Micromineralogists of the National Capital Area, Inc.

The Mineral Mite

Vol. 46 – No. 2 **Washington D.C. – A Journal for Micromineralogists February 2013**

Meeting: February 27 Time: 7:45 p.m. – 10 p.m.

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

Program:"Agates of Copper Country"

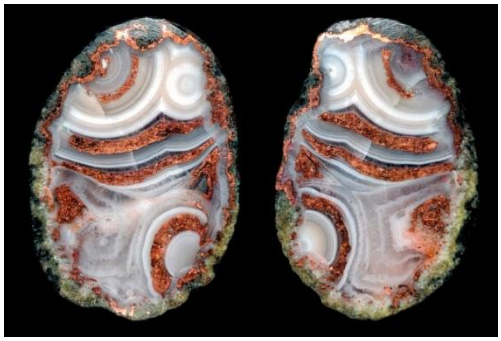
By Wayne Sukow, presenter

The colorful and many patterned Lake Superior Agates are found in the glacial gravels of numerous states including the beaches of Lake Superior. The varieties are given names such as fortification, plume, moss agate, floater, sagenitic, skip-an-atom, and eye agate, among others based on the a characteristic that repeats in numerous agates. Naming of these varieties continues to this day.

This program emphasizes the variety of "Lake Superior Agate", that are found in a small geographic region in Michigan's Upper Peninsula, given the name Copper Country. Since only a few have been transported by glaciers and many are found in situ it is not uncommon to find them virtually fracture free. Some agates from this region will be the familiar Lake Superior Fortification agate...some are quite different in terms of their source, inclusions, color and textures. (cont. p. 2)

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

"Photo of the Month"



Copper Replacement Agates: Upper Michigan

President's Message:

By: Dave MacLean

I believe we all enjoy our hobby in micromineralogy and have become very good add it. Paul smith said many times, "Now it's time for fun" and went off to look at his mineral treasures. I began looking at minerals in 1966 by borrowing a microscope from DePauw University, Greencastle, IN. Articles in Rocks and Minerals led me to microminerals. About 1965 I bought a ten power loop and the wonders appeared.

I would hate to see our craft die because we did not attract new aficionados to join us. How many other crafts have disappeared because new persons did not become practitioners?

Our outreach has been demos of the wonders of microminerals at the NVMC and GLMSMC shows. We attract mostly children but that is where the interest begins. The opportunity is keeping them attracted or retracting them when they are in their 40's, 50's, and 60's.

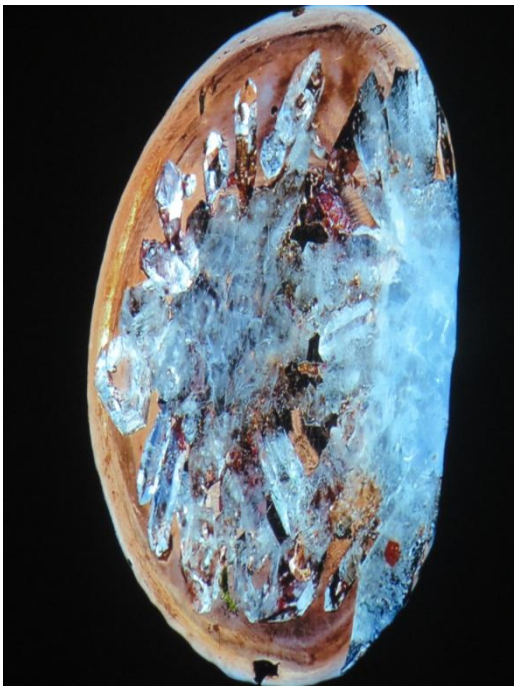
We reserved 1 and 1/2 table at the GLMSMC show Sat-Sun 16&17 March, Rockville, MD fairgrounds for our micromineral demo. I am working at the kid's table 1100-1500 Sunday 17 March. I can demo only 1000-1400 or a portion thereof Saturday 16 March. We need volunteers to demo Sat Afternoon 16 March until 1800 closing and all day 1100-1700 takedown Sun 17 March. The persons who often do the demos are doing other demos or working the show. We need persons willing to demo at the GLMSMC show. Help please.

