

Southern Maryland Rock and Mineral Club



Rock Talk



July/August, 2018

Next Meeting:
July 24, 2018@7:00 PM

Program:
TBD
Bill Stephens

Refreshments
Ralph Gamba

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

Upcoming Program Speakers

August 28 - Auction

September 25- Joe Davis

October 23- Geode Cracking with Jim White

Refreshments

August 28 - Pot Luck

September 25- Paula

October 23- Cheryl Reese

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JUNE MINUTES

Submitted by Polly Zimmerman

DATE: Meeting was called to order at 7:10 by Sondra, President.

VISITORS/NEW MEMBERS:
Tim S.'s daughter, Francesca.

MEMBERSHIP: no report.

NEWSLETTER: Editor – no report.

MEETING MINUTES: Minutes read: one correction. National Limestone mines visited were Mt. Pleasant Mills and Middlebury, Pa.

TREASURER: \$60 was given to Tina for T-shirts.

FIELD TRIPS: Dave, Field Trips Chairman: Sign-up sheets were passed around for trips.

July 14 - HK Penn/Md Quarry (Peach Bottom) for clear translucent Williamsite and serpentine. According to Mindat, there are 31 minerals in the area.

July 28 -National Limestone: Mt. Pleasant Mills & Middlebury, Pa.

Interest in two other possible trips was determined by a show of hands to Point of Rocks for marble or Contrary Creek forgold. Interest was about equal.

PROGRAMS: Tonight's program is presented by Orion and Kim on "Remarkable Rocks, Minerals, Silicates, Elements, and Gemstones." They also provided

refreshments. July's program will be presented by Bill Stephens. Topic TBD. Refreshments by Ralph. August - keep in mind our annual auction and pot luck. Bob, Dave, and Tim S. will coordinate.

WEBSITE: Bob, Webmaster – website is doing okay – no problems.

OLD BUSINESS: None.

NEW BUSINESS: Dave reported he attended a talk at Smithsonian by Jim Sterns, recently retired from JMU.

ADJOURNED: Business Meeting adjourned at 7:33 PM

Upcoming Shows and Events: 2018

September: 22-23: Annual Atlantic Gem, Mineral, Jewelry & Fossil Show hosted by the Gem Cutters Guild of Baltimore. Howard County Fairgrounds, 2210 Fairgrounds Rd; West Friendship, MD 21794. Info: www.gemcuttersguild.com

ITEMS WANTED/FOR SALE

For Sale – Virginia unakite slabs (approx ¼ inch thick) – \$0.50 per square inch (this is half off regular price). Call Dave (240) 427-7062.

For Sale – SMRMC t-shirts for sale: size small (1) at \$9.00; medium (2) at \$5.40 each, large (5) at \$9.00 each, and xtra-large (2) at \$9.00 each. Contact Tina @ htleague@comcast.net

Rocks, Minerals, and Fossils in the News

National Museum of Natural History Welcomes Nation's T.Rex

BY BLOUIN ARTINFO

<http://www.blouinartinfo.com/news/story/3168620/national-museum-of-natural-history-welcomes-nations-trex>



“Triceratops,” the Nation’s T. rex will be the centerpiece of the David H. Koch Hall of Fossils—Deep Time, a 31,000-square-foot dinosaur and fossil hall (Courtesy: Smithsonian Institution)

The Smithsonian’s National Museum of Natural History has announced the return of the Nation’s T. Rex. The Tyrannosaurus Rex will be the centerpiece of the new 31,000-

square-foot fossil hall which is due to open on June 8, 2019.

“The Tyrannosaurus Rex skeleton will be featured in the reopened hall alongside more than 700 specimens, including dinosaurs, plants, animals, insects, and some never before objects displayed at the National Museum of Natural History. The exhibition will depict a journey through time of more than 3.7 billion years of life on Earth. Visitors will discover their impact on life’s story as it plays out today and their role in shaping its future,” the museum says.

