



THE NORTHERN VIRGINIA MINERAL CLUB INC



Crystals are the flowers of the Mineral Kingdom



THE MINERAL NEWSLETTER

Meeting: June 25 Time: 7:30-10 p.m.

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

Mystery Speaker

The Seven Metals

Until the 1600's European, Chinese, Indian, SE Asia, Mexican, western S. American societies recognized not more than "seven metals"; gold, silver, copper, tin, iron, lead and mercury. These societies used other natural or modified minerals including limestone, "jewelry minerals", clay minerals for ceramics, salt, iron oxides, mineral acids, alum, calamine, arsenic oxide, charcoal.

The presentation will include an explanation of the reasons these metals were important and the technologies for finding, mining, and processing them.

President's Message

Summer is almost here. Whether it means collecting or, like me, spending time organizing what I've collected, enjoy learning more about our hobby. If you are traveling, keep your eyes open for collecting opportunities, and for rock shops. Look online for mineral clubs, collecting localities, and dealers. Many collectors are happy to trade specimens or tell you about places to collect. Resources include the website of the American Federation of Mineralogical Societies (<http://www.amfed.org/>) and Bob's Rock Shop (<http://www.rockhounds.com/rockshop/table.shtml>).



Volume 53 No. 6

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Also find information on our Club website:

<http://www.novamineralclub.org/>

Private Fossil Collecting Trip Near Solomon's Island, Maryland- Western Shore of the Chesapeake Bay Tuesday, June 19, 2012 10am til 12 noon

Contact: *Patricia Rehill,
Direct Line 703-992-8345
Cell phone 703-915-1883

If you are cataloging your collection, remember that the information you have about a specimen adds to its value. I've been frustrated by the changing names of some localities (countries, towns, mines). It's still better to have older location information than none at all.

And if collecting or cataloging aren't what you fancy, seek opportunities to create (lapidary), study (libraries or from other club members, or on the web), or share (volunteer!). A wonderful aspect of our hobby is that there's something in it for everyone. Wishing you a safe and fun summer, Sue Marcus

NVMC Meeting – May 21, 2012

Interim Secy.: Sheryl Sims

Presentation Topic: Fossil Insects of the Crato Formation by Yinan Wang

Meeting convened at 8:05 pm. NVMC Presidente, Sue Marcus, introduced guests, Paul and Sheryl Monroe-Medonich. Returning guest, Tim Ford was also present.

Sue Marcus reminded members to pay the dues. See Rick Rieber and if possible, please pay by check. In not, turn in a membership applications with your dues payment so that he will have a record of who paid and how much.

Old Business: April minutes were approved and seconded by Jim Kostka and Barry Remer.

- Sue Marcus made a request for volunteers to support the newsletter by submitting articles and to consider what officer positions they might fill next year (January).
- Fossil Collecting field trip along the bay is scheduled for June 19. Please contact Pat Rehill.
- Ted Carver will host a mineral club picnic this summer and perhaps combine it with a mineral swap.

Geology in the News:

- Woman found combustible rocks which exploded in her pants pockets.
- Woman found meteorites in a parking lot and was trying to sell them for thousands of dollars.
- An earthquake was reported in Italy.
- Sand mining in India for construction purposes. Mining is causing a big problem because it creating large sink holes and affecting the flow of rivers.
- Recreational Govt. Org. publication – Fossil hunting on Chesapeake Bay, pg. 42.

New Business:

- Jim Kostka suggested that members share the joy of collecting buy giving away some of their extra mineral samples to kids/students/schools, etc. See Jim if help is needed in this area.
- Jim Kostka acknowledged Sheryl Sims for soliciting/arranging for the donation of 12 mineral boxes to a DC school.
- Tom Taffee requested small rocks and minerals for the NVMC show “Kids Mine”. He said to look for nice shapes, colors, forms, etc. and to select rocks 1-3 inches in size.
- Dave McLean invited members to attend the Micromounters meeting on Wednesday 23 for a presentation on Cyanites. He also said that a new location is needed for the annual conference and it needs to be an affordable space. Please contact him if you have any suggestions.
- NVMC will hold its last meeting before the summer break on June 25. Barry Remer reported that no program has been scheduled as yet.

Door Prizes were won by: Alec Brenner; Rick Rieber, and Dave McLean.

Thanks to Jim Kostka for donating give-aways from National Limestone and Sue Marcus for refreshments.

Barry Remer announced that the Nature Center had a reptile book, authored by one of the center’s employees, for sale for \$25.

