



MNCA Website dcmicrominerals.org
The Mineral Mite



Vol. 49 – No. 2 **Washington D.C. – A Journal for Micromineralogists** **February 2016**

February 24 Time: 7:30 p.m. – 10 p.m.

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

Program: "Exploring the Mines of Dal'Negorsk, Siberia"

By David Fryauff, Vice President

Club members will view a DVD presentation by Rock Currier from the Dallas Mineral Collecting Symposium 2012. He passed away just this past year and was a legendary collector. Thanks to Jim Kostka for the DVD that contains this presentation.



Members who have Dal'Negorsk mineral specimens in their collections are invited to bring them in to the meeting so we can see some of these natural wonders. Cynthia Payne had a good number of Dal'Negorsk specimens in her collection, and I believe I have several of these. More information on page 2.

Photo of the Month



President's Message:

By: Dave MacLean

We will meet again after our January meeting was a victim of piles of sunshine crystals.

We have opportunities to share our gifts with the people who are coming to the Gem, Lapidary, and Mineral society of Montgomery County Sat 10AM-6PM 19 March and Sunday 11AM-5PM 20 March at the Montgomery County Fairgrounds in Gaithersburg. We need volunteers to show off our craft.

Saturday 13 February we are invited to meet with visit JMU with members of NVMC and the DC club to get help with identifying our unknown minerals and visit the museum. Please let me know so we can let Lance Kearns know how many are coming.

Our very own Atlantic Micromounters' Conference will be held on Friday evening and Saturday all day 22-23 April at the Springhill Suites Marriott in Alexandria. Please bring mounted and unmounted minerals for inclusion in the auction.

We are the beneficiary of some more Cynthia Payne's micro material. Thank you Cynthia.

I will pick up the Micro material next week from Susan Fisher in Centreville, VA and bring them to our Wed 24 February meeting.

Kämmererite from Kraubath, Austria?.

Field of view 8 mm. Single photo, taken with Minolta MACRO lens. *Michael Pabst photo*

Previous Meeting Minutes: 1/27/15

By: George Reimherr, secretary
There were no minutes to record, as the MNCA meeting was cancelled due to a record breaking snow storm.



Previous Program Reviewed 1/27/15

By: George Reimherr, secretary
The Micromineralogists of the National Capital Area meeting was cancelled due to a record breaking snow storm.

Editor's Note:

I recall, when I accepted the volunteer position as editor for MNCA, I stated that the newsletter was not mine, but the club's. I am very pleased with the inputs submitted throughout the year.



I wish to personally thank the following club members for contributing articles to *The Mineral Mite* in 2015: Michael Pabst, David Fryauff, Erich Grundel, Dave Hennessey, Scott Braley, Robert Clemenzi, and Tom Tucker. Without these inputs, we would not have a federation award winning newsletter.

I must also thank Dave MacLean for his president's remarks each month. The greatest accomplishment goes to George Reimherr for recording the secretary minutes at each meeting for many years. Finally, my college student daughter, Julia Hrechka is given full credit for introducing our club to the world wide web in 2014. www.dcmicrominerals.org

Again, thank you all for your interest in our club through supporting monthly editions of *The Mineral Mite*. The federation award means a lot to me, as I spend many hours at my laptop, gathering your inputs. I am quite proud of our club.



"Exploring the Mines of Dal'Negorsk, Siberia" February Program

By David Fryauff, Vice President

The Dalnegorsk ore field in a nut shell:

Mineralogy: Complex sulphide & calc silicate deposits, sometimes rich in boron silicates

Crystal Size: Crystals of hedenbergite, calcite and fluorite (and possibly Danburite and Datolite?) may all reach sizes of up to 1 m (confirmed). There are also giant, leather like aggregates of dannemorite, which may cover several square meters!

Geology & formation: Complex skarn type mineralization, rich in sulfide and boron.

Current status: Ongoing mining activity in both the sulfide and boron deposits.

Remarks: Mineralogically extremely rich with splendid and large mineral specimen. Easily one of the most spectacular mining districts both in terms of mineralogy and geology. Mindat.org lists 231 entries & 167 valid mineral species, no Type Locality species.

