

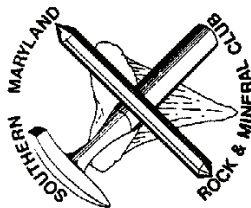
August 2013



SOUTHERN MARYLAND ROCK AND MINERAL CLUB



Rock Talk



Message from the President

Rich Simcsak

The last newsletter had the initially proposed dates for the Rock and Mineral Show in February, 2014. Since then, the dates were changed to March 8 & 9, 2014 at the Showplace Arena in Upper Marlboro, using the entire main floor of the arena for the first time. This will allow us to have many more and different dealers as well as multiple educational exhibits. We will be expecting a very large turnout for this year's show and this means that we as a club need to turn out in larger numbers to ensure continued successful shows like we have done before. The August meeting we will talk more of the show's requirements to the club. Equally as important—August is

the month for the Pot Luck Dinner and Annual Auction. This year we have a donated collection of quality material and equipment for auction that may take the entire evening to auction. Pictures of the material and equipment were emailed out earlier this month. Please be punctual tonight. We will start promptly at 6 PM with the meeting and pot luck dinner then move into the auction. There will be something for all tonight. Make this meeting one to remember! See you all there!

August 27th Auction

The Nature Center recently received a large donation from the Jack and Alva Worthington family. Over 50 flats/boxes will be auctioned off at the August meeting.

There are geodes, thunder eggs, tumbling and polishing grit, oxalic acid, and lapidary material (slabs, chunks, and small pieces) including Agate, Jasper, all kinds of Obsidian, Tiger Eye, Blue Lace, Petrified Wood, Wonder Stone, Azurite, Chrysacolla, Malachite, and much more.

There are a few flats of small labeled specimens as well as larger ones. There are also a few flats of jewelry findings—chains, bell caps, etc.—many in their original packaging.

As for equipment, there is a 10" Ray-Tech Vibratory Lap in almost new condition which will be perfect for polishing Thunder eggs and slabs and a 6 pound rock tumbler.

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Meetings

..are held the 4th Tuesday of each month at 7:00pm.

Clearwater Nature Center 11000 Thrift Road, Clinton, MD

**For more information, call:
(301) 297-4575.**

EFMLS/AFMS/SFMS



There is no new EFMLS or AFMS news. Their respective newsletters will resume production in September.



Courtesy of the *Gem & Mineral Journal*, Official Monthly Publication of the Gem and Mineral Society of Lynchburg, VA, Inc. (WWW.LYNCHBURGROCKCLUB.ORG)

Bench Tips by Brad Smith

Bench Tips by Brad Smith are at: [groups.yahoo.com/group/Bench Tips/](http://groups.yahoo.com/group/BenchTips/) or [facebook.com/Bench Tips](http://facebook.com/BenchTips)

Upcoming Shows and Events

September 14-15: 48th annual Gem, Mineral & Jewelry Show. Sat 10 AM – 6 PM, Sunday 10 AM – 5 PM. Zembo Shrine, Third and Division Streets, Harrisburg, PA Admission \$6.00. Children 12 and under, Scouts in uniform free with adult.

September 28-29: Franklin-Sterling Gem and Mineral Show Saturday 9:00-5:00 (indoor) and 7:30-6:00 (outdoor). Sunday 10:00-4:00 (indoor) 9:00-5:00 (outdoor). Franklin School, Franklin, NJ. Admission \$7.00 (adult) \$4.00 (children 6-16) for more information, contact Franklin Mineral Museum 973-827-3481 www.franklinmineralmuseum.com

October 11: Chesapeake Gem and Mineral Society Auction. 7:30 PM (preview at 7:00 PM) Weschester community Center, 2414 Westchester Ave. Oella, MD 21043

November 23-24: Fairfax, VA 22nd Annual Gem, Mineral & Fossil Show Sponsored by the Northern Virginia Mineral Club - www.novamineralclub.org & and the GMU Department of Atmospheric, Oceanic and Earth Sciences.

George Mason University, Fairfax Virginia at The Hub (former Student Union Bldg II) Saturday 10:00 AM - 6:00 PM, Sunday 10:00 AM - 4:00 PM. Adults \$5, Seniors \$3, Teens (13-17) \$3. FREE - Children (12 & under), Scouts in uniform, GMU Students w/valid ID. Parking: On campus use GMU's parking Lot A (for Handicap Parking follow our van back from Lot A) Enter Lot A from Nottaway River Lane off Brad-dock Road Courtesy shuttle.



If anyone has information on any other local shows or rock events, contact Ralph Gamba at rgamba@verizon.net.