Meeting adjourned at 9:00pm.

NVMC Field Trip Announcements!

John T. Carver

Fossil hunting in nearby West Virginia. June 30th:

What: This trip is owed to the courtesy of me. That's right, me.

When: Saturday, June 30th, 2012 at 08:00 (AM)

Where: 7375 Atlas Walk Way, Bldg. G, Gainesville, VA 20155-2992
571-248-8830 – Google it.

Who: Members of Mineral Clubs in the Eastern Federation – that's us, Southern Maryland, DC, Shenandoah and Montgomery County clubs in this case. Guests allowed, membership not required.

How: C'mon, by car. How many such jokes can I do before it gets annoying?

Why: Fossils, jeez. Here's a list:
Old plant and animal bits

Safety as per usual – see Safety, below.

National Limestone Quarries, Middleburg, PA. July 14th :

Important Note: The current owners of the mine, the Stahl brothers, are currently in negotiations to sell out and the likely new owners are not going to allow collecting. This may well be our last trip there.

What: This trip is owed to the courtesy of me, too. Yup.

When: Saturday, July 14th, 2012 at 09:30 (AM)

Where:
From US 15 south of Harrisburg, PA to National Limestone (you can figure out how to get to Harrisburg):

1. Take the PA-581 E/Harrisburg exit toward I-83/Hershey 0.2 mi
2. Merge onto PA-581 E 2.0 mi
3. Continue onto I-83 N 1.2 mi
4. Take exit 43 toward Capitol/2nd St 0.6 mi
5. Keep right at the fork, follow signs for I-83/I-81 154 ft
6. Turn right at Paxton St 0.3 mi
7. Turn left at S Cameron St 2.6 mi
8. Continue onto US-22 W 32.3 mi
9. Take the PA-333 exit toward Thompsontown/E Salem 0.3 mi
10. Turn right at PA-333 E 3.0 mi
11. Continue onto PA-235 N 0.7 mi
12. Turn left to stay on PA-235 N 2.8 mi
13. Turn right at PA-235 N/PA-35 N 0.2 mi
14. Take the 1st left onto PA-235 N 9.1 mi
15. Turn right at Beaver Ave/US-522 N
16. Continue to follow US-522 N 6.3 mi
17. Turn left at Royers Bridge Rd 0.9 mi
18. Continue onto Chestnut Hill Rd 0.7 mi
19. Turn right at Quarry Rd 46 ft

Who: Members of Mineral Clubs in the Eastern Federation – that's us, DC clubs, Shenandoah and Montgomery County clubs in this case. Got to be a member to get into privately owned quarries.

How: Car, boat, llama, whatever. Remember, it's about 3 hours or so drive time one way.

Why: Here's a list:
Budlite, Cacozenite, Calcite, Celestine, Fluorite, Nightlite, Strontianite, Suburbanite, Wavellite

The quarry is perhaps best known for its Strontianite and Wavellite. Very nice when found. There are also fossils and bits of caves in the limestone rubble and usually great quantities of Calcite. Not to mention a smallish dose of fundamental Christianity. Actually.

THE MINERAL NEWSLETTER

Safety as per usual – see, well, below.

Safety:

- Steel-toed Boots - a requirement. In a quarry, everyone can hear you scream.
- Safety Helmet - also a requirement. A skull sometimes needs to be fashionably armor clad.
- Safety Goggles - also a requirement, too. See: screaming, above.
- Heavy Work Gloves - also a requirement, too, as well. Protect all your dainty appendages.

Other Handy Objects - non-must-ish, but a good idea. Rock Chisels, Small Sledge Hammers, Large Sledge Hammers, Huge Unwieldy Sledge Monsters, Geologists Picks, Count Chocula Cereal, Heavy Plastic Containers (for large specimens), Egg Cartons (for small specimens), First Aid Kits, Snacks, Water, Plastic Sheeting (to protect the interior of your car) and formal evening wear, tuxes for the gents and flashy designer gowns for the ladies. Let's be the best dressed mud covered folks out there.

LASTLY: Due to the vagaries of weather, academia and my own erratic behavior, the event may be canceled on the very whisp of a whim. If there is any question as to whether the trip will come off or if you simply want to go on the trip contact me at jtcarve@msn.com (preferably), 571.344.4958 (c) or 703.754.2050(h).