The hall is renamed as the David H. Koch Hall of Fossils — Deep Time, in recognition of a \$35 million gift from David H. Koch, the largest single donation in the history of the museum. The Deep Time project is the largest and most complex renovation in the museum’s history.

When the fossil hall closed in 2014 for renovations, all specimens on display were removed for conservation and study by Smithsonian scientists. Several spectacular dinosaur fossils from the hall were disassembled and taken to Research Casting International in Ontario, Canada, where they were repositioned into dramatic, new and more scientifically accurate poses.

Those fossils, including the T. Rex, which is on loan to the Smithsonian for 50 years from the U.S. Army Corps of Engineers, are being transported back to the museum for permanent installation in the new hall in a specially branded FedEx Custom Critical

truck. The delivery is part of the company's FedEx Cares "Delivering for Good" initiative. "The return of the Nation's T. Rex is an important milestone in the countdown to the grand opening of the new hall in June 2019," Kirk Johnson, Sant Director of the National Museum of Natural History commented.

He further said, "This hall will be unlike any other — it begins in the past and ends in the future. Using extraordinary fossils, compelling interactive and multimedia experiences, and latest science, visitors will be inspired by the fascinating story of our evolving planet and the life that has inhabited it and understand the critical role they each play in determining its future."

"Creating the new fossil hall involved the largest building renovation in the museum's history. Interior walls that had been put into place during the past century were removed, structural columns were relocated, all electrical and mechanical systems were updated and windows and skylights were replaced to allow natural light to permeate the hall. In addition, spaces on the ground floor below — the substation in the basement and up to the building attics — required infrastructure renovations and upgrades to make way for the dinosaurs. The project cost \$125 million," says the museum release.

A quadrillion tons of diamonds lie deep beneath the Earth's surface

Written by Ayana ArchieRalph Ellis, CNN

<https://www.cnn.com/style/article/diamonds-under-earth-surface-trnd-style/index.html>



Credit: Donald Bowers/Getty Images North America/Getty Images for Sotheby's

As it turns out, diamonds in the Earth are much more common than we thought. About 1,000 times more common, according to the Massachusetts Institute of Technology. A new study by an interdisciplinary team of researchers used seismic technology (the same kind used to measure earthquakes) to estimate that a quadrillion tons of diamonds lie deep below the Earth's surface. That's 1,000,000,000,000,000 --- or one thousand times more than one trillion.

Don't expect a massive diamond rush, though. The deposits sit some 90 to 150 miles below the Earth's surface, much deeper than current mining machinery allows. The Mir Diamond Mine in Russia, for instance, is the world's second-largest human-made hole and only goes about a third of a mile deep.

Seismic technology uses sound waves to make measurements, because their speeds change depending on the composition, temperature and density of the rocks and minerals they're traveling through.

Deep in the earth are cratons, masses of rock shaped like upside-down mountains. They are usually cooler and less dense than

surrounding rock and result in faster sound waves.

But scientists observed that the waves got even faster when moving through the bottom of the cratons, known as their roots.

So they put together virtual rocks, made from potential combinations of materials, and using three-dimensional models, compared the velocities of sound through the variations.

Sound travels through diamond twice as fast as other rocks, so the team of researchers figured there had to be some of the material in the cratons.

"Diamonds are a perfect match because they're a little bit more dense, but we don't need a lot of them," said Ulrich Faul, a researcher in MIT's Department of Earth, Atmospheric, and Planetary Sciences and a senior participant in the study.



Faul, who worked in the lab with a team of seismologists, geochemists and other scientists, slightly increased the amounts of diamond in the virtual rocks, until they reached a combination that produced the same advanced speeds they'd been encountering by using seismic technology on the real Earth.

That amount was 1-2% of the craton.

Next, the team multiplied this percentage by the total volume of cratonic roots in the Earth, estimated by thorough mapping of new and old rock formations. They came up with one quadrillion. That's at least 1,000 times more diamonds than scientists had expected.

