

The Mineral Mite

Vol. 46 – No. 9

Washington D.C. – A Journal for Micromineralogists November 2013

Meeting: November 20 **Time: 7:45 p.m. – 10 p.m.**
Long Branch Nature Center, 625 S. Carlin Springs Rd. Arlington, VA 22204

Program: Louis Perloff's Micromount Mineral Slide Collection

We will view micros of the late Louis Perloff, prepared for the 50th Anniversary Baltimore Micromount Symposium.



Louis "Lou" Perloff, prominent American micromounter, was born in New York City in 1907. He developed an interest in minerals at an early age, along with his boyhood friend, Neil Yedlin, through visits to the Brooklyn Children's Museum beginning around 1919. Minerals became a lifelong passion for them, but he did not begin micromounting until 1947, when he bought his first microscope. He was a regular speaker at the Baltimore Mineral Society's annual symposium for close to 40 years. He was inducted into the Micromounters Hall of Fame at its inception in 1981. He died on January 16, 2004.

President's Message:

By: Dave MacLean



We have an opportunity to light a fire under some people to develop a passion for microminerals at the NVMC Show at GMU on November 23-24.

Sign up here. <http://vols.pt/wBE8HU>

Our nominating committee will be offering a list of officers nominees at the Nov. meeting for 2014.

I noticed the wide range of expertise and initiative at the BMS Micromineral Symposium last month in obtaining and mounting specimens, along with photography as a means to share with others. I see these knowhow's and initiative among us. We need to find ways to tell the world about microminerals and bring others into our craft.

I enjoy telling the story from an online article about an Australian group who obtained zircons from a 3.3 billion year old sandstone reef. Zircons usually contain small amounts of uranium and thorium. Zircons are hard and inert. What is in them does not easily leach out and what is outside them cannot get in. Micro zircon crystals are found in many igneous and metamorphic rocks. When these rocks weather, the zircons are left behind as a resistate. Their age is related to the age of their host rock when they formed. The group looked at a small (submicro?) single crystal noting that it had been broken and the underwent repair.

President's Message Continued on page 2

**Perloffite from Big Chief Mine, South Dakota
Micro from Louis Perloff's collection.**

"Photo of the Month"



Micromineralogists of the National Capital Area, Inc.

President's Message continued:

The uranium/lead ages varied from 4.4 to about 3.6 billion years in this one crystal. The oxygen 18/16 ratio suggested that there was liquid water on the earth 4.4 billion years ago, approximately 370 million years after the molten earth appeared.

I believe that the analysis was obtained by laser ablation to vaporize atoms off the crystal followed by identification by high resolution mass spectroscopy.

Previous Meeting Minutes: 10/23/13

By: George Reimherr, Secretary

President Dave MacLean opened the business meeting at 8:00 p.m. Eleven members and one guest were present. The minutes for the previous meeting were approved, as printed in the Mineral Mite - but - under "Old business, change the word "officer" to the word "office". The treasurer gave his report.

Old business -- The place and the date for our conference in 2014 has not been settled. The club has an offer of a contract at the same location as the conference in 2013, but the rental fee has been increased. Completing a slate of candidates for the club office positions for 2014 continues to be a work in process. Several members have volunteered to demonstrate micromounting at the upcoming Northern Virginia Mineral Club show on November 23 and 24, 2013.

New business -- none

Announcements -- Back issues of the Mineral Mite, from the first issue in October, 1967, through December, 2006, have been digitized onto a flash drive; this is done in black and white. It is planned to include the issues from 2007 through December, 2013 in the future; the later issues will include color photographs. The project is expected to be completed, and may be available to the club members by the end of the year. The business meeting ended at 8:22 p.m.

Previous Program Reviewed 10/23/13

Club member Jim Kostka continued his discussion of uranium mineralization and classification which he had begun as the program for our meeting last May 22nd. This evening's program included a showing of (mostly colorful) uranium mineral specimens from Jim Kostka's collection..

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: vacant

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

* American Federation of Mineralogical Societies (AFMS) www.amfed.org

Dues: MNCA Membership Dues for 2012 are due.. \$15 (single) or \$20 (family)

Payable to MNCA

Michael Pabst

270 Rachel Drive

Penn Laird, VA 22846



Editors' Notes:

Kathy Hrechka

AFMS Editors Award
1st Place - 2011 Mini Bulletin



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

Club Article Deadline is 10th of each month.