2016 MNCA Membership Dues

A reminder, Please Pay your 2016 Dues;
Single only \$15.00. Family \$20.00.

Send or give your check to our treasurer
Michael Pabst,

270 Rachel Drive, Penn Laird, VA 22846



GeoWord of the Day and its definition:

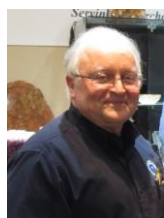
strelkinite (strel'-kin-ite) A yellow orthorhombic mineral of the *carnotite* group:
 $\text{Na}_2(\text{UO}_2)_2(\text{V}_2\text{O}_8) \cdot 6\text{H}_2\text{O}$

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

**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 www.dcmicrominerals.org
Reserve your hotel early to receive our rate.

Submitted by Kathy Hrechka, Conference Chair

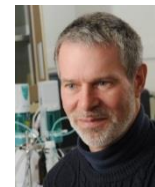
Robert Hazen: Chance vs. Necessity in Mineral Evolution: A New Approach to an Ancient Subject - Feb. 19 in D.C.

By Robert Clemenzi

Last year I heard Robert Hazen talk on mineral evolution - it was very interesting. According to him, the number of possible minerals changed as the Earth cooled. When liquid water became available, additional minerals were possible. Then, when free oxygen was produced by living things, additional minerals became available. His analysis leads to the prediction that there are ~1500 "missing" minerals on Earth - minerals that must exist but have yet to be discovered. Further analysis predicts what some of those minerals might be and where we might find them.

<http://www.philsoc.org/2016Spring/2359abstract.html>

Robert M. Hazen 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. Bob's recent research focuses on the role of minerals in the origin of life, the co-evolution of the geosphere and the biosphere, and the development of complex systems. Bob is an author on more than 400 scientific articles and 25 books, including *Genesis: The Scientific Quest for Life's Origin* and *The Story of Earth*.



He is a former President of the Mineralogical Society of America. And he is active in presenting science to nonscientists through writing, radio, TV, public lectures, and video courses. Bob earned a BS and an SM in Geology at MIT and a PhD at Harvard University in Earth Science.

Hazen will speak on Fri., Feb. 19, 2016 at 8 PM in the John Wesley Powell Auditorium, adjacent to the Cosmos Club, 2170 Florida Avenue NW, Washington DC 20008. Entrance is through the club gate, the first right-hand entrance on Florida Avenue north of the intersection with Massachusetts Avenue NW. The auditorium entrance is to the left of the gate. The Cosmos Club is within walking distance of the DuPont Circle Metro stop (Q Street exit), the Connecticut Avenue bus routes (L2, L4), and the Massachusetts Avenue bus routes (N2, N4).

Kämmererite = Chromian Clinochlore

By Michael Pabst

Clinochlore is a phyllosilicate, like mica, which shows perfect cleavage across the c-axis {0,0,1}. (Think baklava!).

Clinochlore is monoclinic ($2/m$), with $\beta = 97.20^\circ$. So Clinochlore has one mirror plane and one two-fold axis-of-rotation, which is a fairly low level of symmetry. However, specimens often appear to be hexagonal in habit, because faces showing the true symmetry might not be evident. The name comes from the Greek, and means “incline green”, referring to its monoclinic crystal class and green color.

The chemical formula for Clinochlore is $Mg_5Al(Al,Si_3O_{10})(OH)_8$. Clinochlore with this chemical composition would be colorless. The color of more desirable Clinochlore specimens depends upon the presence of other ions like iron Fe^{2+} or chromium Cr^{3+} . Below is a picture of Clinochlore colored by Fe^{2+} . The chemical composition of this clinochlore would be written: $(Mg,Fe^{2+})_5Al(Al,Si_3O_{10})(OH)_8$, indicating that Fe^{2+} is less abundant than Mg^{2+} .



Clinochlore (pale green transparent crystals) colored by Fe^{2+} iron, with on a matrix of Diopside (pale green, nearly colorless) and Grossular (brown). From Felskinn, Fee Glacier, Saas-Fee, Saas Valley, Zermatt-Saas Fee area, Wallis, Switzerland. FOV 2 mm. Specimen belonging to Scott Duresky.