Faul said the location of the diamonds at the base of the cratons makes the most sense, as diamonds are formed via extreme pressure and extreme heat, so the weight from all the rock above provides ideal conditions for their formation deep in the Earth's mantle.

The diamonds that end up in necklaces and rings come closer to Earth's surface, usually through volcanic eruptions, Faul told CNN.

The study also included researchers from various national and international institutions, including the University of California at Berkeley, Harvard University, the University of Melbourne and the University of Science and Technology of China, among others.

HK Penn MD Quarry Trip July 2018 by Dave Lines (Photos by Tim Smith)

Our Club's third visit in seven months on July 14th was still productive with lots of chrome minerals and great lapidary material colored green. This time we were the guests of the Montgomery County club. Altogether there were about 45 attendees --- we mustered 15 from our club including Lorna, Tim S., Harry, Tina, Sondra, Mike S. Jim, Ralph B., Joe, Paula, Rich, Orion, Arion, Aby and Dave. We all found enough specimens to satisfy our needs --- and then some.



The main difference in conditions on this field trip was that it was hot (very hot), dry and had not rained on any of the rocks since our June visit. That translated to the rocks being dusty and dirty and they all looked the color “gray” (at least to the casual observer). This made a huge difference in being able to determine which rocks were green colored. I partially solved the problem with a bucket of water and a scrub brush. I literally dipped each suspected rock into the water and scrubbed it off. Yes, it was slower, but it was effective.

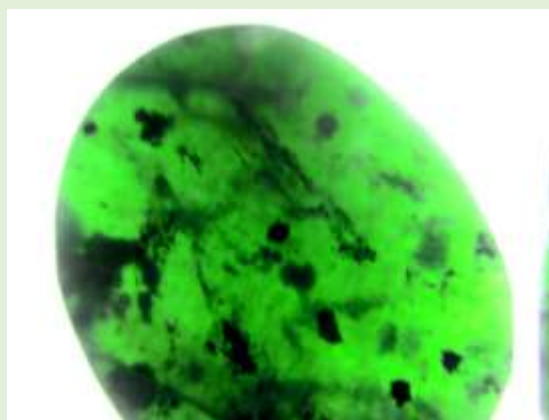


As it turned out, there were ample quantities of the most “sought after” williamsite. We just had to look harder. Often, we would find pieces right where someone else had just looked there. The key was the bucket of water. The water immediately brought out the color of the rocks when wetted down. My best piece was about 5 pounds of high quality williamsite --- a nice clear green with a

smooth flinty texture. I heard that Joe and Orion found a very large piece (in fact, a seam) and divided it. This is still a super location and one well deserving of return visits.

Member’s Finds

Photos of worked material, including williamsite (top) collected from the HK Penn/MD Quarry in Peachbottom, PA, from the collection of Joe Davis



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.

Official Southern Maryland Rock and Mineral Club(*) Field Trip Notice**National Limestone Mt. Pleasant mills and Middleburg Quarries on Saturday July 28, 2018 from 9:00 a.m. – noon and 1:00 p.m. to 4 p.m.**

(* This trip may include other local EFMLS clubs if I need to get more people.)

Meeting Time --- Meet at the Quarry Office parking lot at Mt Pleasant Mills Quarry. 217 Quarry Rd., Mt. Pleasant Mills, PA 17853 **at 8:45 a.m. (no later!!)** for listening to owner's Christian testimony (his personal requirement as the cost of admission), a Safety Briefing and signing waiver forms. We plan to break for lunch together at 12 noon, then drive 8 miles to Middleburg Quarry, 3499 Quarry Rd., Middleburg, PA 17842 as a group by 1:00 p.m..

Trip Leader --- Dave Lines

Location --- Our first 3 hours will be at National Limestone Quarry, 217 Quarry Rd., Mt. Pleasant Mills, PA 17853 (Approx. 200 miles and a 3-1/2 hour drive from La Plata according to MapQuest) and our second 3 hours will be at Middleburg Quarry, 3499 Quarry Rd., Middleburg, PA 17842.