The Mineral Mite will be emailed on 15th



November Articles

*Kathy Hrechka

*Michael Pabst

57th Annual Paul Desautels Micromount Symposium 2013

By Kathy Hrechka

On October 19, I attend the 57th Annual Paul Desautels Micromount Symposium, sponsored by the Baltimore Mineral Society. The conference was held at the Friends School of Baltimore, Maryland. MNCA attending members included George Reimherr, Dave MacLean, Cynthia Payne, David Fryauff, Mike Seeds, and Steve & Carolyn Weinberger.

Conference Chair, Mike Seeds opened the symposium, which included mineral give-aways, sales, trading, and a silent auction. After lunch we bid on microminerals in a live auction led by Al Pribula. Later in the afternoon Cynthia Payne conducted the "Micromount Induction Ceremony" honoring the late Peter Braithwaite of Great Britain.

The high point of the ceremony is always the announcement of the micromounters selected for induction into the Hall of Fame in the following year. The late Dr. Carl Rilling was the first selectee announced. The audience burst into applause when Cynthia went on to announce that Carolyn and Steve Weinberger have been selected. They will be inducted at the next Paul Desautels Micromount Symposium in the fall of 2014.

Dan Behnke from Northbrook, Illinois gave a power point presentation on the "Microminerals of Cornwall and Enviorns". After dinner, Bob Rothenberg gave a power point presentation of "Six Years of Field collecting in Arkansas".

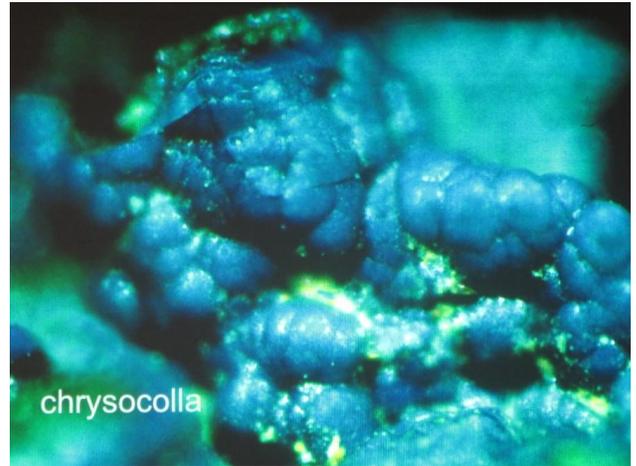
I enjoyed the entire day, reminiscing with friends including Jim Hurlbut from Denver as well as Louis (Lou) D'Alonzo from Nutley, New Jersey.



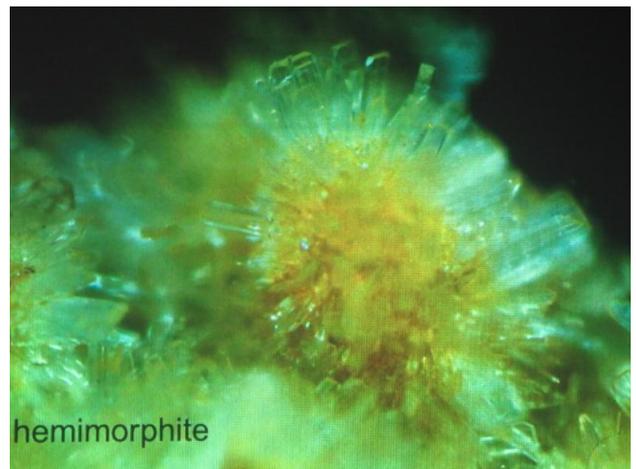
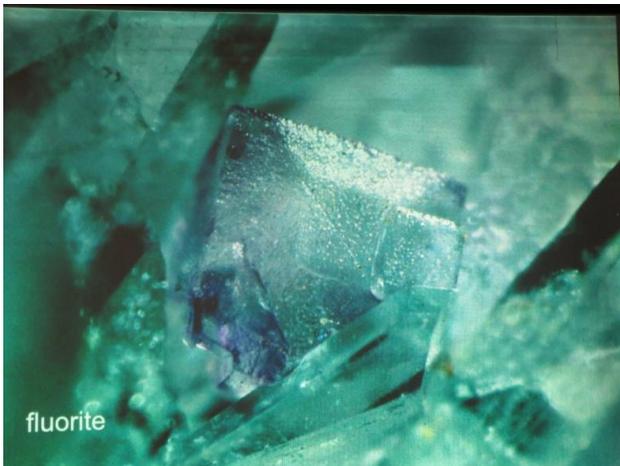
Photos courtesy of Kathy Hrechka

Micromineralogists of the National Capital Area, Inc.

