

# The Mineral Mite

Vol. 46 – No. 7

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

**Meeting: September 25 Time: 7:45 p.m. – 10 p.m.**  
**Long Branch Nature Center, 625 S. Carlin Springs Rd. Arlington, VA 22204**

## **Program: A Brief Introduction to the Geology & Minerals of the New Street Quarry in Paterson, New Jersey**

Presenter, David Fryauff will be talking about the Upper New Street zeolite quarry in Paterson, New Jersey. He is will be providing plenty of giveaways including; calcite, prehnite, pumpellyite, natrolite, laumontite, celadonite, chabazite, etc. Bring your microscopes.

Read David's biography on page 2..

**Join us for dinner at Five Guys,  
4626 King Street before the meeting.**

## **Photo of the Month**



## **President's Message:**

By: Dave MacLean



We start up again Wed. 25 September. I hope we all have had an interesting summer. I would like to include a sharing session for our September meeting of our summer finds.

First of all I thank the persons who served as officers, put out the newsletter, handled the logistics of our conference in May, organized the members lists, served as demonstrators, put on or recruited meeting programs, and provided much needed advice.

We need volunteers for the nominating committee ASAP, preferably persons who are currently not officers. Last June a person indicated a willingness to serve, one as Secretary and one as Treasurer. We will need to elect a president and Vice President to start in the new year. We have two opportunities to show ourselves, the NVMC show 23-24 November and the GLMSMC show 16-17 March 2014. We need volunteers to demonstrate.

Our big event next year is the Atlantic Micromounters Conference under the care of Chairman, Kathy Hrechka. When Kathy asks us to help, I am sure we will all respond.

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## **Photo of the Month: Pyrite Wire**

Todd's Quarry, New Zealand

*Australia and New Zealand Micromineral News:*  
August 2013 Issue 7

[http://www.crocoite.com/wiki/index.php?title=Australia\\_and\\_New\\_Zealand\\_Micromineral\\_News](http://www.crocoite.com/wiki/index.php?title=Australia_and_New_Zealand_Micromineral_News)

## **David Fryauff's autobiography**

My dad was a mine engineer who worked for the Minnesota Mining & Manufacturing (3M) Company in their industrial minerals division. He was involved in management of 3M quarries & crushing operations in Wausau, Wisconsin, Little Rock, Arkansas, & Belle Meade, New Jersey. He introduced me to interesting rocks & minerals from his geologist friends at work & I became a collector of virtually everything--rocks, fossils, butterflies, bugs, reptiles, amphibians--at a pretty young age.

We moved to New Jersey in 1967 where we collected mineral specimens in "his" Belle Meade quarry, as well as in Franklin and some of the trap rock quarries in the Watchung basalt formation extending across the state of New Jersey from Bound Brook up to Paterson & Montclair. As a kid I had a pretty good collection of minerals that were given to my dad or that we had found together. Prehnite & Zeolites were some of the showiest specimens and continue to be my favorites.

I went to college and got a BSc in biology from American University in Washington, DC, then went back to NJ and got a MSc in entomology from Rutgers University. From there I joined the Peace Corps and did a two year tour in the Tonga Islands working on a project to treat & control the parasitic disease filariasis (Elephantiasis is the worst form of this disease), then got married and went to Western Samoa and worked on pesticide regulations. My wife, Mani & I came back to the US in 1981 and I got a PhD from Johns Hopkins School of Public Health, Baltimore. My doctoral work took us to Liberia, West Africa, where I studied the epidemiology of another parasitic disease called onchocerciasis (aka River Blindness).

In 1987 the US Navy commissioned me as an officer and assigned me to its infectious disease research laboratory in Cairo Egypt and I spent a lot of time in the Sinai desert working with the International Peace Keeping force.



After five wonderful years in Egypt where we grew to become a family of 5, we were transferred to Jakarta Indonesia where I was the head of the Parasitology Department in the Naval Medical Research Unit. Eventually the Navy reeled in the line & assigned me to Malaria vaccine work at its headquarters laboratory, the Naval Medical Research Center, in Bethesda, MD.