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***If corrections or additions are needed, please contact *Rock Talk* Editor

Cover Photo Courtesy of Microsoft Office

Birthstones: Myth and History

Tiffany & Co. published these poems "of unknown author" for the first time in a pamphlet in 1870.

By her who in January was born, no gem save **garnets** shall be worn, They will ensure her constancy, True friendship and fidelity.

The February born shall find, sincerity and peace of mind, freedom from passion and from care, If they, the **amethyst** will wear.

Who in this world of ours their eyes, in March first open shall be wise, in days of peril firm and brave, and wear a **bloodstone (heliotrope)** to their grave .

She who from April dates her years, **diamonds** shall wear, lest bitter tears. For vain repentance flow; this stone, emblem of innocence, is known

Who first beholds the light of day, In spring's sweet, flowery month of May, and wears an **emerald** all her life, shall be a loved and a loving wife.

Who comes with summer to this earth, and owes to June her hour of birth, with ring of **agate** on her hand,

can health, wealth, and long life command.

The glowing **ruby** shall adorn, those who in July are born. Then they'll be exempt and free from love's doubts and anxiety.

Wear a **sardonyx** or for thee, no conjugal felicity. The August-born without this stone, `tis said, must live unloved and lone.

A maiden born when September leaves are rustling in September's breeze, a **sapphire** on her brow should bind, `twill cure diseases of the mind.













October's child is born for woe, and life's vicissitudes must know, but lay an **opal** on her breast, And hope will lull those woes to rest.

Who first comes to this world below with drear November's fog and snow, should prize the **topaz's** amber hue, emblem of friends and lovers true.

If cold December gave you birth, the month of snow and ice and mirth, place on your hand a **turquoise** blue. Success will bless whate'er you do.

While the list of birthstones has varied slightly through time, this is the traditional list that is recognized by jewelers.

Birthstone Colors

 January (Garnet)	 May (Emerald)	 September (Sapphire)
 February (Amethyst)	 June (Light Amethyst)	 October (Rose)
 March (Aquamarine)	 July (Ruby)	 November (Topaz)
 April (Crystal)	 August (Peridot)	 December (Blue Zircon)

The SMRMC 24th Annual Mineral, Jewelry, & Fossil Show

Date: March 8 & 9, 2014

Location: The Show Place Arena, 14900 Pennsylvania Ave., Upper Marlboro, MD

Saturday Hours: 10:00 a.m. – 5:00 p.m.

Sunday Hours: TBD

Volunteers

Dave Lines: Gold Panning

Gary and Cindy Lohman: Fluorescent mineral demo and solicit local clubs for vendors

Harry and Tina League: Setup, advertising, work the Show

Carole and Al Raucheisen, Jan and Bob Simmons, Ralph Gamba, Cheryl Reese: TBD

Penny Masuoka: Talks, sedimentary rock demo

Marco de Pompa: Set-up, demo (flint knapping, cabochons), clean-up, advertising

John Pesch: Setup, cleanup, advertising assistance, general labor

Rich Simscak: Anywhere needed

Tim Foard: Setup, cleanup, general labor

Monty Reese: Setup, cleanup, grunt work

Thank you to our early volunteers! Contact Michael Patterson to add your name to the growing list of volunteers to help with advertising, vendor solicitation, setup, cleanup, demonstrations, door prize announcements, and more.



The Nature Center recently received a large donation from the family of Jack and Alva Worthington. Over 50 flats/boxes will be auctioned off at the August meeting starting at 6 pm.

Tyrannosaurus rex gets long-term lease at Smithsonian's Natural History Museum

By Joseph Stromberg (6-27-13)
www.Smithsonian.com

On October 16, a truck hauling some rather remarkable cargo will arrive in Washington, D.C. At the world's most-visited natural history museum, workers will carefully unload boxes that carry the fossilized bones of the world's most iconic dinosaur, the 66 million-year-old *Tyrannosaurus rex*. After a stay at the Museum of the Rockies in Bozeman, Montana, the 38-foot-long, 7-ton skeleton will live at the Smithsonian National Museum of Natural History for 50 years, giving millions of visitors the chance to appreciate its grandeur and sheer size firsthand.

"If you've ever stood next to a real *T. rex* skull, you'll realize what a breathtaking thing it is: four-feet long, with teeth the size of bananas," says Kirk Johnson, Sant director of the museum and a paleontologist himself. "It is the most terrifying carnivore that's ever lived on the planet. And it really makes you ponder what life would have been like with these things prowling the North American landscape."

