

MNCA Website dcmicrominerals.org
The Mineral Mite



Vol. 47 – No. 6

Washington D.C. – A Journal for Micromineralogists

June 2014

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

Program: Workshop of Cynthia's Micromounts

The program will consist of boxes of micromount specimens from the Cynthia Payne collection -- about 35 to 45 specimens per box -- to be passed around to the members who can pick out and buy their choices. Proceeds will benefit Cynthia and our club.



President's Message:

By: Dave MacLean

Thanks to the generosity of Cynthia Payne we all enjoyed the chance to look at and buy some of her beautifully mounted micros in May. We will continue looking at more micros on Wednesday 25 June.

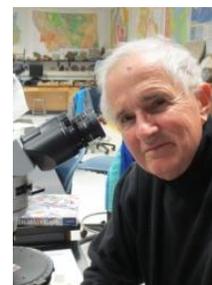
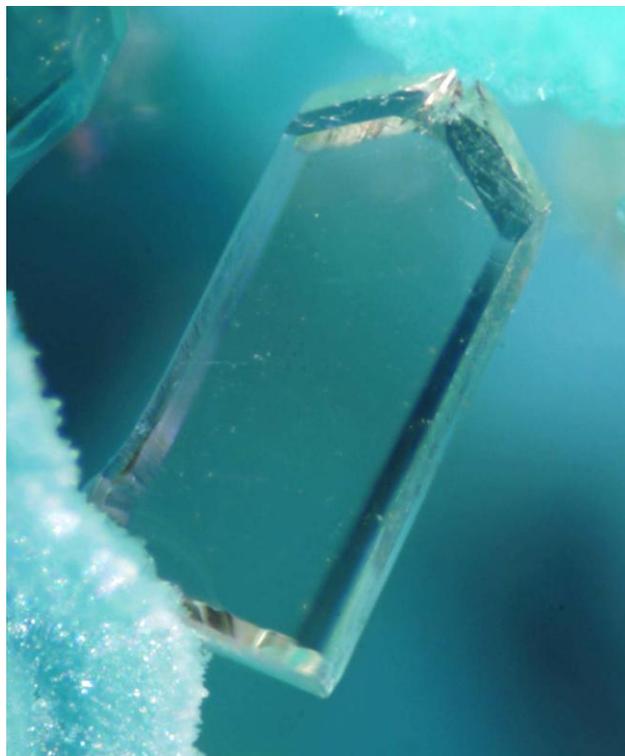


Photo of the Month



Senegalite $(Al_2(PO_4)(OH)_3 \cdot H_2O)$ on Turquoise $(Cu(Al,Fe^{3+})_6(PO_4)_4(OH)_8 \cdot 4H_2O)$, from Mount

Many thanks go to all the persons who helped sort, recover and distribute to MNCA the micros and to others the other rocks and minerals in Cynthia's garage. Their efforts resulted in the micros coming to MNCA and other rocks and minerals going to teachers and scout programs. Cynthia, thank you from all of us for your donating all these micros and other rocks and minerals.

Carol and I just came home from a short stay in Buffalo Creek, CO. During our walk, Carol turned over a rock and the adhering soil had shiny yellow flakes in it. A loupe exam showed that the flakes are probably weathered biotite. Continued on page 2.

**Atlantic Micromounters' Conference
April 10 - 11, 2015**

SpringHill Suites by Marriott Alexandria, VA

Kourou Diakouma (Kouroudiako), Saraya, Falémé River basin, Tambacounda Region, Senegal. Closeup with field of view = 1 mm.

Photomicrographer, Michael Pabst. Go to page 3 for the overview of part of the specimen.

Micromineralogists of the National Capital Area, Inc.

President's Message continued

The Pike's Peak granite batholith (1040 million years ago MYA) contains an unusually large concentration of iron, which is contained in biotite and magnetite grains. Water and carbon dioxide slowly leach ferrous iron out of biotite. Oxygen oxidizes ferrous iron to initially a film of hydrated iron oxide, limonite or goethite, which gives the flake a gold color. Eventually the biotite flakes turn brown on their way to become clay minerals. Nobody has found gold in the Buffalo Creek area. The only gold was from timber sales 1870-1890's and tourism. I wish all of you and your families an enjoyable and restful summer. I look forward to our next meeting September 24, 2014.

