

Southern Maryland Rock and Mineral Club



Rock Talk



May, 2015



Message from the President

Summer months are here. I ask all to take care of themselves with the changing season. Pace yourself - especially with your collecting in the hot sun. - I admit - buckets seem to be getting heavier as each new year comes along. Really do not know why. Also many of those small creatures we all want to avoid seem to be right where one finds the better specimens. Keep focus on all things in your collecting sphere.

Yes - there is only nine months until our next Show. The show is a reflection what this group can deliver for the public to see what this fantastic hobby we have embraced so well and for so long. The show is the first exposure for many people to show them what one has found and what can be done with the rocks they discovered. The joy and the story behind each find when one started to take interest. I challenge each person to think back to the first time they began with collecting minerals, polishing stones, making jewelry, finding that first plant fossil or dinosaur bone and share that with those unaware of the enjoyment we all have experienced.

Also this month we will talk of "digital finds". Sites on the internet that has some "gems" of true nuggets of information that can benefit one's knowledge and collection of sites many may have forgotten. If there

are web sites that you are using for the hobby - PLEASE share them with the group next week!

In this issue:	
April Minutes	2
Upcoming Field Trips	3
Upcoming Shows and Events	3
EFMLS/AFMS News	4
Rocks, Minerals, and Fossils in the News	5
Amazonite at Morefield Mine, Amelia, VA	6
Green Minerals from the Mid-Atlantic Region: Vivianite	6
Member's Finds	8

Next Meeting:
May 26, 2015 @ 7:00 PM

Program:
Rockhounding on the Internet
Rick Simcsak

Refreshments:
Paul and Linda Holden

**Clearwater Nature Center, 11000 Thrift Road,
Clinton, MD.**

APRIL MINUTES

Submitted by Linda Holden

DATE: Meeting was called to order at 7:03 pm
April 28, 2015.

VISITORS/NEW MEMBERS: --- Chantica Wheeler from Waldorf. Rich updated us on his daughter. She will have a girl, Samatha, sometime in August.

MEMBERSHIP: Michael reported that the list is current as of today. Michael will send electronic copies to those who need them.

NEWSLETTER: Tim was not present because his son was ill. No report, but Tim needs all submissions to the newsletter by May 20th. Rich sent out some interesting articles: "Transparent Armor From NRL; Spinel Could Also Ruggedise your Phone" and the Lower Bucks County May "Rock Chatter." He asked if we see anything interesting please send it out.

FIELD TRIPS: Jim was not present. Dave had a box with free stellarite from Manassas Vulcan Quarry. Joint trips are coming up. Moorefield Mine is still open until May 30th. Dave is taking some kids this weekend. The mine will be open for 5 more Saturdays. Tina and Harry are back from the Mushroom Festival in Irving, Kentucky. For 3 days they hunted agate. They found geodes at a new location, Kings Mt. Joe and Paula, and Cheryl and Monty also attended. 40-50 people went on guided hunt for agate. Tina will do a write up in the newsletter.

TREASURER: No changes.

MINUTES Approved as written

PROGRAMS: The speaker tonight is Bob Farrar. His program is "Cruzeiro Mine: The World's Greatest Tourmaline Mine". Carole, Al and Polly provided refreshments. Rich has the program for next month. Paul and Linda will provide refreshments. Carole said the Eastern Federation sent out 101 program tips. She is looking for any ideas from members. Rich wants to share sites he has found. Gary reported that gypsum mostly on private property. Lorna volunteered to do a program. We still need volunteers for programs or refreshments. The speaker tonight is Bob Farrar. His program is "Cruzeiro Mine: The World's Greatest Tourmaline Mine". Carole, Al and Polly provided refreshments. Rich has the program for next month. Paul and Linda will provide refreshments. Carole said the Eastern Federation sent out 101 program tips. She is looking for any ideas from members. Rich wants to share sites he has found. Gary reported that gypsum mostly on private property. Lorna volunteered to do a program. We still need volunteers for programs or refreshments.

