

# The Mineral Mite

Vol. 47 – No. 1

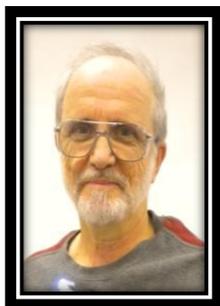
Washington D.C. – A Journal for Micromineralogists January 2014

**Meeting: January 22 Time: 7:45 p.m. – 10 p.m.**

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

**Program: How many specimens can you fit on the head of a pin?: How to mount sub-millimeter size specimens or how I reinvented the wheel.**

Eric Grundel, MNCA member since 1970s will demonstrate his homemade apparatus (=reinventing wheel) which allows him to mount sub-millimeter size specimens as small as 0.05 mm (?0.002 in). How the device was made will be explained, with the aim of encouraging others to make one for themselves. Those in attendance will be given the opportunity to try the device.



Such small pieces are 1-2 orders of magnitude smaller than normal micromount specimens. Such tiny specks represent significant challenges to all steps of the micromounting process. One has to learn new ways of doing things in order to make a good mount. I am still trying to make good ones.

It depends on the pin and the specimens. The best I have done so far is six but I suspect in the right hands dozens!

**Come and explore a new frontier in micromounting with Eric Grundel.**



## President's Message:

By: Dave MacLean

Happy New Year!

At our January 22 meeting Erich Grundel will show us how to mount very small .05mm diameter micros. When one thinks about it, very small micros are probably more abundant than the ones we usually mount. An example I think of are zircon crystals found in beach, river sands, and regoliths. We need volunteers to present meeting programs and suggestions of programs and speakers.

March 15-16 we have an opportunity to demonstrate micromineralogy at the show put on by GLMSMC.

Lets us all look forward to our MNCA Atlantic Micromounters Conference scheduled for Friday evening and all day Saturday April 4-5, 2014 at the Congressional School in Falls Church, VA.

## Photo of the Month



**Sklodowskite on Gypsum, Naica, Chihuahua, Mexico. Field of view is 12 mm. Michael Pabst**

## Micromineralogists of the National Capital Area, Inc.

### Previous Meeting Minutes: 12/16/13

By: George Reimherr

The occasion was a joint Christmas/Holiday party with the Northern Virginia Mineral Club, during which each of the two clubs held a brief business meeting. About 41 persons were present from the two clubs; this compares with about 31 persons present at each of the two previous years' parties. Club president Dave Maclean opened the micromounters business meeting at 7:35 p.m. The item for discussion was the election of club officers for the year 2014. The club officers from 2013 were unanimously reelected, with David Fryauff being elected the new vice president. With that, the business meeting was closed.

### Previous Program Reviewed 12/16/13

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### MNCA Atlantic Micromounters Conference News April 4-5, 2014

By Kathy Hrechka, Conference Chair

The 41<sup>th</sup> Atlantic Micromounters Conference is scheduled for Friday evening and all day Saturday at the Congressional School in Falls Church. Our featured speaker will be Joe Marty from Salt Lake City, Utah. Joe had discovered many new minerals, including "postite" for Dr. Jeffrey Post, Curator of Minerals at the Smithsonian's Museum of Natural History. We will discuss pending conference details at our next meeting.



**Micromineralogists of the National Capital Area Meeting:** The 4th Wed. of each month 7:30 -10 p.m.  
(Except Easter & December)

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

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

President: Dave MacLean, dbmaclean@maclean-fogg.com

Vice President: David Fryauff

Secretary: George Reimherr, greim@cox.net

Treasurer: Michael Pabst Michaeljpabst@yahoo.com

Editor: 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)

## 2014 Dues are Due

**Dues:** MNCA Membership Dues for 2014

\$15 (single) or \$20 (family)

**Payable to MNCA**

**Michael Pabst**

**270 Rachel Drive**

**Penn Laird, VA 22846**



**Editor's**

**Notes:**

**Kathy Hrechka**



Each month I will feature a club member's original article. Also, if you enjoy a particular article in an electronic form, forward it to me to be included in the next Mineral Mite. Photos are great too.

