

Southern Maryland Rock and Mineral Club



Rock Talk



January, 2017

Free Door Prizes at Our Next Rock Club Meeting --- At our next SMRMC meeting on January 24th, there will be lots of door prizes given out to lucky attendees. Don't miss this opportunity to pick up some GREAT SPECIMENS of minerals, fossils, and lapidary material. FREE! FREE!! FREE!!! We plan to continue door prizes at all of our meetings this year. So come out and join the fun.

Do you like geodes? Then come to our January Meeting and maybe you will win one as a DOOR PRIZE!

Fossils, anyone? We will give away some great fossils at our January Rock Club meeting. Be there --- you may be a lucky DOOR PRIZE winner.

FREE Lapidary Rough From Around the World at Our January Meeting ---- Yes -- FREE lapidary rough as door prizes at our Rock Club Meeting on Jan 24th. You could be a winner if you attend!

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Next Meeting:
January 24, 2017 @ 7:00 PM

Program
Jewelry 101: Basic Jewelry Making
Linda Holden; Lorna will have tools and supplies for sale

Refreshments
Al and Carole
**Clearwater Nature Center, 11000 Thrift Road,
Clinton, MD.**

NO DECEMBER MINUTES WERE TAKEN

Rocks, Minerals, and Fossils in the News

'Diamond Del's Gem Mining Bus' visits MES

<http://uniondailytimes.com/features/lifestyle/9182/mining-for-minerals-and-rocks>



Photo courtesy of Monarch Elementary School Students in the 3rd, 4th, and 5th grades of Monarch Elementary School got to enjoy mining for minerals and rocks when "Diamond Del's Gem Mining Bus" visited the school earlier this month. Pictured are Logan Yarbrough and Anthony Dickert from Mrs. Tami Garrett's 3rd grade class taking part in the mining.

MONARCH — Most people don't normally associate mines with schools but students at Monarch Elementary School recently got to experience mining when a "mine" on wheels visited their school.

The school was recently visited by "Diamond Del's Gem Mining Bus" which, according to its website (www.diamonddel.com) is "The Field Trip That Comes To You!" The website states that the program "is designed to create interest in the rock and mineral unit often taught in grade levels ranging through k-12th (depending on the school district). This shows students that science can be FUN!"

The Upstate Diamond Del's Gem Mining Bus franchise is owned and operated by Joey Caldwell of

Spartanburg who visits area schools during the school, bringing the bus and providing students with an educational and entertaining experience.

The website states that experience begins before Caldwell arrives with the bus, as each school receives a DVD for the students to watch prior to the visit. The DVD, which is 20 minutes long, introduces students to each rock and mineral. The schools also receive brochures for each participating student. Each brochure features a rock and mineral identification card. The students bring the brochures to school with them on the day of the bus' visit. They are able to use those brochures when they are back in class to identify the stones they find while mining. There is also a follow-up DVD that teaches students how to classify and identify their collection.

As for the actual visit itself, the website states that during the 30-minute mining session, students are "guaranteed to find a fabulous gem collection featuring over 15 different gems and minerals around the world."

That's the program the students in the 3rd, 4th, and 5th grades got to participate in when Caldwell brought Diamond Del's Gem Mining Bus 5 to Monarch Elementary School earlier this month. According a press release issued by the school, the students "enjoyed mining for minerals and rocks" on the bus.

Boys & Girls Club, Dino Center team up for science education

BY Trudy Balcom, The Independent

http://www.wmicentral.com/community_beat/education/boys-girls-club-dino-center-team-up-for-science-education/article_c8a76ce4-cdfb-11e6-b554-7f4b1d275aec.html



Doug, Hazel and Christopher Wolfe operate the White Mountain Dinosaur Exploration Center in Springerville. The Center is partnering with the Round Valley Boys and Girls Club to offer an earth science exploration program at the club starting in January. The program is supported by a grant from Tucson Electric Power.

SPRINGERVILLE — Children just seem to have a natural fascination with dinosaurs. Some, like Doug Wolfe, of the White Mountain Dinosaur Center, never outgrow that fascination. Starting this winter, children who attend the Round Valley Boys & Girls Club will get the opportunity to work with the local paleontologist and his wife Hazel, exploring earth science, fossils, rocks and minerals as part of an after-school program.

The hands-on program will allow students of all ages an opportunity to handle fossil casts, learn about

prehistoric animals that inhabited the area, and even participate in fossil hunts.