Previous Meeting Minutes: 5/28/14

By: George Reimherr, Secretary

President Dave MacLean opened the meeting at 7:56 p.m. Eleven members and three guests were present. The minutes for the previous meeting on 4/23/14 were approved, as printed in the Mineral Mite. The treasurer gave his report.



Old business -- the Atlantic Micromounters Conference for 2015 is set for April 10-11, 2015, at the SpringHill Suites by Marriott in Alexandria, VA (same location as in 2014).

New business -- Micromount specimens from the Cynthia Payne collection will go on sale to the club members. There may be a group of micromounters from Belgium arriving in our area in September, 2014. Although we do not have club meetings at the Nature Center during July and August, we may have get-togethers at a member's residents on each of these two months.

Miscellaneous -- There were several tables of mineral giveaways, including bags of miscellaneous specimens from the Cynthia Payne collection (one bag per member), and specimens donated by Scott Braley from his collecting at the Bennett Quarry, Buckfield, Maine. The business meeting ended at 8:18 p.m.

Previous Program Reviewed 5/28/14

The program consisted of boxes of micromount specimens from the Cynthia Payne collection -- about 35 to 45 specimens per box -- were passed

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
Treasurer: Michael Pabst, Michaeljpabst@yahoo.com
Editor: 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

Dues: MNCA Membership Dues for 2014 \$15 (single) or \$20 (family)

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



**Editor's Notes:
by Kathy Hrechka**



Send your articles and photos to your editor.

Club Article Deadline is 10th of each month.

The Mineral Mite will be emailed on 15th.

No newsletter July/August

AFMS Editor's Award

First Place 2011 - Mini Bulletins



June Articles:

* Michael Pabst

* Sheryl Sims

* Erich Grundal

* D. Hennessey



Previous Program Reviewed continued

around to the members who could pick out and buy their choices at prices ranging from \$2 to \$4 per specimen.

Photo of the Month continued p. 1



Senegalite ($\text{Al}_2(\text{PO}_4)(\text{OH})_3 \cdot \text{H}_2\text{O}$) on Turquoise ($\text{Cu}(\text{Al}, \text{Fe}^{3+})_6(\text{PO}_4)_4(\text{OH})_8 \cdot 4\text{H}_2\text{O}$), from Mount Kourou Diakouma (Kouroudiako), Saraya, Falémé River basin, Tambacounda Region, Senegal. , with the featured crystal in the lower center, with field of view = 10 mm.

The **Senegalite** has a light yellow color that is overwhelmed in the photograph by the intense blue background of Turquoise. This crystal is a beautiful example of the orthorhombic pyramidal class $mm2$, where the crystal has two mirror planes and one two-fold axis of symmetry. (The crystal is symmetrical right-to-left and front-to-back, but not top-to-bottom.) Both the top and the bottom of the crystal are contacting the Turquoise matrix, but enough of the top and the bottom are free to show that the faces are different. Hemimorphite ($\text{Zn}_4\text{Si}_2\text{O}_7(\text{OH})_2 \cdot \text{H}_2\text{O}$) is a more common member of this crystal class.

Usually, with both Senegalite and Hemimorphite, the base of the crystal is fully attached to the matrix, so you cannot see the faces on the base. Therefore, with most of these crystals, the absence of top-to-bottom symmetry is hidden. Luckily here, the top and the bottom are both visible.

Photomicrographer Michael Pabst is pictured with his velvet lined, sewer pipe bellows and camera set up.



**2013 Bulletin Editors Awards Competition BEAC
EFMLS Eastern Federation
Mineralogical & Lapidary Societies**

**Congratulations to the following
MNCA members:**

EDUCATIONAL ARTICLES:

Trophy - Michael Pabst

“Bequerelite and Kasolite” *The Mineral Mite*

Second Place - Michael Pabst

“Fourmarierite” *The Mineral Mite* MNCA

ORIGINAL NON-TECHNICAL ARTICLES

Second Place - Patrick Hayes

“Archuleta Prospect; Cerro Colorado, Bernalillo County, New Mexico” *The Mineral Mite* MNCA

Sixth Place - Michael Pabst

“The A.E. Seaman Mineral Museum”
The Mineral Mite MNCA

Ninth Place - David J. Fryauff

“Slag Minerals from Laurion, Greece”
The Mineral Mite MNCA

Honorable Mention - Cynthia Payne

“Founding and Early Years of the
Micromineralogist of the National Capital Area”
The Mineral Mite MNCA