**Dan Behnke of Northbrook, Illinois
"Microminerals of Cornwall & Environs"**



Micro Photos from Dan's program



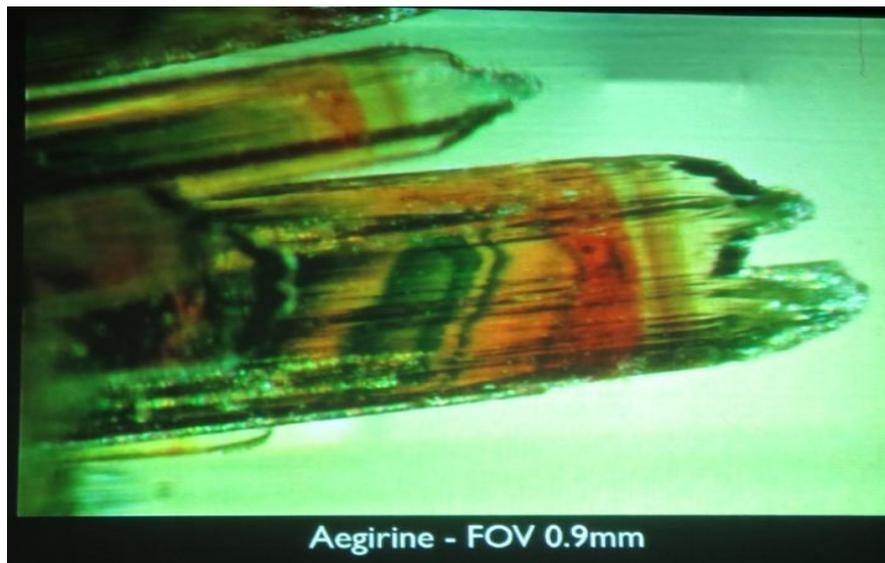
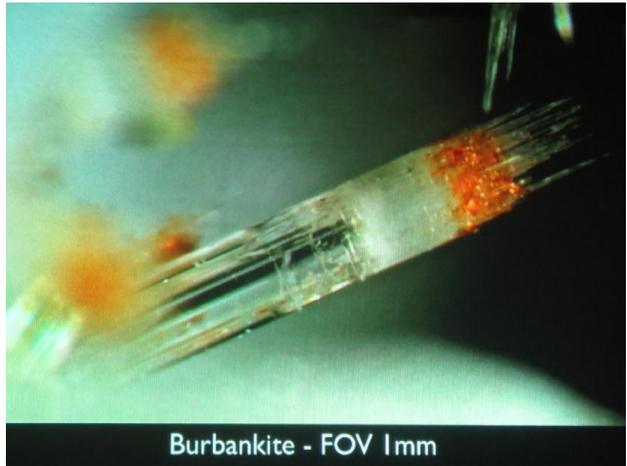
Micromineralogists of the National Capital Area, Inc.

Bob Rothenberg, Oneonta, New York

"Six Years of Field Collecting in Arkansas"



Micro Photos from Bob's program



Becquerelite & Kasolite

By Michael Pabst



In the September *Mineral Mite*, we saw pictures of Fourmarierite, and one of the pictures included Becquerelite as well. These are both hydrated secondary uranium oxides. Their chemical composition and crystallography are similar:

*Fourmarierite: $\text{Pb}(\text{UO}_2)_4\text{O}_3(\text{OH})_4 \cdot 4\text{H}_2\text{O}$

Red Orthorhombic, $mm2$ - pyramidal

*Becquerelite: $\text{Ca}(\text{UO}_2)_6\text{O}_4(\text{OH})_6 \cdot 8\text{H}_2\text{O}$