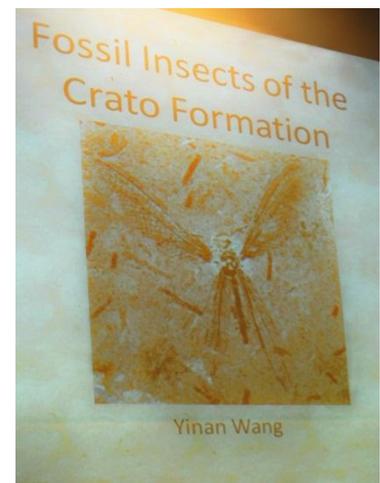
Any mistakes I may have made in this announcement I will try to amend, appease or otherwise fix. Failing that, if in doubt, contact me or risk ending up in the wrong state. Your call.

Later, dudes, dudettes and assorted Deuteronomys.

Oh, yes, I am recycling some jokes. It's not your imagination.



Last month's meeting



Wonders of Sand

By Sheryl Sims

Our soils consist of organic matter, gravel, sand, silt, and clay. Size ranges are gravel 2-64 mm (.08-2.6"), sand .0625-2 mm (.0025-.08") silt .004-.0625 mm (.00016- .0025") and clay similar to silt. These various forms of micro and submicro rocks are what are left after rocks have been subjected to freeze-thaw, tumbling in streams and beaches, being blown around by wind, leaching by water and carbonic and other acids, and air oxidation.

Most gravel, sand, and silt are remains of minerals whose hardness and chemical inertness greatly slowed their destruction. Clays are the end product of mechanical size reduction and chemical conversion to a variety of often hydrated clay minerals.

Most sands including those in the DC Metro area are 95-99% quartz often stained with small amounts of hydrated iron oxide (goethite or limonite). Sands often contain low concentrations of other minerals; ilmenite, rutile, garnet, epidote, staurolite, monazite, gold, magnetite, hematite, zircon, and others. In some places such as northeast Florida, SE Georgia, and Travancore, Kerala State, India the concentrations of these and other minerals may be high enough make separating them from the sand profitable.

Some sands including those in south Florida and the Cayman Islands consist of almost all aragonite from broken up seashells.

The denser minerals in sand are often concentrated in places by stream or wave action. Locally the small waves on the Potomac estuary on Pohick Bay have partially concentrated the denser minerals into areas where the sand appears gray (hematite and ilmenite?). On the south shore of Ocracoke Island on the Outer Banks there are red-purple sand layers (ilmenite, rutile, garnet, etc.) where the waves have washed away the less dense quartz. Other examples include Union Bay near Silver City, MI, Illinois Beach State Park and Tower Road Beach in Winnetka, IL where there are layers of black sand.

In Pohick Creek, West Springfield the very small dense fraction contains mostly fragments of magnetite octahedra and few goethite pseudomorphs after pyrite from the Wissahickon Schist. In contrast sands in Scotts Run, McLean, VA contains high concentrations of magnetite.

Jack Nelson, deceased 2003, panned sands on Rock Run in Potomac, MD and other locations to obtain flour gold, a few larger gold pieces, cubical garnets, and hematite. He found cubical garnets in the stream next to the Long Branch Nature Center

Most sand grains except for zircon are rounded by tumbling in streams or on beaches. Sands from NE Illinois, Western Upper Michigan, Pohick Bay, VA, Buffalo Creek, CO contain a few small well formed zircon crystals easily seen at 50 x. Zircon is a trace constituent in igneous and metamorphic rocks. It is so hard and chemically inert it can survive weathering for billions of years. Decay of uranium or thorium in zircon leaves visible damage.

Sand grains (regolith) found near the original source rock are often angular. Sands from the Pikes Peak granite (1.04 billion years old) near Buffalo Creek, CO contains high concentrations of magnetite and lanthanides (rare earths). These granites contain unusually high concentrations of iron for granite.

This author had access to the equipment at USGS Reston to separate the minerals in sands from dense concentrates Union Bay, MI, Winnetka, IL, Crab Lake near Presque Isle, WI, Pohick Bay, VA, and Buffalo Creek, CO

. The sands were sieved to obtain the “fines” containing the dense minerals, panned to remove the quartz etc. magnetite removed with powerful hand magnets, and the remaining minerals separated with an electromagnetic separator. Many minerals including those containing ferric iron are paramagnetic, weakly attracted to a magnet to variable extent. By adjusting the current in the electromagnet one can separate mineral grains from each other. Other minerals such as quartz, most feldspars, and zircon are diamagnetic, very weakly repelled by a magnet.

