



MNCA Website [dcmicrominerals.org](http://dcmicrominerals.org)  
**The Mineral Mite**



Vol. 49 – No. 3

Washington D.C. – A Journal for Micromineralogists

March 2016

**March 23 Time: 7:30 p.m. – 10 p.m.**

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

**Program: "The Historic Rutherford Mine, Pegmatite #2 of Amelia Courthouse, Virginia**

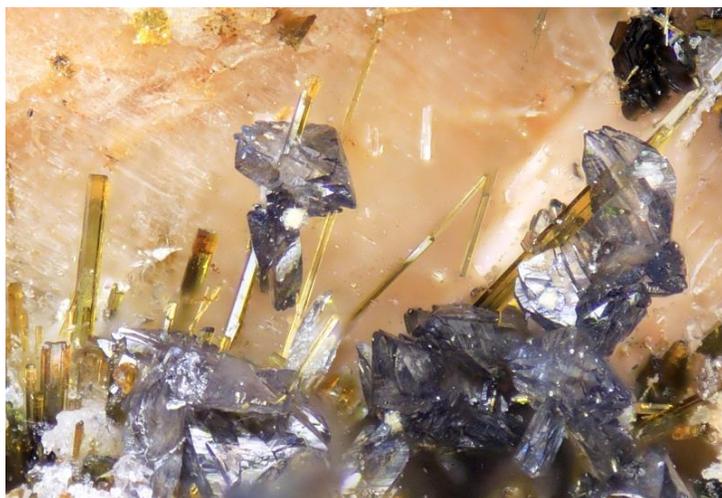
**Presenter: Scott Duresky**



This presentation is made in conjunction with the September release of "A Survey of the Minerals Associated with the Rutherford Mine, Pegmatite #2", which will be released to the mineralogical community at no charge, and will be the most comprehensive survey of its kind ever done for this locality. This was made possible through the generosity of many individuals, and over the past five years, has involved the intensive study of thousands of samples.

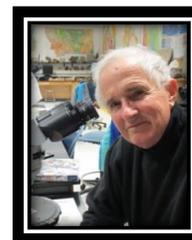
History and Scott's biography continued on page 3.

**Photo of the Month  
Blue Titanites on Aegirine**



**President's Message:**

By: Dave MacLean



Our first opportunity to reach our mineral interested public is demonstrating micromineralogy to the children and adults who come to our table to look at minerals thru the scope. If we can get ten power loupes to sell we can show what one can see with a ten power loupe, the poor man's microscope. Otherwise we can bring our ten power loupes to show people what we can see.

Our Tour d'Force is the our Atlantic Micromounters Conference Friday evening 22 April and Saturday all day 23 April. We need micros for the slide auction, freebies for the freebie table, and help for setup and takedown.

We have signups to demo all day Saturday 3-19 and only one two our slot on Sunday 3-20. Many thanks to those who agreed to demonstrate micromounting.

\*\*\*\*\*

**Blue Titanites on aegirine** from the Granite Mountain Number One Quarry, Pulaski County, Arkansas. Higher magnification shot and better color rendition. FOV is about .6 X .5mm. Imaged with a Canon 40D, 23mm Nikon objective and 300mm Canon FD telephoto in a tube configuration and stacked using Combine Z software.

Photomicrographer - Dr. Henry Barwood, member of the Canadian Micro Mineral Association, Inc. Published by Steve Stuart, new editor CMMMA *Micronews*, Vol. 50, No. 1, January 2016

## Micromineralogists of the National Capital Area, Inc.

### Previous Meeting Minutes: 2/24/16

Recorded by Bob Cooke for George Reimherr, secretary

President Dave MacLean called the meeting to order at 7:45PM on February 24, 2016.

Members present were: Scott Braley, Bob Cooke, Dave Hennessey, Kathy Hrechka. Dave MacLean, Michael & Karen Pabst, and Barry Remer.

Minutes of the December 2015 meeting were approved as recorded in the January 2015 Mineral Mite. (There was no club meeting in January due to a snow storm.)

Dave MacLean solicited volunteers to demonstrate micromount minerals at the March 19 & 20 mineral show on sponsored by the Gem, Lapidary, and Mineral Society of Montgomery County MD.

Members were advised there will be a Maker Fair, Sunday March 13 at South Lakes High School, Reston.