The loan comes after decades of attempts by the museum to acquire one of the dozen or so relatively complete *T. rex* fossils that exist worldwide. The specimen, officially

designated MOR 555, is commonly known as "Wankel's Rex," because it was found in 1988 by amateur fossil hunter Kathy Wankel in Montana.

"She and her family were



out boating on Fort Peck reservoir, and they stopped on an island to look around a little bit, and she found some bones," says Shelley McKamey, the director of the Museum of the Rockies. "She brought them to the museum to be identified, and I remember our curator Jack Horner asking her 'Can you find this site again?' because what she'd brought in were the first arm bones of a *T. rex* ever found."

The area with exposed rock from the Late Cretaceous epoch is "chock-full of dinosaurs," according to Johnson; it was also the site of several other *T. rex* fossil discoveries, including the species' type specimen, found and excavated in 1902. Horner led the excavation of Wankel's Rex, which, when

finally unearthed, proved to be what was then the largest and most complete *T. rex* fossil in existence.

Because the reservoir was under the control of the U.S. Army Corps of Engineers at the time, the fossil became federal property, though it was stored at the Museum of the Rockies. Through a joint agreement with the Army Corps of Engineers, Montana State University, and the Museum of the Rockies—which has a second *T. rex* specimen of its own—

Wankel's Rex will now be donated to the Smithsonian and reside permanently in the nation's capital.

The specimen is roughly 85 percent intact, and though it has been surpassed by subsequent finds, it is still among the most complete *T. rex* fossils ever found. "It's a really nice specimen in the sense that it's got a lot of the body, head to tail," Johnson says. The creature has a disarticulated skull, meaning that its skull bones separated before it fossilized—so they aren't attached—but each one is present.

Furthermore, new technological advances will allow Smithsonian researchers to fill in any gaps to produce a complete and accurate skeleton.

(Continued on page 5)

T. rex to be the Centerpiece of Dinosaur Hall

(Continued from page 4)

“Once we unpack it, we’ll begin by digitally scanning every bone and producing a virtual *T. rex*,” Johnson says. “Then, if you’re missing bones and want to recreate the whole animal, you can essentially take the opposite bone and flip the image.” Adam Metallo and Vince Rossi, the “laser cowboys” of the 3D Lab in the Smithsonian’s Digitization Program Office who work at the fore-

ture the contours of the *T. rex* can be used to print replicas at any scale, from full size to desktop, a major asset for both educational and research purposes.

Digitizing the *T. rex* is one of the first steps in studying the skeleton to better understand the legendary species as a whole. “It’s the most famous dinosaur of all time, and yet we don’t really know the details of the differences between the

search on the *T. rex* that has led to a number of noteworthy discoveries by other researchers in recent years, such as the change in our understanding of its posture (bent over, parallel to the ground, rather than upright, like a kangaroo) and the fact that dinosaur bones feature growth rings inside, which can tell us how large the animal was at any given age and its age at death.

Apart from research, the *T.*

rex will also serve as a key educational tool for the thousands of visitors who come through the National History Museum’s doors daily. Although the fully mounted skeleton won’t be on view until 2019, the museum will create a series of temporary displays over the next few years that will feature parts of the skeleton, along with digital renderings, including a fall 2016 exhibition about the *T. rex* and its environment. But

in due time, the *T. rex* will assume its permanent position, one befitting a creature with a name that translates as “the king of reptiles,” towering over dozens of other dinosaur fossils, as the centerpiece of the Dinosaur Hall.



A close-up of a cast of the *Tyrannosaurus rex*, known as the Wankel *T. rex*, which was installed in front of the Museum of the Rockies at Montana State University in Bozeman, Montana in 2001.

front of museum digitization, have already used this type of technology to digitally preserve everything from fossilized whales excavated in Chile to many of the skeletons that currently fill the museum’s Dinosaur Hall. Once fully digitized, the 3-D data points that cap-

ture the contours of the *T. rex* can be used to print replicas at any scale, from full size to desktop, a major asset for both educational and research purposes. Digitizing the *T. rex* is one of the first steps in studying the skeleton to better understand the legendary species as a whole. “It’s the most famous dinosaur of all time, and yet we don’t really know the details of the differences between the known skeletons,” Johnson says. “So ideally what we’d like to do is scan all the known skeletons and get a good sense of the variation between them.” Smithsonian scientists will also conduct the sort of conventional anatomical re-

Kyanite Mine—Willis Mountain, Virginia

By Jim White

This is a reminder of the annual Willis Mountain Kyanite Mine field trip near Farmville, VA. This will be a combined field trip with many other clubs. The trip is scheduled for September 28, 2013 from 9AM-1PM. Meet in the parking lot of the mine company between 8:30-8:45—NO LATER. No age restriction but children MUST be supervised. All standard safety equipment is a must—hard hat, steel-toed boots, goggles, gloves, etc. The minerals found at Willis Mt. include white Kyanite (sometimes fluorescent), Pyrite, Quartz, Hematite (sometimes iridescent), red Mica, Apatite, and Trolleite.