SMALL BULLETINS:

Fourth Place - Kathy Hrechka *The Mineral Mite*

**American Federation Invitation to
Tulsa, Oklahoma on July 9-13**

**Michael Pabst: Adult articles/Features Top 5
Kathy Hrechka: Bulletin Top 10**

Congratulations! The following entries have been scored in the top 5 in the 2014 AFMS Bulletin contest. Trophies and certificates will be awarded at the Breakfast with the Editors & Webmasters - Sunday July 13, 2014 - during the AFMS Show in Tulsa, OK. I hope you can attend ---Linda Jaegar, AFMS Bulletin Editor Advisory committee chair.

Walpurgite By Michael Pabst

Walpurgite is a bismuth uranyl arsenate, named for the mine where it was discovered in 1871: the Walpurgis Flacher vein, Weißer Hirsch Mine, Neustädtel, Schneeberg District, Erzgebirge, Saxony, Germany. This vein of the Weißer Hirsch Mine was named for *Walpurgisnacht*, a Germanic festival similar to Halloween. *Walpurgisnacht* is the evening of April 30 when the witches gather on the *Brocken*, the highest peak of the Harz Mountains. (I have not been invited, so I don't know what the witches do on the mountain top.) The following day May 1 is the feast of St. Walpurga, an English missionary to Germany, who was canonized on May 1 ca 870 by Pope Adrian II. Because of her chronicles, she is regarded as the first female author of both England and Germany. I assume that *Walpurgisnacht* was chosen in honor of pagan May Day, rather than as a commentary that a literate woman must be a witch.

The specimen that I have from the Walpurgis vein is tiny (only 6 mm across), but full of interesting features, including three uranyl arsenate minerals: Walpurgite, Zeunerite, and either Trögerite or Nováčekite-I. The Walpurgis Flacher vein is the type locality for all five of the minerals listed below.

*Walpurgite bismuthyl uranyl arsenate
 $(\text{BiO})_4(\text{UO}_2)(\text{AsO}_4)_2 \cdot 3\text{H}_2\text{O}$

*Triclinic Zeunerite copper uranyl arsenate
 $\text{Cu}(\text{UO}_2)_2(\text{AsO}_4)_2 \cdot 12\text{H}_2\text{O}$

*Tetragonal Trögerite uranyl arsenate
 $(\text{UO}_2)_3(\text{AsO}_4)_2 \cdot 12\text{H}_2\text{O}$

*Tetragonal Nováčekite-I magnesium uranyl arsenate
 $\text{Mg}(\text{UO}_2)_2(\text{AsO}_4)_2 \cdot 12\text{H}_2\text{O}$

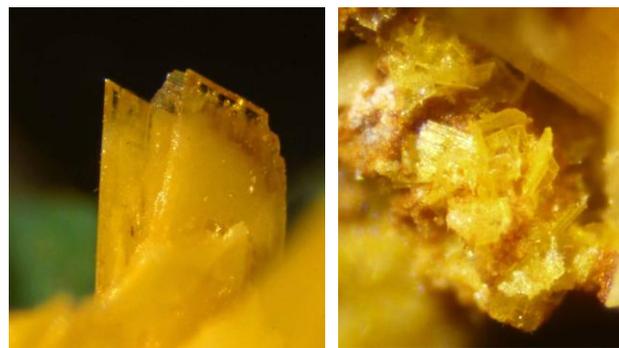
*Triclinic (pseudotetragonal) Asselbornite lead bismuthyl uranyl arsenate
 $\text{Pb}(\text{BiO})_3(\text{UO}_2)_4(\text{AsO}_4)_2(\text{OH})_7 \cdot 4\text{H}_2\text{O}$ Isometric

The minerals in my specimen are likely to be partly dehydrated, and should be considered as “meta”, as in Metazeunerite. However, for simplicity, I have omitted the awkward “meta” preface. Similarly, Nováčekite-I is the original mineral found at the mine; in storage, it dehydrates to Nováčekite-II and to Metanováčekite. None of these five minerals is fluorescent, and the featured specimen also shows no fluorescence.