Program continued from page 1

By Wayne Sukow

This 60-minute program includes agates from:

- GITCHEE-GUMMIE
- ISLE ROYALE...A CLOSED LOCATION
- Copper Mines...VANISHING LOCATIONS
  - THE Sources and VARIETIES OF AGATES,
  - FEATURES REVEALED BY ETCHING AWAY THE CALCITE, AND
  - THE BEST OF THE BEST
- COPPER COUNTRY BEACHES
- QUARRIES, BLUFFS AND LEDGES
- The Republic Iron Mine



Previous Meeting Minutes: 1/23/13

By Kathy Hrechka, Secretary Pro-tem

President Dave MacLean opened the business meeting at 8:05 p.m. The minutes of the December 17 meeting were approved as published in The Mineral Mite. Treasurer, Michael Pabst asked for a correction of his email address on page 2. Michael also gave his treasurer's report, reminding members that dues for 2013 are due. $15. for single members, and $20. for a family. Dave recognized past president, Tom Tucker. Club members welcomed new member, Navy Officer Dave Fryauff. He is a microbiologist, having attended Rutgers University along with John Hopkins University. Dave and his wife have two daughters, one son, and a granddaughter. Dave's father was interested in rocks and minerals working for 3M.

Old business: Dave MacLean presented a certificate of appreciation to Eric Grundel for his article in the 2012 EFMLS Bulletin Article competition. Tom Tucker spoke about the Taylor micromount collection, which was given to our club by Mrs. Taylor. Tom offered to purchase the collection for $100., with an agreement to give Mrs. Taylor 50% of his proceeds. The attending club members voted for Tom to purchase the collection, as no other offers were given.

The GLMS club of Montgomery County are in need of micromounter volunteers to staff the micromounter demonstration table at the March 17-18 show. (Saturday 10-6 p.m., and Sunday 10-5 p.m.)

Meeting date change: March 20th for our March meeting due to Easter.

New business: Tom Tucker reminded club members to attend the field trip to visit Dr. Lance Kearns at James Madison University on February 23. 9-3 p.m. RSVP to Tom threedogtom@earthlink.net or call 540/347-9098.

Dave encouraged members to attend our Atlantic Micromounters' Conference May 3-4 at the Congressional School in Falls Church. Dave also spoke about the discussions heating up in Virginia concerning the potential mining of the uranium deposit.

A motion was made to adjourn the meeting at 8:35 p.m.

Previous Program Reviewed 1/23/13

By Kathy Hrechka, Secretary Pro tem

Tom Tucker presented minerals from the Taylor collection. Club members viewed micros.

Field Trip - Feb. 23
9 a.m. - 3 p.m. Mineralogy Laboratories and Museum at James Madison University

By: Tom Tucker

Dr. Lance Kearns has again invited MSDC, along with the MNCA Micromounters and the Northern Virginia 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.

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 let me know the number in your party, so that we can let Lance know how many to expect for coffee and buns.

Email: threedogtom@earthlink.net

Phone: 540-347-9098. See you there, Tom

If you would like to extend the weekend to include a field trip on Sunday to collect micro-minerals at various syenite localities about 15 miles south of Harrisonburg, or to Sugar Grove, West Virginia (about 40 miles) let me know, and we will do it.

Micromineralogists of the National Capital Area
Meeting: The 4th Wed. of each month 7:30 -10 p.m.
(Except 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:DaveMacLean,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 Mineralogica1 Societies
(AFMS) www.amfed.org

2013 Dues are due.

Dues: MNCA Membership Dues for 2013
$15 (single) or $20 (family)

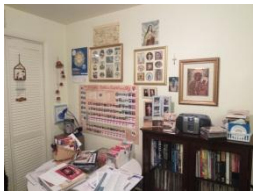
Payable to MNCA
Michael Pabst
270 Rachel Drive
Penn Laird, VA 22846

Editors' Notes:
Kathy & Julia Hrechka

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.

"Where in the World are your Editors?"

Kathy's Rock Room before new paint & carpeting.



Club Article Deadline is 10th of each month.
The Mineral Mite will be emailed on 15th

Slag Minerals from Laurion, Greece

David J. Fryauff

The copper, lead, and silver deposits of the Laurion (Lavrion) District of Greece have been mined since ancient times (>2000 BC) but the old mines there continue to produce an amazing variety of secondary mineral species, many of which are unique to that locality. Browsing through the Shannon mineral website the description "New findings from Laurion, Greece" caught my eye, and to get a 5 kg grab bag for just US$ 43.00 seemed worth the risk.