Orange Orthorhombic, $mm2$ - pyramidal

*Kasolite: $\text{Pb}(\text{UO}_2)[\text{SiO}_4] \cdot \text{H}_2\text{O}$

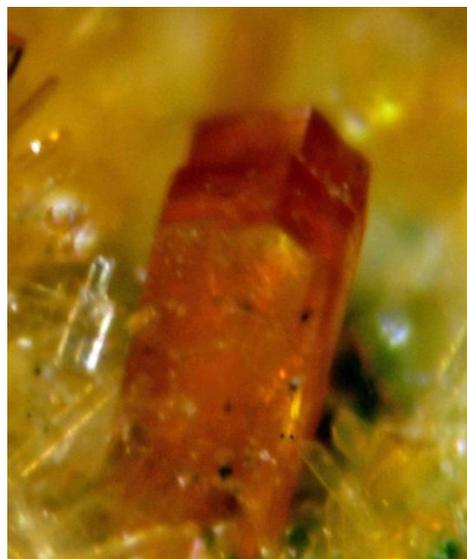
Yellow, Orange Monoclinic, $2/m$ - prismatic, $\beta =$

104.33° Another potential cause for confusion is that Becquerelite commonly contains Pb as an impurity. Nevertheless, good crystals of these two minerals are fairly easy to distinguish, because of the intense red color and unusual pseudo-hexagonal crystal habits of Fourmarierite.

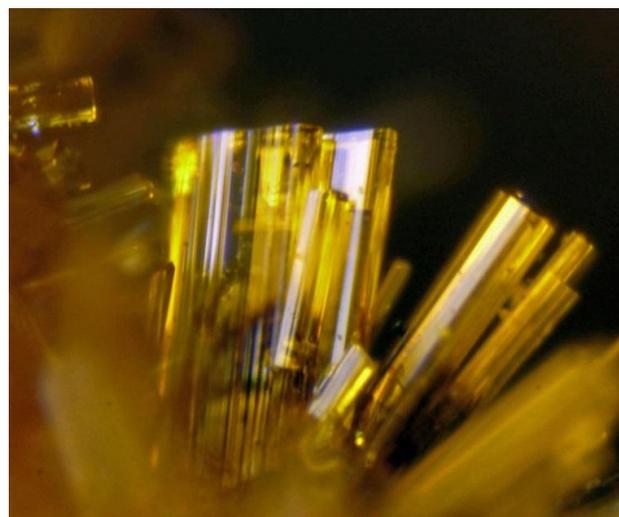
A more likely case for misidentification involves the third mineral in the table, Kasolite. Although Kasolite is a silicate, not an oxide, and Kasolite is monoclinic, rather than orthorhombic, the microcrystals of the three minerals look similar. Looking at tiny crystals through a microscope, it is difficult to distinguish an orthorhombic crystal with an angle $\beta = 90^\circ$ from a monoclinic crystal with $\beta = 104.33^\circ$. None of the other secondary uranium minerals is as red as good Fourmarierite, but less ideal crystals can be golden red or brown. Becquerelite is usually amber-yellow or lemon-yellow, but it can be yellow-orange. Kasolite shows many colors including yellow, orange, reddish orange, amber and brown. So color is not definitive for identification.

The type locality for all three of these uranium minerals is Shinkolobwe, Katanga, D R Congo. Two or three of these minerals can be found together on any given specimen. A host of other secondary uranium minerals may also be present. Thus, with many specimens, the label is probably not complete, even if it what is written is accurate. Kasolite is widely distributed. We saw yellow Kasolite from Musonoi, Katanga in the June *Mineral Mite* Photo of the Month, and another Musonoi specimen is pictured here.

When I look at the pictures of Becquerelite on Mindat (www.mindat.org), some of the specimens look like Kasolite to me. There might be good data to support the identifications given, but I would have been fooled visually. In my specimens from Shinkolobwe, Becquerelite prisms have a flat termination or "roof", maybe sometimes with bevels, whereas Kasolite prisms always have a peaked "roof". That doesn't sound very scientific, but perhaps the pictures will help.