We became homeowners in Damascus, MD and in my spare time I took up gardening and kayaking.

But in 2011 we attended the annual rock, gem, & mineral show at the Gaithersburg fairgrounds, and strangely, suddenly, I felt that unusual fascination with "well-arranged molecules" and I was back again, passionately collecting minerals, trying to understand them and trying hard to make up for all that lost time.....

David J. Fryauff, MSc, DSc CDR, MSC, USN  
Military Malaria Vaccine Program  
Chairman, Institutional Review Board  
Naval Medical Research Center  
Silver Spring, MD, USA, 20910



Photo courtesy of Gem, Lapidary, and Mineral Society of Montgomery County, Maryland

## Micromineralogists of the National Capital Area, Inc.

### Previous Meeting Minutes: 6/26/13

By: George Reimherr, Secretary

The evening events began at 8:00 p.m. Fourteen persons were present, including one guest. First up was the program -- a viewing of a DVD of Bob Jones interviewing the promoters of the mineral and gem show, held in Changsha, Hunan Province, China, May 16 - 20, 2013. Following this, scenes from the show were shown, as posted on the Internet.

President Dave MacLean began the business meeting at 9:00 p.m. Past president Cynthia Payne was present and was recognized. The minutes for the previous meeting were approved, as printed in *The Mineral Mite*. The treasurer gave his report.

**Old business** -- Jim Kostka reported that the club had a successful field trip to the Vulcan Materials Quarry, Garrisonville, VA, with about a dozen persons there.

**New business** -- Dave MacLean announced that business obligations will result in his missing the September, 2013 meeting - so we began the process of forming a nominating committee now, to select club officers for 2014. Three members volunteered to be on the committee.

Next, the members voted to have an Atlantic Micromounters Conference in 2014, after Kathy Hrechka volunteered to be in charge. It will again be held at the Congressional School, if a suitable date can be arranged. April 4 and 5, 2014 seems to be the best choice for the club. Lastly, Michael Hrechka will design a web page for the club; Julia Hrechka has begun scanning the *Mineral Mites* back to the first issue.

The business meeting ended at 9:59 p.m.

### Previous Program Reviewed 6/26/13

Club members viewed a DVD of Bob Jones interviewing the promoters of the mineral and gem show, held in Changsha, Hunan Province, China, May 16 - 20, 2013. Following this, scenes from the show were shown, as posted on the Internet.

**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](mailto:dbmaclean@maclean-fogg.com)

Vice President: vacant

Secretary: George Reimherr, [greim@cox.net](mailto:greim@cox.net)

Treasurer: Michael Pabst [Michaeljpabst@yahoo.com](mailto:Michaeljpabst@yahoo.com)

Editor: 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)

**Dues:** MNCA Membership Dues for 2013  
\$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 10<sup>th</sup> of each month.**  
***The Mineral Mite* will be emailed on 15<sup>th</sup>.**

**Note:** The Bulletin Editor's Advisory Committee of the Eastern Federation announced the results of the 2012 article awards.

See page 4 and 5 for our results.



*Susan Ciervo-Boyle*

Susan Ciervo-Boyle, BEAC Chair

## 2013 EFMLS Bulletin Editors Competition

in the Category of  
Educational Articles

to

**Kathy Hrechka**

from

The Micromineralogists of  
the National Capital Area

for

"Rev. Dr. Martin Luther King, Jr.  
Memorial"



*Susan Ciervo-Boyle*

Susan Ciervo-Boyle, BEAC Chair

## 2013 EFMLS Bulletin Editors Competition

in the Category of  
Educational Articles

to

**Kathy Hrechka**

from

The Micromineralogists of  
the National Capital Area

for

"Blessed Nicolaus Steno, Father  
of Geology and Stratigraphy"



*Susan Ciervo-Boyle*

Susan Ciervo-Boyle, BEAC Chair

## 2013 EFMLS Bulletin Editors Competition

in the Category of  
Written Features

to

**Kathy Hrechka**

from

The Micromineralogists of  
the National Capital Area

for

“American Federation-  
Eastern Federation Page”