**Club Article Deadline is 10<sup>th</sup> of each month.**

**The Mineral Mite will be emailed on 15th.**

**AFMS Editors Award  
First Place 2011 - Mini Bulletins**



**January Articles:**

\*Michael Pabst

\*Mike Seeds

\*Kathy Hrechka

\*Tom Tucker



## Sklodowskite and Cuprosklodowskite

By Michael Pabst  
Photographed with his wife  
Karen



### Sklodowskite,

$\text{Mg}(\text{UO}_2)_2[\text{HSiO}_4]_2 \cdot 5\text{H}_2\text{O}$ , which is bright yellow, and Cuprosklodowskite,  $\text{Cu}(\text{UO}_2)_2[\text{HSiO}_4]_2 \cdot 6\text{H}_2\text{O}$ , which is bright green, are beautiful uranium silicates. Originally they were thought to be analogs, with  $\text{Mg}^{2+}$  as the principal cation in Sklodowskite and  $\text{Cu}^{2+}$  in Cuprosklodowskite. However, Sklodowskite is monoclinic,  $\beta = 105.88^\circ$ , whereas Cuprosklodowskite is triclinic,  $\alpha = 109.23^\circ$ ,  $\beta = 89.84^\circ$ ,  $\gamma = 110.01^\circ$ .

**Cuprosklodowskite** is one of the few secondary uranium minerals that occurs in crystals large enough to be appreciated by “Muggles”. (Muggles are people who lack a “magical” stereomicroscope!) In this year’s October *Mineral Mite*, there is a picture of a nice Cuprosklodowskite-lined cavity in a macro specimen. However, *micro* Cuprosklodowskite specimens are even more magical. In the specimen below from Musonoi, Katanga, D R Congo, green needles of Cuprosklodowskite are associated with blocky yellow crystals of Soddyite,  $(\text{UO}_2)_2\text{SiO}_4 \cdot 2\text{H}_2\text{O}$ , and with tan crystals of Rutherfordine,  $(\text{UO}_2)\text{CO}_3$ .



**Cuprosklodowskite, Soddyite, Rutherfordine**  
Musonoi, Katanga, D R Congo. Field of view is 5 mm.

In one of my specimens from Musonoi, Katanga, D R Congo, Cuprosklodowskite appears as spheres of diaphanous flat crystals.

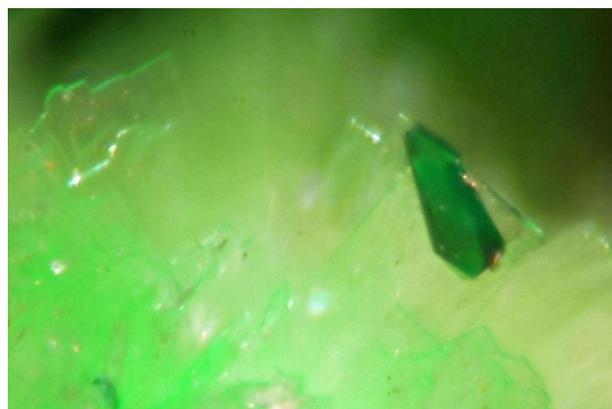


**Cuprosklodowskite** from Musonoi, Katanga, D R Congo. Field of view is 8 mm.

Hidden in the crevices of the above specimen are some tiny yellow crystals that might be Sklodowskite, or perhaps Kasolite (I will never know). Also present are crystals of what I believe to be Vandenbergite,  $\text{Cu}(\text{UO}_2)(\text{OH})_4$ .



**Yellow Sklodowskite (?) (top) and dark green Vandenbergite (bottom)** from Musonoi, Katanga, D R Congo. Field of View is 1 mm both.



## Sklodowskite and Cuprosklodowskite

By Michael Pabst  
continued from page 3

Sklodowskite can be blocky, but sometimes appears as long needles. In the specimen below from Mexico, bright yellow Sklodowskite needles are partly embedded in Gypsum.