Kathy Hrechka described the preparations for the Atlantic Micromounters Conference on April 22-23, 2016. A sign-up sheet for specific duties will be passed around at the March MNCA meeting. Tony Nikischer of Excalibur Minerals will be the guest speaker; he will talk on "How New Minerals Are Discovered and Named," "Minerals of the Kola Peninsula," and "Rocks from Space."

This was Scott Braley's last MNCA meeting before he moves to Colorado to pursue his PhD.

The meeting adjourned at 8:17 pm.

### Previous Program Reviewed 2/24/16

Recorded by Kathy Hrechka for George Reimherr, secretary

Stormy weather prevented David Fryauff from attending the club meeting, therefore no formal program was presented. Instead attending club members had a workshop viewing and purchasing micros from Cynthia Payne's collection. Plenty of freebies were donated by Scott Braley.



Farwell Scott Braley! We wish you well in CO.



Above: L-R Clemenzi, MacLean, & Hennessey  
Below: L-R Cooke, Pabsts', & Hennessey



**"The Historic Rutherford Mine, Pegmatite #2 of Amelia Courthouse, Virginia continued from the front page**

By Scott Duresky

The Rutherford Mine was a complex pegmatite known for its abundance of rare-earth minerals, the finest quality Amazonite found in the world, and large crystalline masses of gem-grade Spessartine. In addition, it was noted for many other rare mineral species including Manganotantalite, Helvine and Pyrochlore var. Microlite, many of which were found associated with crystalline masses of Albite var. Cleavelandite, which were equivalent in quality to those found in Minas Gerais, Brazil and the Northern Areas of Pakistan. The mine was open to the general public from the 1950's through 1985, and on the Labor Day Weekend from 1986 - 1998, after which it closed permanently.



**Spessartine Garnets** from the Rutherford Mine



Unkown mineral

**Scott Duresky's Biography**

Scott was introduced to minerals at age 8 by his youthful and energetic grandmother, who purchased for him his first specimen: a Copper-Silver "half breed" nugget, from the Keweenaw Peninsula, Michigan. Later, Scott discovered the joys of field collecting while living in Louisville, Kentucky. At age 12, he spent many summer Saturdays "mining" a vein of Pyrite which ran through a hillside on the campus of Bellarmine College, and dragging it back home in a Red Flyer wagon.



His experiences, though, didn't begin in earnest until he moved in January, 1968 (the middle of his senior year) from Richfield, Minnesota to Richmond, Virginia. That April, in Chemistry class, one of his new friends told him about "this place in Amelia County where you can find some really cool rocks, and afterwards, you can stop by this rock shop in Midlothian where there's a guy who'll tell you what you found."

It was almost those exact words which started Scott on a decade's worth of collecting at this incredibly rich and diverse locality, during which time he went over 100 times, learned a great deal, and amassed an excellent collection.

Time and circumstance forced Scott to eventually sell his entire collection in 1986, but in the last five years, through good fortune, hard work and the generosity of many individuals, he has been fortunate enough to acquire not only a large amount of material, more than enough to surpass his collection from previous years but with his improved mineralogical skills, to embark on a project that is designed to keep the knowledge of this important locality alive for posterity, even as currently works with members of the Shenandoah Valley Gem and Mineral Society to increase their knowledge and appreciation for the beautiful world of micro minerals.

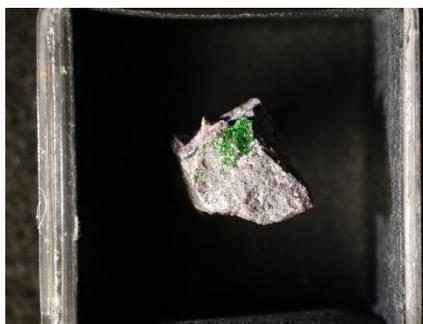
## A New Lens for Photomicrography: Mitutoyo 10X Infinity Focus Objective

By Michael Pabst

In my recent article about Kämmererite in the February, 2016 issue of *The Mineral Mite*, there was a picture of Kämmererite on Uvarovite from Fresno County, California.