*Susan Ciervo-Boyle*

Susan Ciervo-Boyle, BEAC Chair

## 2013 EFMLS Bulletin Editors Competition

in the Category of  
Educational Articles

to

**Joe Marty**

from

The Micromineralogists of  
the National Capital Area

for

“Postite:  
Dr. Jeffrey E. Post - New Miners”

## Fourmarierite

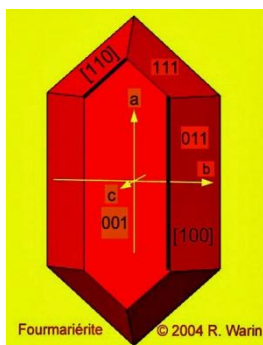
By Michael Pabst

(Our editor, Kathy Hrechka, asked me to coordinate a monthly column featuring a favorite micromineral, with a pretty picture and a short description. Because my collection is limited, I hope that our members will help me by contributing a photo of one of their favorites, or by bring in a favorite for me to photograph. Together we can add some background text, and create a short illustrated article. Let us also continue to provide Kathy with the Photo of the Month.)



Recently, I have been studying secondary uranium minerals, of which Fourmarierite is a beautiful example. Fourmarierite was discovered at the famous uranium mine at Shinkolobwe, which is located in the Katanga Copper Belt of the present Democratic Republic of Congo, formerly Belgian Congo or Zaire.

It was discovered and named by Henri Buttgenbach in 1924 to honor Paul Fourmarier (1877-1970), Professor of Geology at the University of Liège, Belgium. The chemical composition of Fourmarierite is:  $Pb(UO_2)_4O_3(OH)_4 \cdot 4H_2O$ . It features uranium in a +6 oxidation state, giving it a bright orange color. Lead is also an essential element, which, together with uranium, contributes to the high density and high refractive index. Fourmarierite is orthorhombic, but its exact crystal structure has only recently been clarified. One ideal form is illustrated here:



Complete crystals of this form are rare, judging by the photos on [www.Mindat.org](http://www.Mindat.org) and in the *Photo Atlas of Minerals*. Most specimens show only the top half of the form, so I hope that everyone will enjoy seeing this specimen:

This Fourmarierite crystal is nestled among other secondary uranium minerals, but I can only guess at their identity, probably Uranophane, Becquerelite, and Studtite. The whole assemblage is on a matrix of black uraninite (not visible). (Field of view of the picture is 2.5 mm, so the crystal is about 1 mm wide. This was taken through a stereomicroscope, and I used the image-processing program Combine ZP to stack 6 images to improve depth-of-field.)

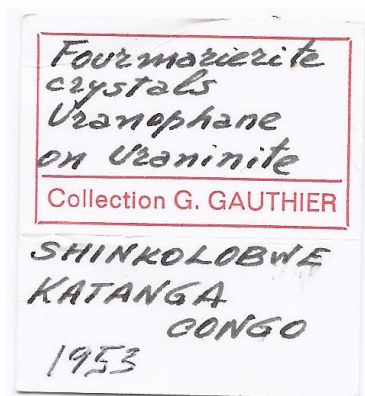


Fourmarierite photo courtesy of Michael Pabst

**Page 7** A picture from another specimen shows “half” crystals of Fourmarierite (red-orange), along with prisms of Becquerelite (orange), and sprays of Uranophane (yellow), all in a vug in black uraninite:

(Field of view is 8 mm. Photographed through a stereomicroscope, using CombineZP to stack 10 pictures.)

I purchased these specimens at different times many years ago from the Belgian dealer Gilbert Gauthier (1924-2006), who worked at Shinkolobwe as a geologist. He was a wonderful man whose charm helped to offset his prices!