**Sklodowskite on Gypsum**, Naica, Chihuahua, Mexico. Field of view is 12 mm.

Sklodowskite is rarer than Cuprosklodowskite. It was first discovered at Shinkolobwe in 1924 by Alfred Schoep (see Schoepite in my last article). Cuprosklodowskite was discovered in 1933 at Kalongwe, Katanga, D R Congo. Both minerals were named in honor of Polish-born Marie Sklodowska-Curie (1867-1934), who studied radiation in Paris, and who invented the term "radioactivity". She observed that minerals like Pitchblende and Torbernite were more radioactive than uranium, implying that there were unknown elements present in the minerals that were more radioactive than uranium. From a ton of Pitchblende, Madame Curie purified one-tenth of a gram of radium chloride. Radium is 3 million times more radioactive than uranium. Her notebooks, and her cookbooks, are still too radioactive to handle without protective gear. She died of aplastic anemia, probably caused by radiation. She won two Nobel Prizes, in Physics and in Chemistry, but as a female Polish agnostic, she was not treated well in male-dominated Catholic France.

## Field Trip: 2/8/14 1pm - ??. Northern Virginia Community College Geology Lab- Thin Section Study



Invite is by John Weidner - NVCC Lab Technician would like to offer a "field trip" to visit the Northern Virginia Community College Geology Department to look at thin sections. We did this last year for the Mineralogical Society of DC (and had quite a few NVCC members attend, more than just the members of both). It was a great success. There seems to be interest in doing it again ..... We will set up our a dozen+ polarizing microscopes, bring out our 1000 plus thin sections, provide instruction for those who have never used a polarizing microscope before, show how thin sections are made, and generally have a good time. Our mineralogy professor, Shelley Jaye, will be there to provide expertise; geology students and hangers-on will attend to provide enthusiasm.

**Where:** Annandale campus of Northern Virginia Community College, just outside the beltway on Little River Turnpike.

CS Building - 1st Floor - lab room CS-217

**Parking:** On NVCC Annandale campus – in the paid parking garage (vouchers may be available from the Dept). If you park anywhere else you are risking ticketing and towing.

**We, the NVCC geology department and friends, are happy to host your clubs!.**

Is there enough interest? Go to Volunteer Spot and sign up!

Use this link

<http://vols.pt/MM2Nkp>

**John Weidner NVCC Thin Section Lab Technician**

Jim Kostka, volunteer spot sign up 202-207-5437



## Micromineralogists of the National Capital Area, Inc.

**Field Trip: 2/22/14 8:30 am - 3pm**

Dr. Lance Kearns -  
Mineralogy Laboratories  
and Museum at James  
Madison University

By Tom Tucker



Dr. Lance Kearns has again invited the MNCA Micromounters along with the Northern Virginia Mineral Club and the DC Mineral Club - to visit the mineralogy labs and the fabulous mineral museum at James Madison University, in Harrisonburg, Virginia. We'll "pass the hat" so everyone will have an opportunity to make a small donation to the mineralogy department for the furtherance of their activities and acquisitions, and to pay for the hot coffee and breakfast buns or donuts that Lance will have awaiting our arrival.

The Museum alone is worthy of a trip to Harrisonburg, being the finest collection of minerals in the entire State. There are a dozen or so large wall cabinets filled with minerals from around the world, but with an obvious emphasis on Virginia specimens, like the turquoise from Lynch Station, or apophyllite from Centreville or aragonite from Buchanan. After your visit I'm sure you will have selected your own favorites. There is also a small room with a stunning fluorescent mineral display.

I've asked Lance to take a few moments in the morning to explain to our group the main attributes of each identification method - size of specimen required, destructive, non-destructive, information gained, etc. Lance will be available to identify those unknown specimens you have accumulated over the years. I'm sure he will demonstrate the use of the x-ray diffractometer for crystal structure determinations, and the Ramen spectrometer. The lab has enough stereo microscopes for all those interested to examine their specimens, or perhaps those that others have brought to share on a "freebie" table. Bring anything you have to share.

There will be various mineral specimens in all size ranges from micro to cabinet sized, and probably a few books, available for purchase at unusually

reasonable prices or free will donations - acquired from various donations to the labs. Arrive early for the best selections. Please remember, these aren't free specimens, make your donations reasonable.

We will probably go out for pizza at lunch, and return in the afternoon to visit the "micro probe" and scanning electron microscope laboratory, on the other side of the campus. We might use it to determine the chemical make-up of our unknowns, or to photograph close-up the minute crystals at hand.