In a previous article about Autunite and Torbernite, I showed a picture of Zeunerite from Majuba Hill, Pershing County, Nevada. I have not written about the other minerals before. I added Asselbornite to the list, because of its chemical similarity to Walpurgite and the others, but I have not found any Asselbornite on the specimen. Stephan Wolfsried has excellent photos of Asselbornite and the other minerals on Mindat (www.mindat.org).



Walpurgite, Zeunerite, Trögerite (?) or Nováčekite-I (?), from the Walpurgis Flacher vein, Weißer Hirsch Mine, Neustädtel, Schneeberg District, Erzgebirge, Saxony, Germany. Field of view = 6 mm. I used Combine ZP software to stack 22 images taken with a bellows and a 40 mm Luminar lens. The stacking worked well, with a nice result that disguises the tiny size of this rock.



Upper Left: close up view of **Walpurgite**
Upper Right: close up of **Trögerite or Nováčekite-I**

Article continued on page 5



Above: closeup of **Zeunerite**. The identification of Trögerite is tentative, due to the tiny size of the crystals; Nováčekite-I is another possibility, because it looks pseudotetragonal, even though it is really triclinic. Either way, this specimen contains three type locality uranyl arsenates on one tiny rock!

Close up images of the featured specimen (1 mm field of view for each close up), taken by adding a 15 inch tube, lined with black velvet, to the bellows and Luminar lens, for a total length of extension of about 24 inches.

The Weißer Hirsch Mine is now a tourist site, which seems an enlightened policy for a former uranium and cobalt mine of great historical and mineralogical importance.

Microscope for Child with Autism

By Jim Kostka

MNCA - If anyone has an extra scope laying around - Vaughan's new need is a scope. This can even be a 'beater'. Email Jim.



jkostka@juno.com

Cynthia, thank you for passing along the catalog – it was fun to take this trip down micromounting memory lane.
Dave Hennessey

Turning on the Micromounting Time Machine

By Dave Hennessey



I was visiting Cynthia's last month when she was going through her file cabinet to find old newsletters, copies of the bylaws, etc. to pass along. One of the things she uncovered and passed along to me was a 41-year old (1973) micromount catalog from David New of Providence, Utah. The catalog promised that mail orders would be promptly filled on a three-day examination basis subject to approval or return, with a guarantee of complete satisfaction or full and immediate refund.

Specimens were up to ½"x½" in size, priced from 50 cents to \$7.50, and were sent postpaid (first class postage in 1973 for one ounce was eight cents). There were 195 species listed in the catalog and the most expensive \$7.50 specimens were few – Hutchinsonite, a lead thallium silver iron arsenic sulphosalt from Libertad, Quiruvilca, Peru; Paravauxite, a hydrated basic phosphate of iron and aluminum from Llallagua, Bolivia; and Platinum, a "choice silvery metallic crystalline nugget with minor black chromite" from Goodnews Bay, Alaska.

Nothing from our area, in fact only two offerings from east of the Mississippi – Herderite from the Fletcher Mine, North Groton, New Hampshire and Phenacite, from Stoneham, Oxford County, Maine. There were a few things that I think some of us might jump in the time machine to pick up. For Jim and Logan, some things that click – Andersonite, Autunite, Curite, Sklowdowskite and Cuprosklowdoskite, Kasolite, Parsonite, Soddyite and Torbernite. For Kathy - Diamonds from the Congo, Sierra Leone, South Africa (the Premier Mine, Kimberley!), and an unusual locality, the General Electric Laboratory. The diamonds available from GE were "very small olive-green dodecahedral single crystals", at the outrageous price of five for 75 cents. For me, I think I'd like to pick out a few of the native gold, crystals and wires, from Breckenridge, Colorado - just \$3.50 each. Now where did I put that time machine?

One Man's Stash is Another Man's Treasure

By Sheryl E. Sims

Who knew what a great time was to be had when I decided to attend the Micromounters meeting on May 28th? I just happened to look down at my calendar, while at work, and thought, "Hmmm, I think that there's a mineral club meeting tonight!" I checked my email inbox for a copy of *The Mineral Mite* and I was right!

Calling upon my daughter Amber, and her boyfriend, Jorge, to join me, we coordinated our arrivals at my apartment and made it to the meeting on time. Once there, Jorge and I setup my microscope. I had also brought a bunch of unknown minerals with me. It is truly wonderful having so many experts around to help identify minerals. It never ceases to amaze me when someone looks at a mineral and proceeds to tell me from what mine, quarry, and location a particular mineral came.