Wolfe notes that exploration, research, field work and discovery provide one of the best ways to encourage students to appreciate STEM (Science, Technology, Engineering and Math) topics. “Testing and limited funds have made it harder to get students into the field,” Wolfe said. “We hope to expand those opportunities for students to work with scientists and to assist in making real scientific contributions.”

The program will run on two Fridays a month between January to early May, and will culminate May 5 when students show off the projects they have been working on as part of the program. Classes will be conducted at the club, at the Dinosaur Exploration Center in Springerville, and out in the field at area fossil sites, which is Wolfe’s passion.

The Wolfes are also creating an earth science exploration trunk that will include books, DVDs, rocks and minerals (many donated by the White Mountain Gem and Mineral Club), fossil specimens and activity guides. The trunk will be kept at the Boys & Girls Club and will be used to facilitate exploratory learning at the club in preparation for the Science Expo.

The after-school program would not have been possible without a \$5,000 grant from Tucson Electric Power. “The TEP donation is important and we are very grateful,” Wolfe said. “The TEP funds have already helped gain additional contributions from other individuals and institutions to support the student science projects. We hope to make this an ongoing, yearly program and encourage other entities to contact us if they can help support our work.”

Suzanne Kammerman, director of the Round Valley Boys & Girls Club, said she is excited about the opportunity the grant offers. “The Boys & Girls Club

is really thankful to partner with the Dinosaur Exploration Center to help these kids learn about the resources we have right here in our backyard,” she said. “How cool is it that the kids can be introduced to the science of geology and paleontology with resources we have locally? When I first sat down with Doug and Hazel, I could see their passion for science and for youth.”

Wolfe has been recognized for his exploration of local fossil sites that date to the Middle Cretaceous Period, about 90 million years ago. At that time, western New Mexico was a warm, tropical seashore. As part of the Zuni Basin Paleontological Project, Wolfe, working with other scientists, has discovered three new species of dinosaurs in area rocks since the 1990s, including some that were never found in North America before.

Earlier this fall, Wolfe and his wife presented their research into a set of fossilized dinosaur tracks they discovered in the area at the Society of Vertebrate Paleontology conference in Salt Lake City.

PREHISTORIC MARINE CREATURES IDENTIFIED FOR FIRST TIME

David DeMar

<http://www.newhistorian.com/prehistoric-marine-creatures-identified-first-time/7865/>



Image courtesy of Artist: Danielle Dufault. © Royal Ontario Museum

A group of scientists led by an undergraduate from the University of Toronto has identified, for the first

time, just what exactly a curious little prehistoric marine creature actually was during its lifetime.

According to a university press release, U of T student Joseph Moysiuk and colleagues have been able to identify a strange group of long-extinct cone-shaped marine animals as hyoliths, which would have evolved during the Cambrian period more than 530 million years in the past. One of the first animal species to display evidence of having a mineralized external skeleton, hyoliths were thought at one time to be related to mollusks, squids and snails, but Moysiuk has shown this is not the case. Instead, the curious little creatures were closer to brachiopods than anything else.

In a new research study, scientists point out that hyoliths, like other brachiopods, would have had a soft body enclosed between an upper and lower shell or valve. Meanwhile, bivalve molluscs are arranged into left-and-right valves instead. Additional differences include how brachiopods typically only open their valves at the front while feeding, otherwise keeping them closed to provide protection for their internal bodies.

The presence of hyoliths in the fossil record has not been scarce up until now. However, what has been absent has been any sort of critical diagnostic of the brachiopod’s soft anatomy. Moysiuk and his team made some surprising and important discoveries to fill in these glaring gaps, the most telling being that of a row of flexible tentacles making up the hyolith feeding structure. These tentacles, which extended away from the mouth, would have been contained between the lower and upper shells – and it was this brachiopod-like feature that saw the hyolith reclassified as such.

Living brachiopods feed by sweeping organic material suspended in water into their mouths with their tentacles. Moysiuk suggested that, based on

their anatomy, hyoliths would have fed in a similar manner.

Hyolith skeletons have long withstood attempts of others to classify the animal thanks to their structure and appearance, which incorporated one cone-shaped, bilaterally symmetrical shell and a smaller cap-like shell that protected the opening of the larger shell. The best visual description of a typical hyolith would be something shaped roughly like a pointed ice-cream cone with an attached cap, much like those that appear atop certain beer steins.