Shannon did not have this item in stock…it had to be shipped from Greece, and when the box finally came, 2 months later, it showed a lot of hard travel. The rocks inside were all just loosely wrapped in paper with handwritten notes of identification & collecting site. It was full of dust and broken pieces. There were 5 or 6 large, heavy rocks in this box and in two months of international travel, these large items had smashed and ground against the smaller, more delicate specimens in a very disappointing way. I was unhappy to see such mundane junk species as gypsum, goethite, galena, & adamite. But the big disappointment was that the biggest, heaviest rocks in the box were not rocks at all….they were SLAG!!!!! Slag is not a rock!!!

I paid all that international postage for SLAG????? I felt ripped off and was all set to shoot off a dissatisfied customer email to Michael Shannon, but I held off a bit to give everything in the box a dusting off and a careful look under my scope. As you might guess, it was all junk at the macro level, but at the micro level, it was amazing, and although I was seriously prejudiced against anything so unnatural as SLAG, my eyes were opened and I saw some rare & beautiful things….Laurionite, Ludlockite, Nealite, Ecdemite, Hydrocerussite,Perite, Ettringite, Phosgenite. Other species I can only guess at.

It turns out that Laurion is quite famous for its unique assembly of slag minerals, and over 100 species, mostly hydrates & carbonates, have been identified from ancient slag that was dumped or washed into the sea. I believe it is mainly (only?) the combination of metal-rich ancient slag & long-term marine exposure that enabled formation of minerals otherwise extremely rare, or undiscovered, in nature. There is quite a slag following among mainly European micro-mineral collectors, who have been looking at archaeological slag sites for years.

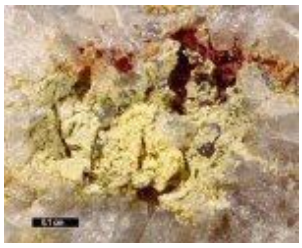
The tons of Laurion slag that had accumulated from ancient times was derived from such a crude process that it still had significant silver & copper content, and this newly profitable waste was commercially processed by more modern refining methods until 1982. Those easily accessed slag heaps have disappeared but since ancient times a good bit was dumped into the sea….and with rising sea levels, which probably amounts to a good bit. But that shoreline slag has become hard to find and it is only the pieces that have been washed out to sea that can still be found by divers. I'm not as crazy about slag minerals as I am about those formed by nature….but they are interesting and can reveal the conditions and processes that form rare mineral species & their crystalline habits in nature.

Laurionite

Ludlockite

Nealite

Perite



Ettringite

Phosgenite

Photos from Mindat.org\

Are Those Crystals Honest to God Minerals?

By Dave MacLean

Old and not so old slag's, ash, clinkers, and other leftovers from mines, smelters and other human activities have been found to contain some unusual minerals and minerals we find in much older "natural materials".

The 2000 slags from smelters the near the 2000 year old lead silver mines at Laurie, Attica, Greece have been found to contain unique, not found elsewhere, minerals in the gas holes. The Greek and Roman slags contain leftover lead and other elements. Exposure to seawater, salt, and oxygen created many lead and copper oxy chloride minerals. In the 1980's, one speaker at the Midatlantic Micromounters Conference reported on the minerals found in these slags at Laurium, Greece.

The European registry of mineral species debated if the minerals found in slags and other human caused leftovers should or should not be listed. The question, are the minerals from or created by exposure to water, oxygen and other materials "legitimate" minerals? I leave the answer to this question to the reader.

Some examples follow: An article in a 1970 issue of Rocks and Minerals reported on the examination of copper oxychloride minerals found in the vugs in slags left from New Haven, CT brass works. The slags, probably 100 years old then, had been left on the shore of Long Island Sound.

A young man gave talks in 1980 and 1982 on the minerals he collected at the exit gas vents from burning underground coal near Scranton, PA. He reported collecting elemental selenium, selenium dioxide and ammonium hexafluorosilicate. He said he saw galena crystals form on a rock as the hot gases passed over it. Apparently the burning coal contained a high concentration of trace elements. He reported that the coal contained tiny lumps of lead selenide. The traces of mercury in the coal would be vaporized and leave with the gases. Native sulfur was abundant.

A young man at the Department of Mineralogy Eotvos University in Budapest Hungary told me that he collected elemental sulfur crystals at the vent exiting hot gases from coal being oxidized in the waste piles from long closed coal mines near Pecs in southern Hungary.

The rocks in waste rock pile from a zinc mine near Nagyszentimre, Hungary were coated with brown hydrated ferric iron oxide and three different habits of gypsum crystals. The last zinc mine in the Bozsony mountains in northern Hungary closed in 1992. Apparently the pyrite in the rocks was oxidized creating ferrous sulfate and sulfuric acid which converted the calcium content to gypsum which leached out and crystallized on the surface. The ferrous sulfate was oxidized to insoluble hydrated ferric oxide (iron rust) by oxygen.