Application of these techniques to the dense mineral concentrate from sand from the Buffalo Creek area revealed a large magnetite fraction, brown crystal fragments with a composition consistent with sphene, calcium titanium silicate, an almost colorless clear mineral as bent crystals thought to be sillimanite or andalusite, and zircon.

The sand from a 1 cm deep layer on the bottom of Crab Lake, near Presque Isle, WI yielded black magnetite crystals which stuck together end to end like tiny bar magnets and red stained rounded quartz grains. Crab Lake is in a glacial (12-14,000 years ago) end moraine consisting of a clastic red clay (said to have been scraped up from Lake Superior) with both rounded and mostly sharp rocks of all sizes with little evidence of sorting by flowing water. The land and lake bottom are clastic red clay containing rocks and a little sand with a thin layer of sand on top.

Earth Yields Last Lunar Mineral

By: Eric Grundel

The last mineral previously known only from lunar samples has now been found as a natural constituent of rocks from Western Australia. When the Apollo 11 astronauts (Neil Armstrong and Edwin “Buzz” Aldrin) returned from their landing spot on the Sea of Tranquility they brought with them more than forty pounds of rocks.

Among the new minerals that the moon yielded was tranquillityite ($(\text{Fe}^{+2}, \text{Ca})_8(\text{Zr}, \text{Y})_2\text{Ti}_3(\text{SiO}_4)_3\text{O}_4$). It has been found also in meteorites of lunar origin. Now, six dolerite sills intruding the Eel Creek Formation, north-eastern Pilbara Craton have yielded microscopic, red laths of the mineral. According to the authors the mineral “...habit and chemistry are consistent with tranquillityite in lunar basalts...” Other minerals associated with it are baddelyite, zirconolite, quartz, K-feldspar and pyroxenes. The tranquillityite from Australia shows much alteration to secondary minerals. Using U-Pb geochronology and age of $1064 \pm 14 \text{ Ma}$ has been established for the sills.

Since it is illegal for individuals to own moon rocks, getting tranquillite specimens must have been a problem for collectors. According to the authors, the tranquillityite by the volume is a very minor constituent of the dolerites but is widespread within them. It therefore is safe to conclude that it will soon be available for adding to your micromineral collection.

Reference: <http://geology.gsapubs.org/content/40/1/83.abstract>

PARTICIPATION IN A MINERAL CLUB IS NOT A SPECTATOR SPORT

By Sheryl E. Sims

Membership in a mineral club is like being a member of any sporting organization. The similarities abound! A good team is made up of a number of people interested in a common objective. The same holds true for our mineral clubs. As with any team, participants may come from different backgrounds, but they contribute in many different ways to the success of that team. Each club member should support their club, even if it's only in a small way. It's important to remember that support leads to participation. Participation leads to increased membership and club activities.

Teams have managers. Mineral clubs call them officers/directors. They take the lead in planning and insuring that the club operations are successfully carried out. If you will notice, in sports, while managers are actively involved in the game, the success of the game does not rest solely on their shoulders. Everyone has a part to play and it's the team, who in fact, contributes to its success.

Every team has its "starters". The starters in our clubs are that core group of members who regularly show up to meetings. How we count on them! There's nothing worse than arranging for a speaker only to be met with poor attendance. Starters volunteer to help club officers find speakers, organize fieldtrips, and even bring refreshments. If there is a will, there is a way, with starters! Their "can do" spirit is to be commended and they frequently agree to serve as officers. They are ready to serve on nominating committees when you need them as well. Starters are those committed members who refuse to watch their club fade away due to lack of interest. Their warm smiles and friendly personalities create the inviting atmosphere that we all enjoy.

Maybe you feel that you can't do the types of things that starters do. If you don't have time to fully take on such a role, why not agree to assist them with a particular task? It's a great way to learn and to connect with other members. This is especially true for new members. Jump right in and let someone know that you'd like to help!

Pinch-hitters are valuable. We all know the pinch-hitters in our clubs. These individuals are great in emergencies, aren't they? They step in and give presentations when speakers can't be found. They give "so-and-so" a ride to the meeting when their car breaks down, and are pros at multi-tasking. You'll find them setting up at mineral shows and breaking displays down when others are long gone. Pinch-hitters, are quick to volunteer to take the club's minutes when the secretary is out. They put their heads together and get the audio visual equipment working when gremlins strike. Pinch-hitters arrive to meetings early with an extra bottle of soda or plate of cookies "just in case". Pinch-hitters must have been scouts at one time or another, because they are always prepared. They are also quick to share club information with visitors when club officers are otherwise engaged.