**Fourmarierite** (red-orange), along with prisms of **Becquerelite** (orange), and sprays of **Uranophane** (yellow), all in a vug in black **uraninite** Shinkolobwe, Katanga, Congo

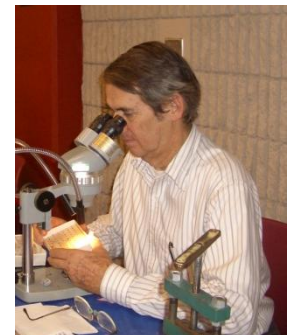
**Photomicrography by Michael Pabst**

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### **Mineral Inquiry by Tom Tucker**

I noticed among specimens that Bob Dunning recently gave the Club, several copper specimens that are covered with what I would describe as "silver bloom". It looks like the acanthite fuzz that rapidly appears on native silver specimens. But these are copper specimens from Cornwall, Pennsylvania; Russia; and Broken Hill, NSW, Australia. Does anyone have any idea what the "bloom" is? Tom



**If you know the answer for Tom, email him at**

[threedogtom@earthlink.net](mailto:threedogtom@earthlink.net)

## 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/ Southeastern Federation Show September 20-22, 2013 Jacksonville, Florida



You are invited Thursday night to Hanna Park at the beach. Star Gazing with Northeast Florida Astronomy Society members and Telescopes (Saturn will be spectacular!) Cook out provided by Host society JGMS.

- \*SFMS Cracker Barrel Meeting – Friday 7pm
- \*SFMS Annual Meeting – Saturday 9am
- \*ALAA Meeting – Saturday 2:30pm
- \*Awards Banquet – Saturday 6pm
- \*Editors and Webmasters Breakfast – Sun. 9am
- \*40+ retail dealers, Fantastic exhibits and speakers from around the country. See the NASA Moon Rock, Lectures on near earth bodies, meteorites, demonstrations, workshops, hourly door prizes, silent auctions and more.

All AFMS and SFMS meetings will be hosted at the: Marriott, Jacksonville, 4670 Salisbury Road Jacksonville, FL 32256  
904-296-2222 or 1-800-962-9786  
(Mention AFMS meeting for \$82 room rate. Offer Expires August 5, 2013.) (This rate is good from Sept. 15th to 25th)

#### Enjoy the Annual Jacksonville Gem Show!!!

#### AFMS Officers:

President - Don Monroe <president@amfed.org>  
Pres.-Elect - Richard Jaeger <rjgrsci@aol.com>  
1st V. P. - M. Roberts <mvroberts@bigvalley.net>  
2nd V. P.- Matt Charsky <matt2430@comcast.net>  
3rd V. P. - Ann James <amariann113@yahoo.com>  
4th V. P. -Sandy Fuller <MWFtreas@Rock-Biz.biz>  
5th V. P. - Doug True <dtruefossils12@yahoo.com>  
Secretary - Anne Cook <secretary@amfed.org>  
Treasurer - Pat LaRue <bplarue@earthlink.net>

Communication and Involvement  
Are the Keys to Our Success!

### Geology Events:

By Matt Charsky

#### September:

**14-15:** 48th Annual Gem, Mineral & Jewelry Show sponsored by the Central Pennsylvania Rock & Mineral Club. Zembo Shrine, 3rd & Division Streets; Harrisburg, PA.

**28-29:** 49th Annual Atlantic Coast Gem, Mineral & Jewelry Show hosted by the Gem Cutters Guild of Baltimore. Howard Co. Fairgrounds, West Friendship, MD.

#### October:

**18-20: Baltimore Mineral Society Micro Conference - Friends School of Baltimore, 5114 N Charles Street, Baltimore, MD 21210**



**19:** Annual Saco Valley Gem & Mineral Show sponsored by the Saco Valley Gem & Mineral Club. Albany Town Hall, Rt. 16, Albany, NH

#### November:

**2 – 3:** 44th Annual Gemarama 2013: Shades of Red” sponsored by the Tuscarora Lapidary Society. The School at Church Farm, Business Rte. 30, 1 / 2 mile west of Frazer Rte 30 Exton, PA.

#### 23-24:

22nd Annual Gem, Mineral & Fossil Show sponsored by the Northern Virginia Mineral Club. George Mason University, “The Hub” Ballroom, Braddock Rd & Rt. 123; Fairfax, VA.