The mineralogy labs are in the Geology Department which is in Memorial Hall ( the former Harrisonburg High School building ), on South High Street. For a map of the campus go to the University website: [www.jmu.edu](http://www.jmu.edu), and at the upper right corner request "directions/map". On the index map, the Memorial Area is an inset at the upper right. Click the small map, and a detailed area map will appear.

Driving directions: It takes approximately two and a quarter hours to reach JMU from the DC Beltway. From the Beltway, go west on I-66 approximately 65 miles to its intersection with I-81. Take the left fork, and go south on I- 81 approximately 54 miles to Harrisonburg. Take Exit 245, Port Republic Road, and go right about a mile to High Street. Turn right, and proceed north about a half mile to a light at Cantrell Avenue. Memorial Hall will be to the left, with abundant parking. Being a weekend, parking passes will not be needed, but if you do have a problem, Lance can probably take care of it. Inside Memorial Hall just follow the signs to the Geology Department. It's easy to get LOST !!

If you plan to attend please go to Volunteer Spot <http://vols.pt/CjiR4z> -- and RSVP -- indicating the number in your party, so that we can let Lance know how many to expect for coffee and buns.

If you have questions -

Email: [threedogtom@earthlink.net](mailto:threedogtom@earthlink.net), or phone Tom at [540-347-9098](tel:540-347-9098).

See you there, Tom Tucker  
Remember, Dr. Kearns has  
Microscopes for sale.



## My First Micromounts By Mike Seeds



I was about 8 years old when I received my first micromounts, and although I don't have them any more, they still come to mind. Perhaps I became a micromounter 50 years later because of those first rocks.

The mineral specimens were given to me by my Uncle Bill and Aunt Mary. They never had children, and consequently, according to my father, they had plenty of money. They always gave my brother and me nice presents, and they seemed to understand that I didn't want footballs and or toy guns. My presents were always related to science or nature, and the best one of all, was a collection of mineral specimens.

The collection is long lost now, but I remember it contained 100 specimens in a shallow cardboard box about a foot long and 10 inches high. Inside was a grid made of up slotted strips of cardboard assembled into a lattice like an eggcrate. Each little opening was padded with a wad of cotton, and each specimen had a tiny bit of paper glued to it with a number from one to 100. Inside the lid was a printed list of the specimens identified by number.

Each specimen was about a centimeter in diameter, so these weren't really micromounts, but they were small, and I had a magnifying glass that I used to study them. I tried to look at them under my microscope, but it was a little Gilbert 'scope with illumination from below by a little round mirror. I didn't have a way to illuminate the specimen from above even if I had thought of it. All I saw was a dark silhouette so I had to rely on my magnifying glass.

Some specimens were rocks: limestone, granite, sandstone. But some were true minerals, and I remember the muscovite especially because it flaked apart so easily and soon became a pile of thin plates. There was one specimen that shed red dust and stained its cotton. I don't recall what it was, but it was probably an iron oxide.

Mostly I recall sorting the rocks. My little brother and I shared a room, and my mineral collection had to be stacked with other toys. It often got dumped, and although it was never my fault, it was my job to fix it. I had to spread everything out on a table, reassemble the lattice, put the cotton balls back, and then sort the minerals back in numerical order. I enjoyed sorting the minerals; each row contained ten, and when I picked up a specimen, I had to look at its number and then count ahead by row and column to find its proper place. Some had lost their little numbered bits of paper, so I had to put them aside and identify them later by looking to see which compartments remained empty. It was really satisfying to get them back in order neatly pigeonholed by number, and I would sit and enjoy the orderly display.

I don't know what happened to my first rocks. My mother probably gave them away with my comic books, American Flyer trains, and first telescope. Perhaps there is a cosmic law that mothers have to give certain stuff to kids down the block, and that's OK. Nevertheless I think of my first rock collection often when I am at my bench mounting specimens in little boxes and numbering them so I can put them in to my collection in their proper place.