If, instead of iron, we had Clinochlore colored by chromium, the result would be Kämmererite, properly known as Chromian Clinochlore, with the chemical composition: $Mg_5(Al,Cr^{3+})_2(Si_3O_{10})(OH)_8$. According to the “50% rule”, Kämmererite is not a separate species from Clinochlore, because Cr^{3+} occupies less than 50% of certain sites in the crystal structure, with Al^{3+} occupying more than 50% of the sites. (I believe that it is possible that someday a Kämmererite sample might be found where Cr^{3+} occupies more than 50% of the relevant site or sites. So Kämmererite might yet become a separate species.) Despite the 50% rule, insisting on a name, Clinochlore, that means *green*, for a purple mineral, is not an elegant use of language. Kämmererite was named for August Alexander Kämmerer (1789 – 1858), a Russian chemist.

The best specimens of Kämmererite come from the Kop Krom Mine in Turkey. An interesting example is shown in next photomicrograph. Besides the blocky deep wine-red crystals of Kämmererite, there is also a hexagonal “cone” with a lighter purple color. This might be just another habit of Kämmererite, or perhaps it is a related mineral like Amesite. Amesite formed that purple background matrix for last month’s photo of green Chromian Titanite. (Back issues of *The Mineral Mite* are available on our website: www.dcmicrominerals.org).



Kämmererite or Chromian Clinochlore colored by Cr^{3+} chromium. Kop Krom Mine, Kop Daglari, Erzurum, Eastern Anatolia Region, Turkey. FOV 5 mm. Perhaps the hexagonal “cone” is Amesite? Photo taken through stereo microscope, stacking 10 shots with CombineZP.

Continued on next page

Micromineralogists of the National Capital Area, Inc.

Here is another view of the specimen above, looking down at the top at the hexagonal crystal.



Kämmererite taken with Mitutoyo 10X Infinity Focus Objective, stacking 16 shots with Combine ZP. FOV 3 mm.

The following photograph is another specimen of Kämmererite, which is labeled as coming from “Kräubat, Austria”. There is a Mindat location in Austria that has Kämmererite: Gulsen Quarry, Kraubath an der Mur, Leoben, Styria, Austria. However, the specimen pictured is far better than any other specimen from Austria on Mindat, so I suspect that its provenance has been “enhanced”, perhaps to appeal to European collectors. To me, it looks like typical Kop Krom material from Turkey. Despite its possible illegitimate origins, this specimen has a pleasing deep red color, rather than the purple-red seen with many specimens. And it shows a nice assortment of complex blocky crystals.



Kämmererite from Kraubath, Austria?. FOV 8 mm. Single photo, taken with Minolta MACRO lens.

The last photograph shows Kämmererite from the USA. I have a number of these specimens, including one that will appear in the Auction at the upcoming Atlantic Micromounters Conference (April 22-23, 2016). Another of these specimens was auctioned at last year’s conference, and was won by Scott Duresky. These are tiny micromount specimens, but the color combination of deep green Uvarovite (chromium garnet) with deep purple Kämmererite is striking. The locality of “EMMCo mine” near Coalinga, CA is not listed in Mindat, but there are two other chromite mine localities nearby, one of which has Chromian Clinocllore listed: Mistake Mine, Butler Estate Chrome deposit, Wright Mountain, New Idria District, Diablo Range, Fresno County, CA. However, there are no pictures of Kämmererite from Fresno County or nearby counties on Mindat, so only readers of *The Mineral Mite* are privileged to see this stuff! (By-the-way, “Coalinga” is not a Spanish or Indian name, but comes from “Coaling (station) A” along a railroad line.)

Continued on next page.



Kämmererite and Uvarovite from “EMMCo mine”, near Coalinga, Fresno County, CA. FOV 2 mm. Photomicrograph taken with Mitutoyo 10X Infinite Focus lens, stacking 41 images.

In the next installment of *The Mineral Mite*, we will look further into Uvarovite and other chromium-containing garnets. And I will talk a little more about my new Mitutoyo lens.