Kasolite, Shinkolobwe



Becquerelite, Shinkolobwe
Photomicrographer - Michael Pabst

Continued on page 7

Becquerelite and Kasolite

continued from page 6



Kasolite on Torbernite, Musonoi, Katanga, D R Congo



Kasolite and Torbernite, Shinkolobwe

I hope everyone enjoys seeing these secondary uranium minerals, because there are still more to come. The uranium minerals are beautiful specimens that I find hard to put away. There is always something more to be seen, and to guess whether a certain crystal is just another Kasolite, or perhaps something more exotic. All these crystals are no more than one mm long, so they are difficult to photograph as sharp images, even with stacking software. But after a long session photographing these crystals, I feel strangely *Energized!*

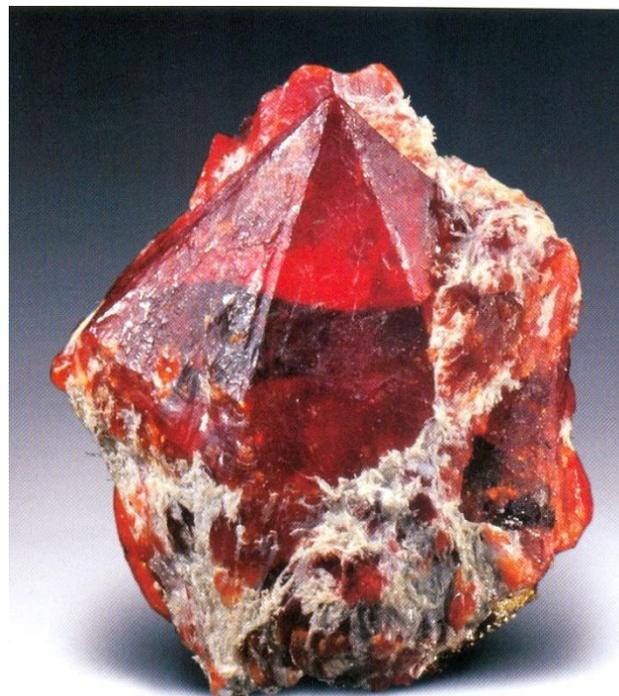
MNCA Member Peter Chin is Famous in The Mineralogical Record - Zincite

George Reimherr found an article on Zincite in The Mineralogical Record, Sept-Oct 2013, Volume 44, #5, p. 519 giving credit to Peter Chin.

THE MINERALOGICAL RECORD

SEPTEMBER-OCTOBER 2013 • VOLUME 44 • NUMBER 5

515



Peter Chin replies,

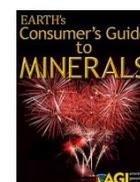
"Well, yes it was me. The zincite crystal is one of the finest. Paul Desautels thought so as well. When I showed it to him in 1974, he remarked, "so you're the one who got it". The Smithsonian had tried to acquire it and Mr. Hesse got tired of waiting and through a somewhat circuitous route, I, through great luck, persistence and the benevolence of the Goddess, Serendipity, acquired it!"

Peter also recommends,

"The Consumer's Guide to Minerals"

e-book www.agiweb.org/pubs/.

Alexandria, VA - The American Geosciences Institute (AGI) announces the release of its latest digital-only publication.



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

American Federation Show 2014 July 9 – 13 Tulsa, Oklahoma

New officers of AFMS

President - Richard Jaeger (Rocky Mountain)
President-elect - Marion Roberts (California)
1st Vice President - Matt Charsky (Eastern)
2nd Vice President - Ann James (South Central)
3rd Vice President - J.C Moore (Midwest)
4th Vice President - Doug True (Northwest)
5th Vice President - Ann Monroe (Southeast)
Secretary - Anne Cook Treasurer - Pat LaRue



AFMS Past Presidents Photographed above

Don Monroe (2013), Lauren Williams (2012), Ron Carman (2003), **Steve Weinberger (2002)**, Dee Holland (1998), Shirley Leeson (2008), Ed Romack (1992), Emerson Tucker (2010).
Camera shy: Bob Carlson (2007)



2013-2014 AFMS Officers Photographed above
Doug True, 4th Reg. VP; Pat LaRue, Treasurer; J.C. Moore, 3rd Reg. VP; Anne Cook, Secretary; **Matt Charsky**, 1st Reg. VP; Ann Monroe, 5th Reg. VP; Marion Roberts, President-elect; Richard Jaeger, President. Camera shy: Ann James, 2nd Reg. VP..

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, PA

Geology Events:

By: Matt Charsky

November:

23-24: 22nd Annual Gem, Mineral & Fossil Show
sponsored by the **Northern Virginia Mineral Club.**
George Mason University, "The Hub"
Braddock Rd & Rt. 123; Fairfax, VA.
MNCA Micromounting Demonstrations



Photo of George Loud & Cynthia Payne
Charter Member, Cynthia has written a special
article of our club's historical beginning in 1967. It
will be featured in December's *Mineral Mite*.