At one of the Midatlantic Micromounters conferences one man showed me micro selenite (gypsum) crystals found in a 100 year old slag pile in New Jersey. A speaker at a recent Midatlantic Micromounters Conference described the micro minerals created by a fire in a highly carbonaceous shale in Pennsylvania.

I collected a section of a narrow coal seam containing pyrite or marcasite near Greencastle, IN and washed it. After sitting in the basement for a few days, it was covered with white hairy stuff. The round vertical wiggly bent hairs were said to be selenite (gypsum), and the white very small crystals looking like white Christmas trees were said to be melanterite, ferrous sulfate tetrahydrate. Waste pile from mines containing sulfides or arsenides often contain microcrystals of sulfates, oxysulfates, and arsenates of calcium, iron and other elements in places where they are not leached away by the rain.

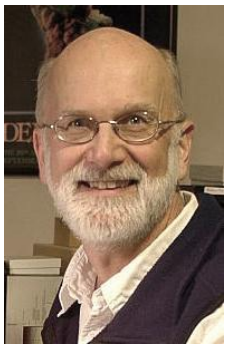
A person at the Smithsonian showed me a part of wooden post from an abandoned copper mine in S. England or Wales in which most of wood was replaced with copper. Most of us are familiar with the leaching of calcium carbonate solubilized by water and carbon dioxide and its subsequent reprecipitation elsewhere. Several papers from science described examination of layers in a 3000 year old stalactite from a cave in S. China. From the ratio of oxygen 18 and 16 isotopes in each layer of the calcite in the stalactite they could surmise which years were relatively wet or dry. The green coating on copper and bronze statues exposed to the outside weather is said to be malachite, a hydrated copper hydroxycarbonate.

These examples seem to include micro minerals from natural oxidation and hydration of minerals, in some cases then leaching out, during a geologically very short times, not millions of years. These processes are what occur in nature. Please consider examples from your own knowledge.

Melanterite
mindat.org

Atlantic Micromounters' Conference Falls Church, VA May 3-4, 2013

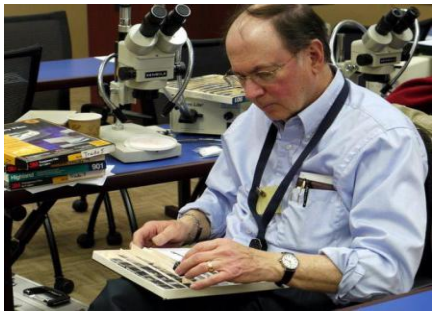
By: Steve Weinberger, Conference Chair



I'm very pleased to announce that Julian Gray will be the featured speaker at our Atlantic Micromounters' Conference on May 3 and 4. Julian is the curator of the Tellus Museum in Cartersville, Georgia. He also helps organize and moderate the annual Mineralogical Symposium at the Tucson Gem & Mineral Show each year and now organizes the Micromount Symposium at the Tellus Museum. Julian is a dynamic speaker and I know that his talks will be both informative and enjoyable.

The information packet will be coming out in February listing hotels in the area, directions, and further details concerning the conference. The Congressional Schools (3229 Sleepy Hollow Rd; Falls Church, VA) is a new location for us, much closer to our meeting place, so I'm hoping that we can increase participation from our members living in the Washington-Northern Virginia area. Since this will be a Friday evening and Saturday conference, your plans for Sunday will not be affected. Hours on Friday will be approximately 7:30 – 10 pm and Saturday from 9 am until 8:30 or 9 pm.

We still need more micro-minerals for our auction. This auction helps to offset the costs of the conference in order to help keep registration fees to a minimum. Please look through your collection, and if you have an extra example of the rare, the beautiful, the photogenic, or the unusual, please send it to me by March 1 so that I can photograph it and put it in the auction. **Send the mineral(s) to me at P.O. Box 302, Glyndon, MD 21071. We give credit for your donation, but if you wish to remain anonymous, your request will be honored.**