Field Trip to James Madison University February 13, 2016

Tom Tucker is finding exciting micros.



Casper Voogt with Isabel, age 11



Photos courtesy Kathy Hrechka

Dr. Lance & Cindy Kearns admire the “Virginia Minerals” showcase display



Tucson Gem & Mineral Show of 2016 Shades of Blue

By Michael Pabst

Your amazingly, intrepid correspondent is enjoying the five-star luxury of the Ritz-Carlton Dove Mountain Resort, while examining about a million mineral specimens scattered in hotels all over Tucson. The food is delicious, and the drinks are strong. The minerals are fabulous and expensive. It's a good thing that *The Mineral Mite* is covering my expenses!

The photo below shows Michael and Karen Pabst attempting to remove an amethyst specimen from the freebie area. (Perhaps they should have asked if it were really free, but since it was far too heavy to lift, they decided to leave it behind.)



This photo shows a nice display of Crocoite and Azurite "moons" from Australia.



I gravitated toward a striking display of Arizona blue, micro minerals prepared by Ron Gibbs.

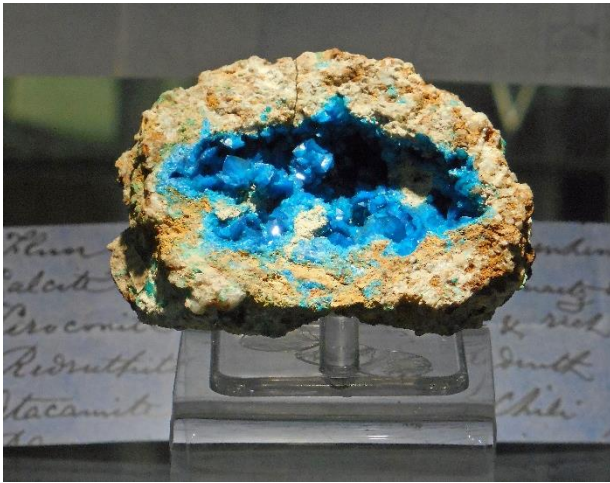
Blue Ribbon Award: "The Blue Spectrum in Arizona Micro-minerals"

Collector's Edge non micros



Tucson “Shades of Blue”

Another fascinating exhibit was from the Natural History Museum in London. The exhibit questioned whether it was worth grinding up 7 **Liroconite** specimens for experiments, the results of which were never published.



I have added a bonus photo of my favorite specimen of **Liroconite** among the many on display or for sale.

Liroconite Wheat Gorland, Cornwall, England



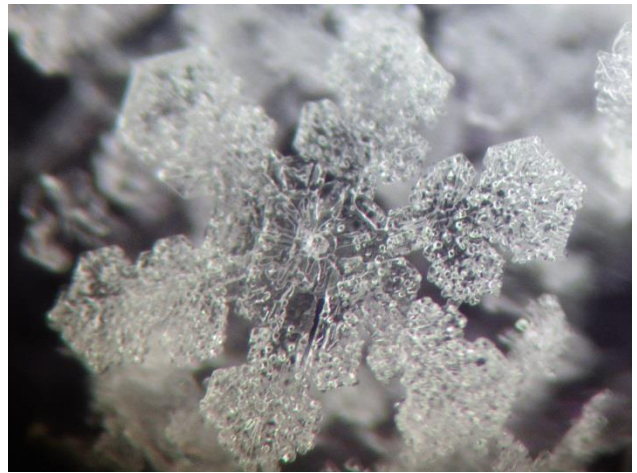
Photos courtesy of Karen & Michael Pabst



Snowstorm Olympia Delivers Snow Crystals for Photomicrography Feb. 15

By Kathy Hrechka

I made another attempt to photograph snowflakes under my microscope today. This snowfall was a success for me. I hope you like my results



Micromineralogists of the National Capital Area, Inc.



American Federation of
Mineralogical Societies

(AFMS)
www.amfed.org



Eastern Federation of
Mineralogical and
Lapidary Societies

(EFMLS)
www.amfed.org/efmls

My Initial View

By Matt Charsky, AFMS President

On my way up the Presidential ladder, I learned a lot about how the AFMS functions. As I performed my duties in each position, I see three primary areas of importance: membership, contact, and participation. Membership: AFMS and Regional Federations rely heavily on the funds generated from membership dues. Recent years, except for 2015, have shown a slight decrease in the portion of membership dues that comes to AFMS, but the decrease does not represent a significant change.