Many hyolith species had additional features as well, including a pair of curved, rigid spines that would have curled out between the cone shell and the cap. Known as “helens”, these spines almost resembled horns, but scientists think the spines may have been used to raise the animal’s body above the sediment of the marine floor, allowing the hyolith to stand, stilt-like, and gain better access to passing organic matter. Instrumental in the new classification of the hyolith were new fossilized remains discovered in British Columbia’s famed Burgess Shale deposits, a Cambrian-era fossil deposit that has a reputation for preserving soft-tissue features, something usually not preserved in traditional fossils. The new research paper is published in the journal *Nature*.



Neither Snow nor Freezing Cold Could Keep Us Away from JMU

by Dave Lines; photos by Dave Lines and Bill Curtin

Dateline: “James Madison University, Harrisonburg, Virginia, Saturday, January 7, 2017 at 8:30 a.m. Eastern Standard time --- It is snowing to beat the band! Already 2 inches on the ground and the temperature is 14 degrees Fahrenheit.”



Yet, it did not stop us from trekking the 170 miles from Southern Maryland. Were we crazy? No way!! Because we *knew* in our Rock Hound hearts that today was going to be “very special”. Every year for the past 10 or so, our club (along with many others) has been most fortunate to be hosted by one of the region’s greatest rock hound supporters ---Geology Professor Lance Kearns. He is an extraordinary mineralogist who has had lots of scientific papers published. Due to his particular passion for Virginia minerals, he has assembled a collection of Virginia mineral specimens that is unsurpassed anywhere locally --- perhaps the world. The high quality and aesthetic beauty of these sometimes one-of-a-kind Virginia minerals is the centerpiece of an excellent mineral museum that he established at JMU. And best part is that Professor Kearns (who is very comfortable with us calling him Lance) *loves* to share his expertise and enthusiasm.

At 8:15 a.m., I was the first to arrive – albeit about a half hour early --- and meet Lance at the outside door of the geology department where he was checking on the snow conditions. Immediately, he invited me in for some hot coffee and pastries. What great hospitality! We soon started talking about what he was going to do after his impending retirement this year. He is going to be the curator (at least initially) of the *NEW* Mineral Museum --- new? --- Yes, because the current one is much too small. Why? Because the University just received a \$20 million mineral collection from a very wealthy Virginia donor --- Mr. Peter Via of Roanoke. Whoa. This is HUGE! [Aside: When I later told my son Jeff, he knew all about Peter Via’s rock collection --- one of the best in the world.] Lance has also agreed to be in charge of moving the museum as well as the geology

department to their new location across campus. He is going to be a very busy retiree for the next few years.

And how does all this fit in with our visit to JMU? Well, Lance decided to start downsizing some of the incredible inventory of geology related “extras” that have accumulated over the years. As in every visit in the past, he generously puts out un-needed specimens as well as books and magazines from various donated collections for us rock hounds to “buy” --- some items are pre-priced and some can be taken for whatever we want to give. It is an extremely good opportunity to pick up some excellent specimens and related material that will improve our collections. And this year, in addition to many flats of minerals, he had put out a large selection of publications including some hard to find books.

But first back to our arrival --- by 8:55 a.m., eleven (11) of our Southern Maryland Club members (Paul and Linda, Bill and Debbie, Tim, Lorna, Emily and Francesca, Robin, Rich and me) had arrived along with nine (9) folks from the Montgomery County (MD) club. Lance welcomed us and explained that all the money we donated for specimens would go toward upgrading the mineral museum. Then we took a group picture and, about 9:10 a.m., Lance uncovered the flats of minerals and the “feeding frenzy” began with happy rock hounds selecting bargains of their choice. There was little time to decide – if you wanted something, you had better make up your mind quickly or someone else would take it. But even after the initial mild chaos, there were many unnoticed, but very good specimens, remaining – if you looked closely. This time, I chose only a few minerals and elected to purchase some of the hardcover books. If I had been better prepared, I would have brought a desired list of Rocks and Minerals magazines which were very reasonable at only \$5 for a full year (6 issues). My choices were a couple of pre-priced books --- the first was a rare copy of “Mineral Resources of Virginia” by Dr. Thomas Leonard Watson, U. VA. Geology Professor, published in 1907 by the Virginia Jamestown Exposition Commission, 618 pages --- truly a

treasure. The second was “Gem and Crystal Treasures” by Dr. Peter Bancroft, a table top 488 page volume published in 1984 of beautiful pictures with text about the world’s 100 best locations to collect crystals --- another treasure.