Conference 2012

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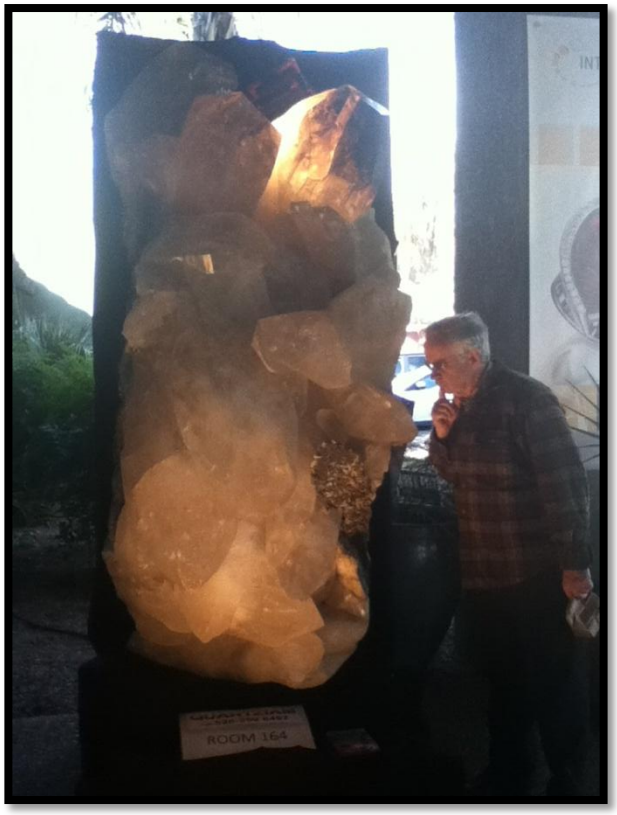
Tucson Gem & Mineral Show 2013

Our club treasurer, Michael Pabst is shown here wondering how many micros he could get out of this 55K (price tag) Quartz.

The Tucson Gem and Mineral Shows attract the world's best minerals, jewelry, lapidary and dealers from across the world to Tucson, Arizona.



American Federation of Mineralogical Societies

(AFMS)
www.amfed.org

Eastern Federation of Mineralogical and Lapidary Societies

(EFMLS)
www.amfed.org/efmls

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

AFMS Endowment Fund News

By R. J. Harris, Chair

The AFMS Endowment Fund Drawing is off to a great start, but we are still in need of your donations. Pam Hecht set the bar very high last year, so I need your help to rival her amazing efforts. We would love your lapidary work, specimens, or any other hobby-related items. Dig through all of your treasures and please donate.
Contact me <roqfreq at rjharris.com>

Here are some of the prizes for 2013:
#1. Two-strand Amethyst necklace with matching earrings by former EFMLS President, Betsy Oberheim. Estimated value: $75. (EFMLS)

#4. Float Copper specimen from the Keweenaw of Michigan's Upper Peninsula, along with a Calumet & Hecla, Inc. stock certificate. Donated by Pam Hecht. Estimated value: $75. (MWF)

Monies used are invested and the interest is used to fund things like the badge programs for juniors and purchase of video programs that are gifts to the federations for loan to member clubs.

The drawing will be held at the annual AFMS Convention in Jacksonville, Florida on September 20 through 22. Tickets are still $5 each, or five for $20. Prizes will be awarded randomly.

Tickets can be purchased by:
Eastern Federation: Carolyn Weinberger
PO Box 302; Glyndon, MD 21071-0302
<editor@amfed.org>

Communication and Involvement Are the Keys to Our Success!

Geology Events:

By Matt Charsky

February

16: 23rd Annual Mineral, Jewelry & Fossil Show sponsored by the So. Maryland Rock & Mineral Club. The Show Place, Marlboro, MD.
23: Field Trip to Dr. Lance Kearns 9 a.m. - 3 p.m. Mineralogy Laboratories and Museum at James Madison University, Harrisonburg, VA
25: Northern Virginia Mineral Club meeting 8pm Long Branch Nature Center, Arlington, VA
Speaker – Michael Pabst, Photomicrography

March:

2 – 3: 50th Annual Earth Science Gem & Mineral Show sponsored by the Delaware Mineralogical Society. Delaware Technical & Community College, Newark, DE.
16-17: GLMSMC Annual Mineral Show Montgomery County Fairgrounds - Rockville, MD Micromineral demonstrations.
23-24: 44th Annual Gem & Mineral Show sponsored by the Che-Hanna Rock & Mineral Club. Athens Township Volunteer Fire Hall, Sayre, PA.

June:

1 - 2: EFMLS Convention & Show hosted by the Island Rockhounds and Suffolk Gem & Mineral Club. Plainview, New York.

EFMLS Meeting; Friday, May 31.

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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.
Call the NMCA President or a Board Member