In fact, in 2015, most Regional Federations increased membership – is this a one-year blip? I hope not and so I would like to reward the Regional Federation that increases membership the most from one year to the next. Let's call it a "friendly competition" that gives one Federation bragging rights for one year. All that has to be done is to compare membership numbers for two consecutive years (2014 and 2015) and the highest difference is the winner. I volunteer to do it for the first year and share the results in early 2016.

Full article is continued on AFMS Dec newsletter.

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

* * * * *

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.



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

Geology Events:

February:

27: MNCA meeting "Exploring the Mines of Dal'Negorsk, Siberia" 7:30 pm Long Branch Nature Center in Arlington

March:

5-6: 53rd Annual Earth Science Gem and Mineral Show; Delaware Mineralogical Society; Delaware Technical and Community College, 400 Stanton-Christiana Road (I-95 Exit 4B); Sat 10–6, Sun 11–5; adults \$6, seniors \$5, kids 12–16 \$4, 11 and under free; info: www.delministry.org or call Wayne Urion at 302-998-0686.

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>.

April:

**22-23: Our Atlantic Micromounters' Conference – Speaker: Tony Nikischer of Excalibur Minerals
Location – Marriott SpringHill Suites
Alexandria, VA 22303**

May

9–15: EFMLS Wild Acres Little Switzerland, NC. \$400 plus materials fee; registration begins Jan 1; information at <http://efmls-wildacres.org/>

Micromineralogists of the National Capital Area, Inc.

Passing of George Rambo February 7, 2016

By Dave MacLean

The members of MNCA and I offer our condolences on the death of George. We always looked forward to seeing him at our conference, and much appreciated the supplies he sold to us.

GEORGE EDWARD RAMBO



George E. Rambo, age 84, of Claymont, DE passed away Sunday, February 7, 2016 at Delaware Hospice Center, Milford, DE.

George graduated from P.S. DuPont High School, Class of 1949. He was a lineman, cable-splicer and PBX repairman for Diamond State Telephone. A computer engineer with AT&T, George retired after 42 total years in the telephone industry. He enlisted in the U.S. Army, where he was eventually promoted to Drill Sergeant while stationed at Fort Benning and Fort Gordon, Georgia. He retired as a master sergeant in the US Army Reserve, (2076 US AR School, Wilmington, DE). George also was the owner of Marine Radio Service.

George belonged to many organizations including, U.S. Army Signal Corps Retired, Senior Member

Mineralogical Society of America, Lifetime Member Ledy Microscopical Society, Member Micromounters of New England, Member Micromineralogists of the National Capitol Area, Past President of First State Amateur Radio Club, Director PA Chapter of Friends of Mineralogy and the Delaware Mineralogical Society.

George was preceded in death by his wife, Barbara, who passed away in 1986. He is survived and will be lovingly missed by his son, Michael G. Rambo, of Kuna, ID, wife, Danielle and their son, Sean Michael; daughter, Lisa McDonough, of Smyrna, DE, husband, Lee; Douglas E. Rambo of Harrington, DE, wife, Michele, and their daughters, Barbara Beth, Sabrina Ruth and Noelle Brenda.

Funeral Service will be held Saturday, February 13, 2016 at 10:30am at Gebhart Funeral Home, 3401 Philadelphia Pike, Claymont, DE 19703, where friends may visit with the family beginning at 9:30am. Burial will be in Gracelawn Memorial Park, New Castle, DE.

In lieu of flowers, memorial contributions may be made to Pine Tree Society, 149 Front St., Bath, ME 04530.

To offer condolences, visit: gebhartfuneralhomes.com 302.798.7726



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: George Reimherr, greim@cox.net
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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
* American Federation of Mineralogical Societies (AFMS) 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 5th 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:

*Michael Pabst
*David MacLean
*Robert Clemenzi
*Kathy Hrechka