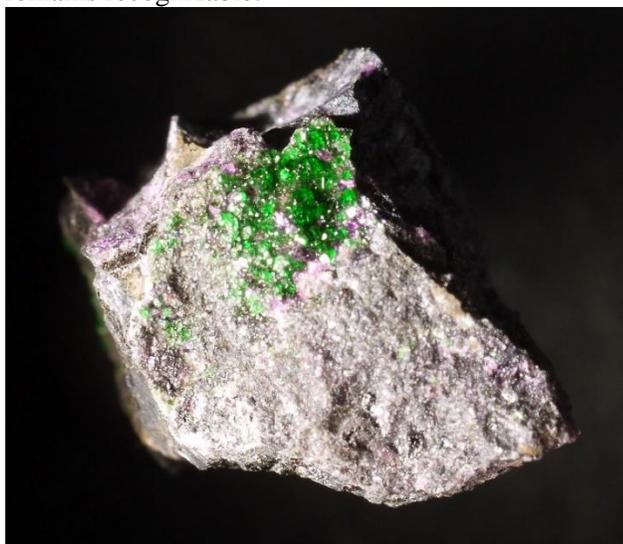


Here is a picture of the entire specimen as it sits in a 20 mm micromount box, taken with a Minolta 50 mm MACRO lens (a standard high quality close-up camera lens).



**Kämmererite on Uvarovite,**  
EMMCo mine,  
Fresno  
County, CA.  
The box is  
20 mm square.

And here is the same image after cropping and sharpening with Photoshop Elements, version 14. FOV 10 mm. On my large monitor, using Microsoft Word 2016, I can zoom in 500%, and the picture remains recognizable.



**Kämmererite on Uvarovite,** EMMCo mine, Fresno County, CA. FOV 10 mm.

Here below is the picture from last month again, but magnified 2X. This further magnification is successful, because the photomicrograph was made with my new Mitutoyo 10X Infinity Focus objective. Compare this magnified version taken with the Mitutoyo lens with a similar photo taken at 140X on my stereo microscope. (140X is the practical limit and the maximum magnification of this microscope, resulting from 20X eyepiece x 7X zoom objective.)

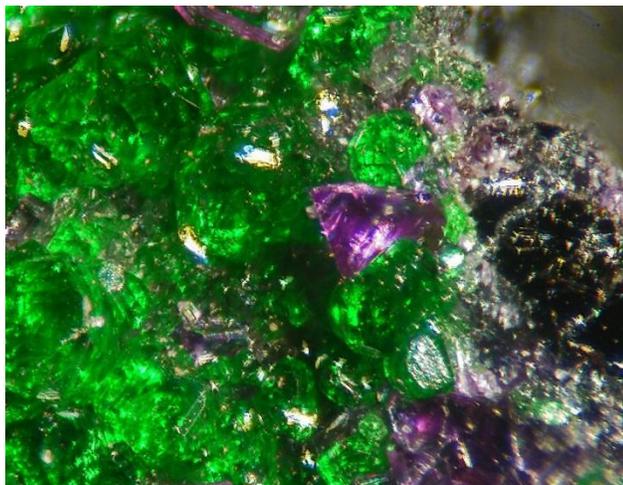
Both photos have been “massaged” to maximum advantage with Photoshop Elements, version 14. The Mitutoyo photomicrograph was made by stacking 41 images taken at different depths, using the computer program CombineZP. The microscope picture was made by stacking 5 images. With my Bausch & Lomb StereoZoom 7 microscope, it is not possible to make smaller incremental steps due to mechanical limitations. With the Mitutoyo setup, the specimen is advanced in tiny steps on a micrometer stage. The field-of-view for both pictures is roughly 1 mm, which is less than the thickness of a dime (1.35 mm)! You can zoom in on your computer monitor to 300%, and these two photos still look reasonably good.



**Kämmererite on Uvarovite,** EMMCo mine, Fresno County, CA.

Continued on next page

## Photomicrography Continued



### Stereo Microscope. FOV 1 mm.

Let us see how far we can push the magnification on the photomicrograph taken with the Mitutoyo lens.

In the close-up below, the image is magnified 5X, to give a field-of-view of 0.2 mm. By comparison, common copier paper is about 0.1 mm thick. This photo is a little fuzzy, but still useful. As an estimate of magnification, the photo shown here is about 100 mm wide, and the photo represents a subject that is actually 0.2 mm wide, so the magnification is  $100 \div 0.2 = 500X$ . This is a remarkable degree of magnification for a 3-dimensional subject. This is an example of excellent hardware and computer software cheating the laws of optics.