Mike Seeds is the Professor of Astronomy at the Franklin & Marshall College, Lancaster, PA. He is also the editor of the *Conglomerate*, the newsletter for the Baltimore Mineral Society, Inc. <http://www.baltimoremineralsociety.org>

## Smithsonian Q?rius – New Education Center is Seriously Amazing

By Kathy Hrechka

The Smithsonian's National Museum of Natural History opened an interactive, educational zone for teenagers on December 12, 2013 called Q?rius (pronounced "curious"). It is a new way of connecting science with the everyday teen experience. The location consists of scientific labs, collections vaults, instructional studios, and a hangout loft to inspire teen visitors. Q?rius is also opened to the general public during designated hours.

Q?rius contains six thousand natural history objects, which are available for teens to handle and observe. Students can create their own digital "Field Books" inspired by scientist notebooks. They are to be used in the collection zone and throughout various activities for collecting data about objects and scientists in the museum. Data from their "Field Book" is retrievable on the internet once they return home. Olympus Corporation donated fifty microscopes. This newly created, educational zone is located on the ground floor by the Constitution Avenue entrance.

Dr. Michael Wise, Department of Mineralogy assisted in choosing various minerals of interest to teens in the collection zone. He is photographed holding a large sulphur crystal.



Geologist, Adam Blackenbicker, in the Natural History's Education Department is credited with designing most of the activities. He is enquiring about how to promote micromounts, as Qrius has acquired 4,000 micros, including the Graves collection.

Qrius Volunteer, Kathy Hrechka is discovering aragonite in the mineral collection zone. Her first mineral added to her Field Book was Smithsonite.



## Micromineralogists of the National Capital Area, Inc.



American Federation of  
Mineralogical Societies

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

**American Federation Show 2014**  
**July 9 – 13 Tulsa, Oklahoma**

**Commemorative Stamp Committee 2012**



This Committee of the American Federation of Mineralogical Societies is responsible for the efforts to obtain stamps featuring subjects of interest such as minerals, fossils, gems and general geology. The Committee has been active for years and submits an annual report at the AFMS annual meeting.

Our current efforts are directed to trying to convince the United States Postal Service to produce stamps showing Birthstones. No stamps featuring gems have ever appeared on US commemorative stamps although there have been some beautiful ones produced by other countries. (There is a definitive \$0.02 US stamp showing Turquoise Indian Jewelry in circulation now, not as a result of our efforts.) The mechanism is to encourage both AFMS members and the public at large to send requests to the Citizens Stamp Advisory Committee (CSAC) of the United States Postal Service (USPS.) It is very difficult to succeed in getting any desired stamp. Only about one out of a thousand requests are approved. It took 10 years of lobbying efforts to get the first set of Mineral Stamps in 1974 and 18 years to get the second set in 1992!



Eastern Federation of  
Mineralogical and  
Lapidary Societies

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

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

**Eastern Federation Show 2014**  
**March 29 – 30 Plymouth Mtg. PA**

The 64th Annual EFMLS Convention & Show hosted by the Philadelphia Mineralogical Society & Delaware Valley Paleontological Society: LuLu Temple, Plymouth Meeting, Pennsylvania

### Geology Events:

By Matt Charsky

#### January:

**30-Feb. 16** Tucson 22nd Minerals, fossils, dinosaurs, meteorites, gems, & jewelry Tucson, AZ

#### February:

**8** - MNCA Field Trip: Northern Virginia Community College Geology Lab- Thin Section Study 1pm - ?? Little River Turnpike  
**22** - MNCA Field Trip Dr. Lance Kearns - Mineralogy Laboratories and Museum at James Madison University, Harrisonburg 8:30 am - 3pm

#### March:

**1-2** 51st Annual Gem, Mineral and Fossil Show Delaware Mineralogical Society Sat. 10-6, Sun. 11-5; \$6 Delaware Technical and Community College, 400 Stanton-Christiana Rd, Newark, DE

#### EFMLS WORKSHOPS AT WILDACRES

Geology Retreat atop the Blue Ridge Mountains in North Carolina. Spring classes April 7 – 13, 2014 Fall classes September 1 – 7, 2014 Tuition is \$390. . EFMLS website <[www.amfed.org/efmls](http://www.amfed.org/efmls)>

### **MNCA Weather alert:** **SNOW CONTINGENCY**

If schools in Arlington County are to be cancelled, or let out early, because of weather on the day of our scheduled meeting, we will have no meeting.