When it comes to veteran members, just like in sports, no one can do without them. If your club has such seasoned members, then your club is indeed fortunate. Their knowledge and experience allows them to share their expertise regarding that which we might not otherwise have access. They seem to always have a bit of time for you. Veterans patiently explain things we don't understand about minerals, love to share their knowledge, and are able to answer historical questions. Veterans are great with young or new rock hounds, too! They are never too tired to answer just one more question or identify one more mineral.

Do you think that you can't do anything for your club? Do you like to write or have suggestions to share? Can you provide presentation ideas or refreshments? How about providing minerals for discussion, study, or door prizes? Are you willing to serve as, or help a club officer! Perhaps you have organizational skills and are willing to organize your club's historical documents. Maybe you can take club pictures or create a club scrapbook! As you can see, there are countless ways to be a team player and a good club member. Don't just sit back and watch! Volunteer and help your club hit a home run!

Club support leads

to participation.

Participation leads

to increased



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

AFMS/MWF Combined Show
A Celebration of Agates
Minnetonka, Minnesota
July 26 - 29, 2012

By Sandy Fuller, Convention Chair

Agates, agates, agates! Almost every area has some type of local agate; a distinctly banded chalcedony quartz.



This July, agate enthusiasts and novices are gathering at A Celebration of Agates, an international symposium and show in Minnetonka MN. The event is being held in conjunction with the American Federation of Mineralogical Societies annual convention

Support our AFMS Endowment Fund

There are four big lapidary equipment prizes. Review items: www.amfed.org/endow2012.htm.

\$5 per ticket, or \$20 for 5, payable to AFMS Endowment Fund along with your name, address, telephone number & a SASE before July 15. Mail to Carolyn Weinberger at PO Box 302; Glyndon, MD 21071-0302.

The drawing will be held during the AFMS Convention in Minnesota at the end of July. You need not be present to win.

All monies raised from ticket sales is invested. The interest generated from these investments is used to purchase things such as programs for the EFMLS library (many clubs borrow these at no charge & use them for programs).



Eastern Federation of
Mineralogical and
Lapidary Societies
(EFMLS)
www.amfed.org/efmls

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

Geology Events:

By Matt Charsky

August:

Saturday 25: 9am to 3pm

2012 EFMLS Region IV Picnic and Rock Swap

at Gilbert Run Park, 13140 Charles Street, Charlotte Hall, MD 20622. This park is 40 miles southeast of Washington (only 35 miles from the Woodrow Wilson Bridge). Hosted by the Southern Maryland Rock and Mineral Club and Carl Miller, EFMLS Region IV Vice President.

Details: Contact Dave Lines (240) 427-7062
dave.lines@earthlink.net

September:

3 – 9: Wildacres Retreat in North Carolina
Speaker – Julian Gray

Complete descriptions of all classes can be found on the EFMLS website <www.amfed.org/efmls>.

Just click on the Wildacres tab. Tuition for the entire week is a mere \$350!



**EFMLS Annual Convention Theme:
Crystals—“Flowers of the Mineral
Kingdom”**

September 14-16, 2012

**Harrisburg, Pennsylvania Hosted by the
Central Pennsylvania Rock and Mineral
Club, Inc.**

www.rockandmineral.org



PLEASE VISIT OUR WEBSITE:
HTTP://www.novamineralclub.org

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The Northern Virginia Mineral Club

You can send your Newsletter articles to:

7201 Ludwood Ct.
Alexandria, VA 22306

Or via email: news.nvmc@gmail.com

Visitors are Always Welcome at our Club Meetings.

RENEW YOUR MEMBERSHIP!

SEND YOUR DUES TO:

**Rick Reiber
Treasurer, NVMC
PO Box 9851
Alexandria, VA 22304**

OR

Bring your dues to the meeting

Purpose: To promote, educate and encourage interest in geology, mineralogy, lapidary arts and related sciences. The society is a member of Eastern Federation of Mineralogical and Lapidary Societies (EFMLS) <http://www.amfed.org/efmls> and American Federation of Mineralogical Societies (AFMS) <http://www.amfed.org>.

Dues: Due by 1 January of each year; \$15.00 Individual, \$20.00 Family, and \$6.00 Junior (under 16, sponsored by an adult member).

Meetings are held at 7:45 p.m. on the fourth Monday of each month (except

May and December*) at Long Branch Nature Center, 625 Carlin Springs Road, Arlington, VA 22204. Phone (703) 228-6535. (No meeting in July & August.)

(* Changes announced in the newsletter.) Snow schedule - Arlington county schools.