WEBMASTER: Bob needs field trip reports. Dave and Tina will write reports.

OLD BUSINESS: Gary gave a recap of the Eastern Federation Convention. He reported that House Bill 713 was defeated in committee. We need to still keep an eye on it. He went on a field trip to amethyst mine. This mine could be a place to go. The trend is for joint field trips. Most clubs having same struggles. Many quarries are owned by same companies. We need to lobby that we are a responsible club. Southern Federation has been doing that. We need to work together with other clubs. Members are getting older. We need to get younger ones interested, ex. Youth programs. MGS trying to get young ones also. Our show is an outreach also. We should plan more demonstrations, perhaps competitions. Link up with Science Fairs. What are students being taught in schools? Hands on is the best. 3rd and 4th grades. Chantica Wheeler said that

Waldorf West Library is looking for people to do a rock and/or fossil program. The Eastern Federation discussed the issue of insurance. Some quarries expect us to have a higher amount of insurance. Some are getting a second rider. Is it a game or legitimate? Gary suggested we try to get ourselves viewed more professionally by becoming certified in

NEW BUSINESS: Saturday February 13th is penciled in for our show next year. No contract yet. The Show Committee had its meeting at 6:15 today. They discussed many ideas. We are trying to involve more kids. Vendor in KY wanted information about our show. Information will be put on website in September. We need to advertise the tentative date. Fees are not set yet. Two days still could be considered. The committee will meet again next month, May 26th at 6:15.

Upcoming Field Trips

*Multi-club field trip to the
National Limestone Quarry,
Mount Pleasant Mills, PA on
June 13th*

If interested, contact Jim White
at whitejs1@verizon.net.

mine safety. Dave knew some that will train, 1 day 8 hour course. What if sponsored by Eastern Federation? Dave received a 3rd place award for Written Features in the Lynchburg Club Newsletter. \$5 Raffle tickets for a stereoscopic microscope by Way and Means. Tickets \$5. AFMLS Raffle - many prizes.

ADJOURNED: Meeting was adjourned at 7:54 pm.

Upcoming Shows and Events: 2015

May 30 –26th Annual Chesapeake Gem and Mineral Show, hosted by the Chesapeake Gem and Mineral Society. Ruhl Armory, York Rd at I-695, Towson, MD

June 6 –64th Semi-Annual Spring Mineralfest Show, sponsored by the Pennsylvania Earth Sciences Association. Macungie Memorial Park, Macungie, PA

June 6 - 7 Gemfest 2015 sponsored by the Wayne County Gem & Mineral Club. NEW LOCATION: Greater Canandaigua Civic Center, 215 N. Bloomfield Rd., Canandaigua, NY.

EFMLS/AFMS NEWS by Timothy Foard



The May newsletter of the AFMS there is an article by Barbara Florio Graham, on the step one can take to prevent legal problems when serving as an officer in a non-profit organization. There is also an article on an AFMS judge-training session hosted by the Midwest Federation.

For these and other information, visit www.amfed.org



The EFMLS Newsletter for May has a summary of the results of the annual convention at Hickory, NC. The contest winners for the Bulletin Editors, the club web sites, the competitive displays, club rockhound of the year, and the Each One Teach One award were also present in the May newsletter.