**Kämmererite on Uvarovite**, EMMCo mine, Fresno County, CA. FOV 0.2 mm, using Mitutoyo lens.

The Mitutoyo 10X Infinity Focus Objective looks like a standard microscope objective lens, but it is bigger than most. My thanks to Scott Braley who helped me obtain the Mitutoyo lens at a good price, and who provided me with a custom-made adapter to connect the Mitutoyo lens with my Minolta 135 mm telephoto lens. The telephoto lens focuses the output of the infinite-focus Mitutoyo lens onto the camera sensor. Here is a picture of the lens and associated equipment:



Mitutoyo Photography Setup. From left to right: micromount box clamped onto a stand (with a clear lid on temporarily to keep out dust), then the silvery Mitutoyo lens, attached to a thin dull black adapter (made by Scott Braley), mounted onto the shiny black 135 mm telephoto lens, then another adapter, and finally the Panasonic camera. Two lab jacks are used to aim the lens. The visible part of the Mitutoyo lens is 60 mm long and 30 mm in diameter (there is a threaded connection inside the adapter that is not visible).

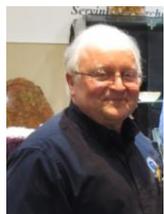
Stephan Wolfsried, the great micro mineral photographer, uses several of the Mitutoyo Infinity Focus objectives. Look at his photomicrographs on Mindat, [www.mindat.org/photo-732783.html](http://www.mindat.org/photo-732783.html), or [www.mindat.org/photo-731816.html](http://www.mindat.org/photo-731816.html), and you can see the level of perfection that I aspire to. I just need a few thousand \$\$ to get all the equipment.

**Editor's note:** We are grateful for Michael's keen interest in photomicrography, as he creates the photos of micro minerals for the auction at our annual conference each year. I view his masterful presentation as a program all by itself.

**Atlantic Micromounters' Conference  
April 22-23, 2016**

Marriott SpringHill Suites  
Alexandria, Virginia  
Please join us in welcoming

**Speaker: Tony Nikischer**



Tony's interest in minerals was stimulated by an early visit to Franklin, NJ in the 1960s. Today, he is founder and president of Excalibur Mineral Corp., arguably the largest provider of systematic minerals in the United States. The company has specialized in rare minerals for researchers, museums and private collectors worldwide since 1974. He operates an in-house analytical laboratory and is also the publisher of the monthly periodical, *Mineral News*.

He is the founder and chairman of The Hudson Institute of Mineralogy, a not-for-profit foundation devoted to study, preservation and public education pertaining to the mineral kingdom. The Institute is now the parent organization of Mindat.org, the most prolific and widely viewed mineralogical website in the world. Tony has served as a director of the Friends of Mineralogy and is a Life Member of the Mineralogical Society of American, and is also a member of both the Mineralogical Association of Canada and the Mineralogical Society of Great Britain.

In 2001, the new mineral "nikischerite" was named in his honor. Tony has contributed over 200 articles to publications such as *Mineralogical Record*, *Rocks & Minerals*, *Mineral News* and *Applied Spectroscopy*, and he has co-authored descriptions of a number of new mineral species. He was awarded the Salotti Earth Science Education award in 2013.

**Nikischerite** Huanuni  
Tin Mine, Dalence  
Province, Bolivia.



Registration details at  
[www.dcmicrominerals.org](http://www.dcmicrominerals.org) Reserve hotel by March  
**18 to receive rate of \$119.**

Submitted by Kathy Hrechka, Conference Chair

**Robert Hazen: Chance vs. Necessity in  
Mineral Evolution: A New Approach  
to an Ancient Subject**

By Kathy Hrechka



I attended the Robert Hazen talk on mineral evolution on February 19, in the John Wesley Powell Auditorium, adjacent to the Cosmos Club in Washington DC. Hazen's presentation was very interesting. I intended to take notes for a write-up, however he presented so much information, that was I was simply mesmerized.

He is Senior Staff Scientist at the Carnegie Institution's Geophysical Laboratory and Clarence Robinson Professor of Earth Science at George Mason University. He is also Executive Director of the Deep Carbon Observatory, a 10-year project to study the chemical and biological roles of carbon in Earth's interior.