In lieu of a program, we were afforded the opportunity to look at some beautiful micros. Some were for sale (at very affordable prices) and others were free. I must give a huge thank you to Cynthia Payne, Michael and Karen Pabst, Jim Kostka, and Scott Braley for that! The number of minerals that circulated the room was incredible. It just seems that one never tires of examining each tiny micro to discover its colors, characteristics and form.

When I opened my mystery bag of minerals from the Pabsts the next morning, to my delight, I found all sorts of interesting specimens. Some were familiar to me and some weren't. However, I discovered that I struck gold! Inside of my bag was a pouch from Coogan Gold Company, Turlock, CA. Inside of the pouch was a gold micro! A letter and map were also included stating that the sample was gold and tsumaitite on quartz (Au-Bi-Te). The Tsumaitite is from a Björkdal gold deposit in Västerbotten County, northern Sweden. The deposit is located in the Skellefte ore district. The article went on to say that gold could be spotted there with the naked eye and that it often occurred in "thin flakes and



rounded crystals, in tourmaline, quartz, or pyrrhotite."¹

Wanting to share my mineral fever, I left a bag of mineral goodies on the doorstep of my 6-year old BFF, Brice Trinidad. His mother sent me the enclosed picture. He, too, was delighted. There's nothing he likes better than to add to his mineral collection. He's even had experience growing crystals and has even attended a mineral club holiday party! I just know that geology/mineralogy is in his future! This is just further proof that thinning out of one rock hound's stash adds to the treasure of another!



¹ GFF Research Note. Geologiska Foreningens: Stockholm Forhandlingar, Vol. 112, (1990, p. 59-60). By Per Nysten.

Fall Fun at Wildacres, North Carolina

By Steve Weinberger, Wildacres Committee Chair
(adapted from *The Mineral Newsletter*, June 2014 & EFMLS News, April 2014) **September 1-7, 2014**

WILDACRES IN THE FALL ...

cool breezes after a long, hot summer. Days spent enjoying our hobby without interruptions. Being served delicious meals without having to cook them. Learning new skills from wonderful instructors. Gaining new knowledge from our interesting speaker. And all at a very reasonable cost of \$390 per person for the week (class supplies are extra). What more could anyone ask for?

For over 40 years now, the EFMLS has enjoyed the Wildacres facility, using it to conduct its educational retreats. People have come back year after year to participate in this excellent opportunity to immerse themselves in our all-encompassing program. Registrants gain new knowledge and skills, and many develop lifelong friendships with other participants.

Our speakers over the years have run the gamut, from mineralogists, to geologists, to jewelry experts, to world travelers. This fall, we are pleased to have Justin Zzyzx, a well-known mineral collector and editor, as our Speaker-in-Residence. Justin, who will be accompanied by his wife Brandy, will present six talks during the week and participate in all our activities.

If you've not yet registered, why not do so now? The earlier you do, the better your chance of getting your preferred classes. The dates are September 1-7. You can take classes in Cabochons (Intermediate), Geology II, Glass Engraving and Etching, Faceting, Lost Wax Casting, Silversmithing II, Soapstone Carving, and Wire-Wrapped Jewelry (Intermediate). For more information, go to the Wildacres Website: <http://efmls-wildacres.org/page5/index.html>.

We still have openings available, but do what a very wise person once told me: "Handle a piece of paper once, then it's not forgotten." Simple advice, but how many of us put things off until too late? Hoping to see you on the mountain in September. You'll be delighted you decided to come!



Fieldtrip: Churchville Quarry 6/28/14 Bluegrass Materials Churchville Quarry, Churchville, MD 8:00 am

Announcement of Northern Virginia Mineral Club

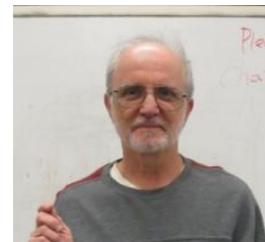
Mineral types: Zeolites (Stilbite, Heulandite, Laumontite, Scolecite) Pyrite, Quartz, Epidote.

