOLD

Micro mineral donations are needed for the "silent" and "live auction".

Bring your micromount donations to our next meeting, or mail to: Michael Pabst 270 Rachel Drive Penn Laird, VA 22846

**Micromineralogists of the National Capital Area Meeting:** The 4th Wed. of each month 7:30 -10 p.m.  
Long Branch Nature Center, (Except Easter & Dec.)  
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, fryauffd@yahoo.com  
Secretary: Bob Cooke, rdotcooke@verizon.net  
Treasurer: Michael Pabst, Michaeljpabst@yahoo.com  
Editor/ Historian: Kathy Hrechka, kshrechka@msn.com  
Website: Julia Hrechka, dcmicrominerals@gmail.com  
Conference: Kathy Hrechka, kshrechka@msn.com

### The society is a member of:

\* Eastern Federation of Mineralogical and Lapidary Societies  
(EFMLS) [www.amfed.org/efmls](http://www.amfed.org/efmls)  
\* American Federation of Mineralogical Societies  
(AFMS) [www.amfed.org](http://www.amfed.org) Affiliation

**Dues:** MNCA Membership Dues for 2016  
\$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 5<sup>th</sup> of each month.**  
*The Mineral Mite* will be emailed on 10th.  
No newsletter July/August

**EFMLS Editor's Award**  
**First Place 2016 - Small Bulletins**



**Member inputs:**  
\*Kathy Hrechka  
\*Dave MacLean  
\*Michael Pabst  
\* Bob Cooke