For these and other information, visit www.amfed.org.efmls

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Rocks, Minerals, and Fossils in the News

Transparent Armor from NRL; Spinel Could Also Ruggedize Your Smart Phone

<http://www.nrl.navy.mil/media/news-releases/2015/transparent-armor-from-nrl-spinel-could-also-ruggedize-your-smart-phone>

A mineral called spinel will soon make it possible for camera lenses to resist scratching in a sand storm or smart phones to still function after being dropped. Spinel is magnesium aluminate ($MgAl_2O_4$), and is part of ongoing research conducted by the Naval Research Laboratory (NRL). Spinel is much stronger, harder, and tougher than glass. The mineral is rarely transparent, often occurring in a variety of colors, which makes it of value as a gemstone, but limits its use in industry. Dr. Jas Sanghera and colleagues at the NRL invented a technique for producing transparent spinel. The technique involves sintering, which involves compressing synthetic spinel powder under a vacuum using a hot press. If done correctly, the finished product is clear and free of trapped air bubbles. It can also be ground and polished, much like a lens, to improve its optical quality. Its ability to transmit infrared light gives it another advantage over glass, which lacks this property. It can also be molded into various shapes. Other potential applications of spinel are transparent armor for military vehicles and face shields, protecting aircraft cameras, and for next generation lasers.

Museum director warns of hunting fossils on unstable hill

http://www.sanluisobispo.com/2015/04/28/3608127_museum-director-warns-of-hunting.html?rh=1

While digging for shark teeth on Hang Glider Hill, near Bakersfield, California a portion of the hillside collapsed, partially burying Donald Reading and resulting in his death. As a result of this tragedy, the director of the Buena Vista Museum of Natural History and Science, Koral Hancharick, is warning people not to collect in this area. In addition to the area being unstable, the site is also on private property. Another death occurred about 10 years earlier, and there had been several accidents in the same area. For those interested in collecting fossils, the museum offers safer guided tours.

Two new minerals found in Ohio

<http://www.norwalkreflector.com/article/6588321>

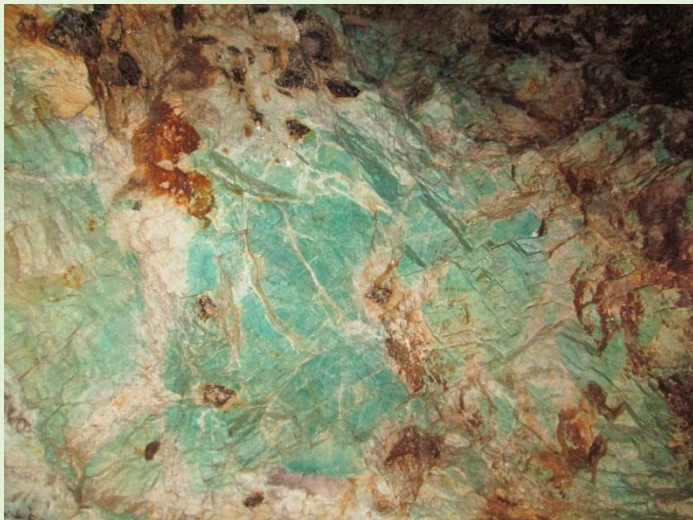
During a study on shale fires burning in the vicinity of Monroeville, Ohio an amateur collector, Will Shewfelt, discovered several minerals, including 2 which later turned out to be completely new to science. The shale fire minerals appear as spots of color on the surface following the fire. Each time he find a mineral, he would send it to Earnest Carlson, professor of geology at Kent State University and author of "Minerals of Ohio" for identification and was collaborating with him for article submission to a rock and mineral magazine. Earnest died before the project was completed, and the project continued under Anthony Kampf of the National History Museum of Los Angeles County (CA) who also sits on the International Mineral Association Board. One of the new minerals was named carsonite, in honor of the late author.

Amazonite at Morefield Mine, Amelia, VA

by Rich Simcsak (Photograph by Greg Polley)

It was a beautiful Saturday 02 May 2015, that two of the SMRMC members met at the Morefield Gem Mine, in Amelia, VA. Sharon and Sam have been busy this season and planned a 30 May closing, so a visit this spring was a must. As the morning drew on more families and couples came to try their luck at finding that special bounty of Amazonite and other possible minerals available at this site. Dave Lines came with a family of five which had one young and highly energetic young collector that used with excitement throughout the day. In addition Rich Simcsak (author) came solo with the hopes of finding the multiple different minerals the mine produces.