Robert and Nerine Clemenzi videotaped Hazen's presentation for the host club, Philosophical Society of Washington. Open link below for program.  
<http://www.philsoc.org/2016Spring/2358transcript.html>

Dr. Hazen has a mineral named after himself. Hazenite is only known from Mono Lake, California. It forms when the phosphorus levels in the lake get too high, and the microbes in the water, in order to survive, have to start excreting it from their cells. The resulting tiny, colorless crystals are essentially microbial "poop". "Yes, it's true - hazenite happens," said Dr Hazen. **Hazenite microbial "poop"**



<http://www.bbc.com/news/science-environment-35569659>

## Where do the Elements Come From?

By Linda Elsnau

The mineral specimens we all enjoy collecting and studying are constructed of various combination of the elements listed in the Periodic Table. But...where did the elements come from?

According to a study done at *Northern Arizona University Meteorite Laboratory*. They are made in the stars! As stars form, and die, each successive generation of star creates heavier and heavier elements. Hydrogen formed in the original "Big Bang", collected to form the first stars. These stars died, exploded and formed the next generation of elements, star which collected to form the next generation of stars and the process continued, each collapsed star forming the next level of elements. This chart shows which elements came from the various sources according to this study.

NASA describes this process on the "Astronomy Photo of the Day" as follows: The hydrogen in your body, present in every molecule of water, came from the Big Bang. There are no other appreciable sources of hydrogen in the universe. The carbon in your body was made by nuclear fusion in the interior of stars, as was the oxygen.

Much of the iron in your body was made during supernovas of stars that occurred long ago and far away. The gold in your jewelry was likely made from neutron stars during collisions that may have been visible as short-duration gamma-ray bursts. Elements like phosphorus and copper are present in our bodies in only small amounts but are essential to the functioning of all known life. The featured periodic table is color coded to indicate humanity's best guess as to the nuclear origin of all known elements. The sites of nuclear creation of some elements, such as copper, are not really well known and are continuing topics of observational and computational research.

<http://apod.nasa.gov/apod/ap160125.html>

Linda Elsnau is the volunteer editor for the bulletin of the Mineralogical Society of Southern California. Her article was published in Vol. 89 No. 2 – February 2016 MSSC.



Periodic table showing origin of elements, based on data at *Northern Arizona University Meteorite Laboratory*. All elements above lawrencium (not shown) are also manmade.

**Image Credit:** Cmglee (Own work) CC BY-SA 3.0 or GFDL, via Wikimedia Commons

<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; background-color: #f0f0f0;"> <p><b>B</b> Big Bang</p> <p><b>C</b> Cosmic rays</p> </div> <div style="border: 1px solid black; padding: 5px; background-color: #f0f0f0;"> <p><b>L</b> Large stars</p> <p><b>S</b> Small stars</p> </div> <div style="border: 1px solid black; padding: 5px; background-color: #f0f0f0;"> <p><b>s</b> Super-novae</p> <p><b>M</b> Man-made</p> </div> </div>																		He
H																		He
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C	C																	SL
Na	Mg																	SL
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Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe	
S	L	L	L	L	SL	L	SL	S	SL	SL	SL	SL	SL	S	S	S	S	S
Cs	Ba		Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	
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			S	S	S	S	S	S	M	M	M	M	M	M	M	M	M	

**Scott Braley, Photomicrographer**

**Tantalite inclusions in Aquamarine** Pakistan.  
Collected July 2015. Crystal size about 2.5 cm max.



Close up: FOV about 2 cm, inclusion size about 1 mm Full specimen: FOV about 5 cm



Negative crystal in Herkimer Diamond. Note shape and alignment of void compared to parent crystal.  
Ace of Diamonds Mine, Middleville NY  
FOV - about 2 cm Void Size - about 1 mm

*Photomicrography by Scott Braley*



Scott Braley will be moving to Colorado in the near future to pursue his PhD. We will certainly miss him. We look forward to hearing about his new mineral collecting adventures in Colorado.