If interested email me to sign up, get more details, and directions—whitejs1@verizon.net.

COLLECTION

Willis Mountain is what's known as a monadnock. The



Atop Willis Mountain itself, showing the exposed, weathered kyanite

kyanite exposure resisted weathering and, as the surrounding area was eroded and weathered away, the mountain outcrop was left standing. This is very much like the famous Graves Mountain kyanite mine in Georgia. The center of the

mined away. We should be able to find plenty of white kyanite blades in the massive kyanite quartzite; pyrite; quartz; hematite with some iridescent, red mica and possibly some blue kyanite and pale green trolleite. Some of the white kyanite here fluoresces a beautiful light blue as well as some of the quartz. East Ridge is rather new but the finds are slightly different but very impressive. Rutile has been found here in the past

EQUIPMENT

Standard quarry gear is required such as hard hats, safety glasses, good strong boots, long pants, gloves, hammer and chisels, wrapping paper, buckets, food and water. Be prepared for windy, hot or wet weather. We will be on the mountain top and it's always windy. Bring a camera, as the view is awesome.



SMRMC members from an October, 2010 Willis Mountain trip

Crystal Grottos Caverns, Washington County, MD

A combined field trip with Montgomery County club to Crystal Grottoes outside Boonesboro, MD took place on Sunday, August 25th. These are caverns carved by ground water percolating through limestone, similar to Luray caverns, but not as far away, and contain stalactites and associated formations. Here's a link with some info about the caves and photos—www.crystalgrottoescaverns.com

The formations in the caverns are made of calcium carbonate and have taken thousands of years to develop. In order for the calcium to get into the caves and create formations, it must first go through both the carbonation process and, then, the decarbonation process. First, the carbonation process occurs as rainwater picks up trace amounts of carbon dioxide from the air. The water continues to pick up even more carbon dioxide as it passes through decaying and/or dead plant matter on its way through the ground. Once the water picks up the carbon dioxide, it becomes carbonic acid. This acid is very mild and can also be found in cola or other carbonated beverages. This carbonic acid, or carbonated water, is the agent by which calcium carbonate can be dissolved. Once this calcium carbonate is dissolved and turns from a solid to a liquid, it then becomes calcium bicarbonate,

which brings us to the end of the carbonation process. At this point, the decarbonation process must occur for the beautiful rock formations to take shape.

The decarbonation process takes place when a drop of water with calcium bicarbonate enters the free air chamber of the caves. As soon as the drop enters a chamber, the carbon dioxide molecules leave the drop of

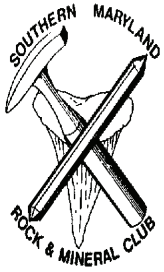
were left out for a period of time. At this point, the agent that kept the calcium carbonate in the water has left—and the CaCO_3 must leave the solution and crystallize. The crystals formed by calcium carbonate are six-sided and are referred to as calcite crystals. At the rate of one cubic inch every 100 to 150 years, trillions of these calcite crystals add up to create a



The temperature is 54 degrees in the caves all year round, so it's cool in the summer, and warm in the winter!

water for two reasons. First, carbon dioxide molecules are heavier than air. And, second, the atmosphere around the drop has fewer carbon dioxide molecules so the carbon dioxide molecules want to go into the air to equalize the pressure. As the equalization process occurs, the drop of water is left flat just as a carbonated beverage would if it

whole range of delicate formations referred to as speleothems. The formations found in Crystal Grottoes Caverns include: stalactites, stalagmites, columns, bacon, ribbons, blanket or drapery types, soda straws, rim stone pools, saw tooth or serrated edges, along with the popcorn, grape, and cauliflower types of helectites.



ROCKTALK

Clearwater Nature Center
Maryland-National Capital Park &
Planning Commission
11000 Thrift Road
Clinton, MD 20735
301-297-4575

We're on the web:
SMRMC.org

Next Meeting:

August 27,

2013

7:00 PM

**August
Refreshments/
Programs**

Refreshments:

Potluck—Bring a dish to share.

Program:

August Auction