Sharon and Sam Dunaway, the mine's owners were excited to see us and pleased that people would drive 3 to 3 1/2 hours to collect from his mine. People could not ask for better hosts. At 0930, the collecting sites opened to us and many more were still coming to the site to collect.



A section of the wall of one of the tunnels in Morefield Mine, showing blue-green amazonite.

Today Sam would make five different dumps of material from the mine in the three collection areas. This usually turned into a "feeding frenzy" for people to collect the deepest blue-green Amazonite. Many nice large pieces (hardball size) to that of a dime were to be found. In addition, samples of grossular garnet were available. Many younger collectors had

specific interest in the garnet. Dave and I were able to find nice samples and share them with the younger collectors for their first samples of the mineral. Excitement was each of their eyes when given a sample - they were instantly hooked on collecting. Some were able to find small garnets on the "garnet hill", small slender quartz crystals, some amethyst partial crystals, that were "added" to the collecting fields. Common Topaz has been found before but we did not hear of anyone finding a specimen.

During one of the fresh dumps of material, I kept in mind those unusual shapes that could come from the mine. The night before, I took the time to look at Morefield Mine on [HTTP://WWW.MINDAT.ORG](http://www.mindat.org) and [WWW.MOREFIELDGEMMINE.COM](http://www.morefieldgemmine.com) which had multiple pictures of sample that came from this mine. In the dump field next to the mine's entrance, there it was in a hole, a hexagon shape crystal - a Green Beryl (see "Member's Finds" at end of newsletter)! Just about an inch long, but it was a beryl. I took the find into the exhibit/gift shop and showed Sharon and Sam. Sam remembered that one of his team found something similar the day before. He re-found the piece and it was of the same color and construction. Then he placed the two together and they were one crystal before the break! He presented me with the piece he had to me to make a single crystal. WOW!! This find and the sharing of the sister piece will keep me coming back to this site!

This fee site for collecting is one that the club has visited many times before and as a repeat visitor, I will always recommend others to spend the time to visit the mine.

Green Minerals from the Mid-Atlantic Region: Vivianite

Timothy Foard

Green or greenish minerals make up a large portion of the rocks of the Mid-Atlantic region-- from the extensive diabase deposits of northern Virginia to the unconsolidated greensands of Maryland and New

Jersey to the serpentine barrens of Pennsylvania and Maryland. Last month newsletter contained an article on the region's most abundant greenish mineral, glauconite and the next several issues will feature a green(ish) mineral that can be found locally. The featured mineral for this month is vivianite.

Vivianite, $\text{Fe}_2\text{PO}_4 \cdot 8\text{H}_2\text{O}$, a phosphate mineral is named after a mineralogist John Henry Vivian of Cornwall, who discovered the mineral. It is a member of the vivianite group of minerals, which consists of phosphates and arsenates of iron, magnesium, cobalt, nickel, and zinc, all with 8 water molecules, and all forms monoclinic crystals. Other monoclinic arsenates and phosphates do exist, but they are assigned to other mineral groups because they are not hydrated.

Vivianite occurs as dark blue or green prismatic or tabular crystals, sometimes in radiating masses, other times incrusting, although it also occurs in massive form. Like glauconite, vivianite is a very mineral; hardness 1.5-2.0. It splits easily, with perfect cleavage, into flexible sheets, has a density of 2.6-2.7, and has a vitreous to pearly luster. Massive form has an earthy luster.

The most distinctive characteristic of vivianite is its tendency to change color upon exposure to light. Freshly exposed vivianite is transparent or pale green, but darkens to dark blue, dark green, brown and nearly black. The color change is caused by a photon-induced oxidation of ferrous (Fe^{+2}) to ferric (Fe^{+3}) iron, which eventually leads to the formation of a new mineral, metavivianite $\text{Fe}^{2+}\text{Fe}^{3+}_2(\text{PO}_4)_2(\text{OH}) \cdot (\text{H}_2\text{O})_7$. Specimens of vivianite should not be displayed as cabinet specimens, but stored, protected from exposure to light.