## Smithsonite Type Locality Puzzlement

By Kathy Hrechka, Mindat sponsor for Smithsonite

While volunteering at the Smithsonian's Museum of Natural History in the Geology, Gems & Mineral Hall, I ponder about the mineral "smithsonite". Where is the type locality? I have not been successful in finding the answer, until I reached out to Tony Nikischer, our 2016 AMC speaker.

**Tony Nikischer's findings:** "Smithsonite" was named by Beudant (beudantite) in 1832 in his *Traite de Elementaire de Mineralogy* for the zinc carbonate found by James Smithson some thirty years earlier. In digging further, James Smithson was working on the mineral "Calamine", then thought to be a single species. However, in 1802, Smithson presented a paper to the Royal Society of London entitled "A Chemical Analysis of Some Calamines". It is published in the *Philosophical Transactions of the Royal Society of London*, volume XCIII, page 12.

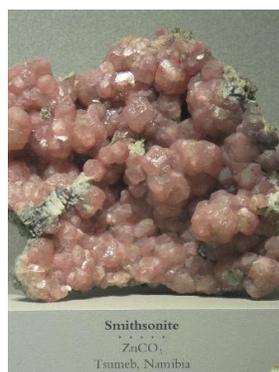
I read the paper this afternoon, and Smithson presented chemical analyses of several "calamine" localities including Bleyberg (Carinthia), Mendip Hills (Somerset), Derbyshire and a locality in Hungary. His conclusion was that "calamine" actually comprised at least two minerals (currently named smithsonite and hemimorphite, but Smithson also identified mixtures of hydrozincite), and he emphasized that this mixture of phases was most clearly represented by the "Bleyberg" specimen he studied.

"Bleyberg, Carinthia" today = Bleiberg, Carinthia, Austria, once in the Duchy of Carinthia (and once partially in Slovenia, within the Holy Roman Empire until 1806, then Austro-Hungarian Empire (Austria-Hungary) until 1918 etc.) The locality has been a geopolitical ping-pong ball, but today is firmly in Austria. When Smithson presented his paper in 1802, it was part of the Duchy of Carinthia. Not surprisingly, Bleiberg is the type locality for the mineral hydrozincite that Smithson found there as well.

## "Smithsonites" in Smithsonian GGM



Kathy is posing by "Smithsonite" from Kelly Mine.



Photos courtesy Kathy



## 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)

### Northwest Federation to host the 2016 AFMS Convention – Show July 27-August 1 in Albany, Oregon

#### AFMS Club Rockhounds of the Year

By Evelyn Cataldo, AFMS Chair

**Eastern Federation:** The Lapidary & Mineral Society of Central Connecticut (L&MSCC) pleased to announce that Bob Reynolds has been selected as our Rockhound of the Year. Bob is a prolific speaker and has given over 30 presentations on minerals, fossils, and meteorites at schools, clubs, senior centers, fairs and other public events in 2015 alone.

He frequently hands out copious amounts of mineral and fossil specimens to school children and teachers at his own expense and from donations he receives from others. Bob also enthusiastically volunteers in club activities and provides educational displays at schools and libraries as a valuable community outreach activity for our club. He is a great ambassador for the L&MSCC and the Geosciences in general. Bob eagerly shares his knowledge with students and the public. We congratulate Bob for a job well done. submitted by Tom Benedict, President



#### GeoWord of the Day and its definition: trapezohedron (tra-pe"-zo-he'-dron)

(a) An isometric crystal form of 24 faces, each face of which is ideally a four-sided figure having no two sides parallel, or a trapezium.

Syn: *tetragonal trisoctahedron*; *leucitohedron*; *icositetrahedron*.

(b) A crystal form consisting of six, eight, or twelve faces, half of which above are offset from the other half below. Each face is, ideally, a trapezium. The tetragonal and hexagonal forms may be right- or left-handed. All terms and definitions come from the [Glossary of Geology, 5th Edition Revised](#).

Communication and Involvement  
Are the Keys to Our Success!

#### Geology Events:

##### March:

19–20: 52nd Annual Gem, Mineral and Fossil Show; GLMSMC; Montgomery County Fairgrounds, 16 Chestnut Street; Sat 10–6, Sun 11–5; age 12 and up \$6, children 11 and under/Scouts in uniform free; info: <http://www.glmsmc.com/show.shtml>.