Directions --- (recommend follow directions from MapQuest)

Special Requirements --- 1st, The road to the small wavellite area is on the back side of a ridge behind the first Quarry and is one way and narrow --- we may have to take turns digging. 2nd, The quarry owner collects rocks and would appreciate the gift of any labeled specimens. 3rd, kids (8 years old minimum and be a club member) are allowed, but must be closely supervised on a ratio of 1 parent per 1 kid (max) and remain next to their parent at all times.

Safety --- steel-toed boots, hardhat, safety glasses, long pants, heavy gloves and bright colored safety vest. Stay clear of all high walls.

Note to Experienced members --- please keep a watch on all of us and say something to those who may not recognize danger before they get into trouble.

What to Collect --- Mt. Pleasant Mills Quarry --- Strontianite, Calcite, Dolomite, sometimes Fluorite --- and Wavellite. Strontianite is best found by breaking open likely looking rocks. A LARGE sledge hammer is helpful. Strontianite is DELICATE. Bring toilet paper/old newspaper to wrap your specimens in. On the top of the ridge, above/behind the quarry, we can dig for Wavellite. Wavellite is found on chunks of limestone/sandstone, which is loose and covered with red dirt/mud. You may need to dig down through several feet of this material to find the "layer" that contains the best wavellite. A short shovel and a pry bar/digging bar help. A garden scratcher is good. Wavellite is best found by wetting promising looking specimens and brushing off the red clay/mud with a stiff scrub brush. Bring a bucket and fill it with water at the office/trailer. These specimens should be wrapped carefully, too. There are also fossils in the same pit with the Wavellite, Brachiopods and moonsnails seem to be most common. On occasion some rarer minerals have been found here as micros ---Variscite and Turquoise. Middleburg Quarry --- Lots of recent quarry activity in this quarry, so our best bet for finding calcite xls. Calcite and Fluorite are the most abundant. Also (fluorescent) flowstone (travertine stalagmites from ancient limestone caverns) and several minerals. Sphalerite and galena (other sulfides) have also been found there as micros.

Equipment/ clothing --- Full safety gear for everyone at all times --- steel toed shoes/boots, safety glasses, hardhat, work gloves, long pants. Recommended tools --- rock hammer, 3 - 4 pound crack hammer, chisels, stiff scrub brush, garden scratcher, 5 gal. bucket, old newspaper for wrapping specimens, small pry bar. Optional -- large sledge hammer, long pry bar, extra buckets, loupe/magnifying glass. Your best tools are sharp eyes. Clothing depends on the weather --- long sleeves are recommended. Rain poncho nice to have. A bow saw is nice to have if the road to the wavellite site has a fallen tree across it. Ticks and bugs – it will be summer and you should apply bug spray as a preventative – I use Deet.

Quarry Description / Hints --- Both quarries are limestone quarries mined for material to be crushed for road construction and riprap. **Hint** ---Carefully search and *investigate anything that is different*.

Vehicles --- We will be allowed to drive our vehicles into both quarries.

Misc. --- Drinking water, sunscreen, bug spray, lunch/snacks, "Thank" the quarry owner. Bring a camera and take some pictures for our Newsletter.

Sign-up List --- Best if you sign up early as it will help my planning. Also sign up at the May, June or July club meetings or by email to dave.lines@earthlink.net

****If you sign up and later find that cannot make the trip, **call Dave at 240-427-7062** and tell him.

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 OFFICERS

PRESIDENT

Sondra Fielder
Sondra611@verizon.net

Program Vice President

Carole Raucheson
caroleal@verizon.net

Membership Vice President

Joe Davis
J1964d@netzero.net

Secretary

Polly Zimmerman
Polly.zimmerman@verizon.net

Field Trip Chairman

David Lines
Dave.lines@earthlink.net

Treasurer

David Lines
Dave.lines@earthlink.net

Editor

Timothy Foard
bmorebugman@yahoo.com

Webmaster

Bob Davison
Bob.Davison2@yahoo.com