Because this is space limited, please reply by June 20 5PM. Call me, Jonathan G. Harris at 301-545-0808. Please note any special issues that may affect your plans on attending (e.g. potential to be called away for business trip, desire to avoid rain, etc.). I will let people know by June 20, if they can attend; previous experience suggests it is unlikely we will be oversubscribed. People who request to attend after June 20 will be accommodated on a first-come-first-served basis.

Crystal Face Measurement Phone App Goniometer Pro App (G-pro) for iOS and Android Phones

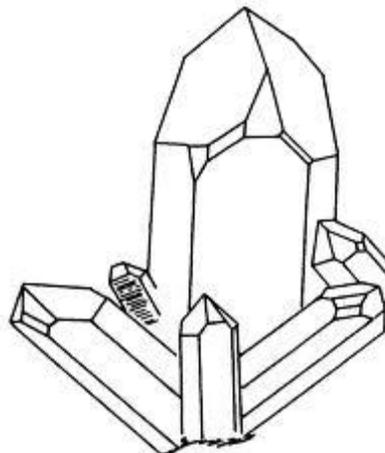
By Erich Grundel

I came across this app demo. It is intended for physical therapy but I see no reason why it cannot be used on crystals, but not micros (at least not yet).



<https://www.youtube.com/watch?v=kMGle-jwHg8>

Touch the phone to the faces you want to measure.



Micromineralogists of the National Capital Area, Inc.



American Federation of Mineralogical Societies

(AFMS)
www.amfed.org



Eastern Federation of Mineralogical and Lapidary Societies

(EFMLS)
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American Federation Rocky Mountain Federation / Show 2014
July 9 – 13 Tulsa, Oklahoma

Tulsa Rock & Mineral Society Presents
"ROCK AND GEMS OF THE INDIAN TERRIORITY" Tulsa Expo Square – 21st & Yale
Special Speakers include:
Mike Everhart – Author of Oceans of Kansas
Marv Damon – Tri State Minerals
Steve Arnold – Meteorite Man
Bob Jones – Chief Editor of Rock and Gem
Stan Krukowski – Oklahoma Geological Survey

Finis Riggs 918-587-4400--Lriggs1331@cox.net
Ben Thomas 918-486-3788--BThomas630@cox.net

Tulsa Rock and Mineral Society Website:
towntownrockhound.org

Rocky Mountain Federation Website: rmfms.org

Dallas Mineral Collecting Symposium

With a focus on Mexican minerals and gold, and some fun extras added in, the 2014 Dallas Mineral Collecting Symposium features eight exciting new speakers.

*The Great Oxidation Event – Diversity of Colorful Mineral Species - **Dr. Robert Hazen**

*Adventures in Mexico's Great Specimen Mines

Dr. Peter Megaw

*The Milpillas Mine, Sonora, Mexico – A Modern Bonanza - **Evan Jones**

*Thumbnail Specimens: Little Treasures – Collecting and Competing - **Dr. James Houran**

*Red Cloud – The World's Greatest Wulfenite Locality - **Les Presmyk**

*Origin of Precious Metal Deposits – Mines That Produce World-Class Collectible Specimens

Dr. David Mustart

*Gold Rush – California's Crystallized Gold Specimens - **Dr. Robert Cook**

*Gold Fever – Monster Gold - **Tony Fraser**

Communication and Involvement
Are the Keys to Our Success!

Geology Events:

June:

23: NVMC Meeting: "Club Member Rocks & Minerals Show & Tell", Long Branch Nature Center, Arlington 7:45 - 10 pm.

25: MNCA Meeting: Workshop of Cynthia's Micromounts, Bring your microscope. Long Branch Nature Center, Arlington 7:45 - 10 pm.

July

11–13: 2014 AFMS/RMFMS Convention and Show; Central Park Hall, Tulsa Expo Square, 21st and Yale, Tulsa, OK; Finis Riggs, 918-587-4400, Email - Lriggs1331@cox.net

August:

8–10: East Coast Gem, Mineral, and Fossil Show Better Living Center, Eastern States Exposition, 1305 Memorial Avenue, West Springfield, MA

EFMLS WORKSHOPS AT WILDACRES

Geology Retreat atop the Blue Ridge Mountains in North Carolina. Tuition is \$390.

* Fall classes **September 1 – 7, 2014**

EFMLS website www.amfed.org/efmls

August 22-23, 2014

Dallas Mineral Collecting Symposium