The best gemmy form of the mineral is found in hydrothermal veins, but it also occurs in the oxidation zones in sulfide deposits, is associated with pyrite in copper and tin veins, as alteration products in pegmatites containing ferromanganese phosphates, in

sedimentary rocks, in clay and greensand deposits, bog iron, and lining the cavities in fossils.

The largest crystals, over 1 meter long, occur in certain bogs in the Cameroons. Excellent specimens are found in Brazil, Bolivia, Germany, Canada, and the United States. Locally, they have been found in sporadic locations in Virginia, Maryland, Delaware, and New Jersey. Most of the local sites are associated with glauconite deposits.

Vivianite is largely of interest to mineralogists and collectors. Large quantities of massive form are used as a coloring agent.



Concretion lined with vivianite crystal, which are in turn coated with iron oxide, Prince Georges County MD

References

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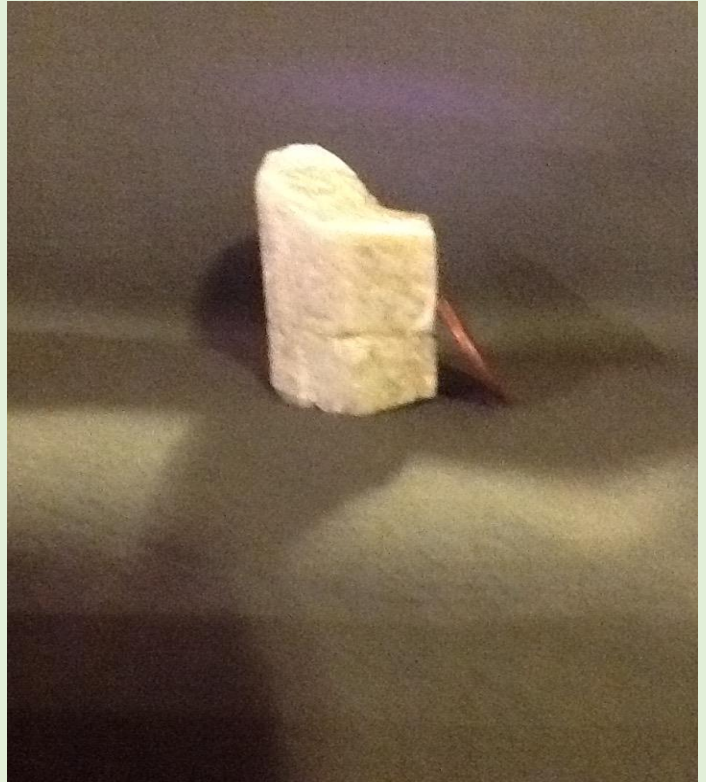
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Fleischer's Glossary of Mineral Species 2008.
Malcolm E. Back and Joseph A. Mandarino. The
Mineralogical Record, Inc., Tuscon, 345 pp.

The Giant Crystal Project: Vivianite
<http://giantcrystals.strahlen.org/africa/anloua.htm>

Member's Finds

Beryl crystal fragment collected by Rick Simcsak
from the pegmatite at the Morefield Mine, Amelia,
Virginia. Top photo shows two pieces, one of which
was collected 1 day earlier; the bottom photo shows
the pieces actually came from the same crystal.



Collected any interesting specimens? Send a photo or
two to the editor at bmorebugman@yahoo.com for
inclusion in the next issue of Rock Talk.



**The Southern Maryland Rock and
Mineral Club**

**Meetings take place on the 4th
Tuesday of each month at 7:00pm**

**Clearwater Nature Center, 11000
Thrift Road, Clinton, MD.**

For More information, call:

(301) 297-4575

**We're on the web:
SMRMC.org**