23: MNCA Meeting Program: "The Historic Rutherford Mine, Pegmatite #2 of Amelia Courthouse, Virginia Presenter: Scott Duresky Long Branch Nature Center, Arlington, VA

28: NVMC Auction – Long Branch Nature Center

##### April:

6: MSDC Meeting at the Smithsonian 8pm

22-23: **Our Atlantic Micromounters' Conference – Speaker: Tony Nikischer of Excalibur Minerals**

**Location – Marriott SpringHill Suites Alexandria, VA 22303**

27: MNCA Meeting at LBNC

##### May

9–15: EFMLS Wild Acres Little Switzerland, NC. Helen Serras Herman, "speaker in residence" is a world renowned glyptographer (gem stone carver).

September 5 – 11 will feature Alfredo Petrov as the "speaker in residence". Alfredo has traveled the world and is extremely knowledgeable about minerals.

**\$400 plus materials fee; registration begins Jan 1; information at <http://efmls-wildacres.org/>**  
Steve Weinberger, EFMLS Wildacres Committee Chair

## Micromineralogists of the National Capital Area, Inc.

### Arizona Geological Survey Mining Data

Submitted by Doug Rambo



Tucson – Phoenix AZ. Unpublished one-of-a-kind Arizona mining documents - once filed away in cabinets and cardboard boxes - are now online, discoverable, and accessible at the Arizona Geological Survey Mining Data website.

(<http://minedata.azgs.az.gov/>)

More than 20,000 files, maps, and reports contributed by dozens of exploration geologists and mining firms are now available. The website exposes more than 8,500 geologic and engineering reports; 6,800 maps – geologic maps, mining claim maps, maps with assays, plats, underground maps and cross sections; and 5,500 historic photographs dating from the 1890s to 2000.

The Mining Data site includes an [applied search tool](#) filtered by key words, mine names, collections, time and place. The geographic search tool provides for a radius search of 1 to 100s of miles from a point of interest for these georeferenced data.

[http://www.willcoxrange.com/news/article\\_84e2aab0-d670-11e5-9281-9bf0d05218c2.html](http://www.willcoxrange.com/news/article_84e2aab0-d670-11e5-9281-9bf0d05218c2.html)

**Resources for the Geology Enthusiast**

The Virtual Museum of Geology has a wide range of tools including:

- Directory of Rock Shops & Geology Attractions ...The most accurate, most complete directory of it's kind on the internet!
- Mineral & Fossil Show List Search our list of upcoming rock, fossil and gem shows.
- Minerals & Fossils Galleries Browse our reference collection of geology samples and special highlights.
- Directory of Geology Clubs

We also have:

- Highlighted Specimens
- Geological Time Scale
- Educational Resources
- Online Rock Shop ...plus much more!

Like us on facebook  
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Visit us soon [www.virtualmuseumofgeology.com](http://www.virtualmuseumofgeology.com)

Virtual Museum of Geology  
Reference Collection ♦ Mineral & Fossil Shop

Jason Rehorst sent us the Virtual Museum of Geology: [www.virtualmuseumofgeology.com](http://www.virtualmuseumofgeology.com)

Facebook:

[www.facebook.com/virtualmuseumofgeology](http://www.facebook.com/virtualmuseumofgeology)

**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](mailto:dbmaclean@maclean-fogg.com)  
Vice Pres: David Fryauff, [fryauffd@yahoo.com](mailto:fryauffd@yahoo.com)  
Secretary: George Reimherr, [greim@cox.net](mailto:greim@cox.net)  
Treasurer: Michael Pabst, [Michaeljpabst@yahoo.com](mailto:Michaeljpabst@yahoo.com)  
Editor/ Historian: Kathy Hrechka, [kshrechka@msn.com](mailto:kshrechka@msn.com)  
Website: Julia Hrechka, [dcmicrominerals@gmail.com](mailto:dcmicrominerals@gmail.com)  
Conference: Kathy Hrechka, [kshrechka@msn.com](mailto: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**

**AFMS Editor's Award**  
**First Place 2011 - Mini Bulletins**  
**Second Place 2015 – Small Bulletin**



**Member inputs:**

- \* Scott Durskey
- \* Michael Pabst
- \* Scott Braley
- \* Linda Elsnau
- \* Kathy Hrechka
- \* Doug Rambo
- \* Jason Rehorst