About 10:00 a.m., Lance took us all (we left our stuff safely locked in the Geology Lab) to visit the Mineral Museum. Even though I have visited it many times, this relatively small museum is always fun to peruse. And each time, I see something that I had not seen previously. It is really neat to see people studying the superb specimens in this spectacular mineral collection. Their “intentness” tells me they really appreciate these special crystals and minerals.



After about thirty minutes in the museum, Lance invited us back to the Geology lab where he continued identifying our unknown specimens and answering our queries.



Unfortunately, since I had to leave by 10:45 to attend our son's 40th birthday party back in Maryland (a three hour drive away), I missed a full hour of "shopping" back in the Geology lab. Still I very much enjoyed our "Annual Winter Field Trip". This was a particularly momentous occasion as it was our last such trip due to Lance's impending retirement.

I should add that throughout our morning with Dr. Kearns, he spent a lot of time patiently providing thoughtful answers to our many "rock" questions. And through it all, he made each of us feel special and comfortable with him. We could easily tell that he loves his profession. His replacement at JMU will have a hard act to follow. And we will truly miss our annual visit with rock hound's favorite university professor.

Member's Finds

Bill Curtin took some recently collected fossils from Calvert beach to John Nance who works at the Calvert marine museum, who said the white claw looking piece was a fossilized spider crab (top photo) claw encrusted at the base and that these fossils were 14 to 15 million years old.



Bill found some thick oyster shells at the bottom of the cliffs at the shore line of Brownies Beach which were 20 million years old. John gave him a humerus from a dolphin, about 15 million year old to give him some idea of what to search for next time he hunts for fossils in the area. Everything else Bill found was either rocks or recent fish bones (bottom photo). In return, for the fossil, Bill gave a kid a shark tooth for the same reason.



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.

Upcoming Shows and Events: 2017

March 4-5-- Wilmington, DE, 54th Annual Earth Science Gem & Mineral Show sponsored by the Delaware Mineralogical Society. NEW LOCATION: University of Delaware, Wilmington Campus, 2800 Penn Ave (Rt. 52).

March 11-- Fairless Hills, PA, 41st Annual Micromount Symposium sponsored by the Leidy Micromount Society. Northminster Presbyterian Church, 140 Trenton Rd.

March 18-19- Gaithersburg, MD 53rd Annual GLMS/MC Gem, Mineral and Fossil Show sponsored by the Gem, Lapidary & Mineral Society of Montgomery Co. MD. Montgomery Co. Fairgrounds, 16 Chestnut St.

March 25-26-- Plymouth Meeting, PA Annual Gem, Mineral & Fossil Show sponsored by the Delaware Valley Paleontological Society & Philadelphia Mineralogical Society. Lulu Temple, 5140 Butler Pike,

March March 25-26 -- Wysox, PA - The 48th Annual Che-Hanna Rock & Mineral Club show will be held on March 25 and 26 , 2017. NEW LOCATION!!!! Wysox Vol. Fire Co. Social Hall, 111 Lake Rd.

A Request for amber, copal, and plant exudates from Dr. Santiago-Blay, Smithsonian National Museum of Natural History

For years, Dr. Joseph B. Lambert (Northwestern University, Department of Chemistry) and I have been studying plant exudates (resins, gums, and phenolics), copal (partially polymerized resin), and amber (fossilized resin) as part of my research program with the Paleobiology Department, Smithsonian Institution, National Museum of Natural History. Links to some of our recent recent papers are included below for reference and I will be happy to send the pdf of a few other papers, if requested.

<https://blaypublishers.files.wordpress.com/2016/11/lambert-et-al-2016-leb-43215-2321.pdf>

<https://blaypublishers.files.wordpress.com/2016/02/lambert-et-al-leb-34-japanese-amber.pdf>

<https://blaypublishers.files.wordpress.com/2015/07/lambert-et-al-nmr-monocot-exudates1.pdf>

<https://blaypublishers.files.wordpress.com/2015/01/le-b-24-1-30-lambert-et-al.pdf>

I am interested in expanding our analyses of these materials and I am reaching out to as many gem and mineral clubs in the United States as possible to request small samples of plant exudates, copal, and amber with good geographical and botanical provenance data. We only need samples of about 100 milligrams (approx. the volume of a new eraser on a school pencil) in our NMR studies. If you have samples and would like us to analyze them (for free), please contact me at blayj@si.edu or at blayajorge@gmail.com. Please, do not send samples at this time. If we think that your samples are new to our analyses, I will contact you and provide mailing instructions. Thank you for your consideration of this request. Sincerely and gratefully,
Jorge Santiago-Blay, PhD



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**

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