

# Southern Maryland Rock and Mineral Club



## Rock Talk



### February, 2017

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Photos of the jewelry making presentation given by Linda Holden at the January 2017 SMRMC Meeting (photos by T. Foard, T. Smith).



**Next Meeting:  
February 28, 2017@7:00 PM**

**Program**  
Gem Discovery - A DVD on mining and processing precious gems.

**Refreshments**  
Bill Curtain

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

**JANUARY MINUTES**

Submitted by David Lines



**DATE:** Meeting was called to order on January 24 2017 at 7:10 pm by Ralph Gamba. Acting Present Bob Davidson was absent. Twelve (12) members were present.

**VISITORS:** Nick Mayorga likes rocks and wants to join club.

**TREASURER:** Dave --- no changes since August.

**MEMBERSHIP:** --- Polly (absent) --- 26 current members

**PRESIDENT'S REPORT** --- Cheryl Reese currently under a lot of stress due to difficult caregiving for Monty who had bad fall in addition to his ongoing battle with cancer. We all signed an encouragement card to Cheryl and will mail it tonight.

**FIELD TRIPS:** Dave Lines --- January field trip was to JMU (James Madison University. Dr. Lance Kearns will retire in July 2017. 11 members attended from our club. Lots of bargains since Geology Dept was moving. Big news was the donation of a \$20 million mineral collection to JMU from Peter Via, a wealthy collector living in Roanoke, VA. Dr. Kearns will handle to building and set-up of a new and larger Rock and Mineral Museum to accommodate the expanded collection. DMC trip on Jan 28th to Antreville SC for quartz crystals at Diamond Hill Mine. Must join the Lynchburg Club to attend. Dave and Ann leaving for Tucson tomorrow. Polly, Carole and Al going to India in February. Ralph and Mary going to Florida. February Field trip TBA --- trying to set up joint trip with Montgomery County Club to new VA kyanite site near Prospect, VA; several backup plans to include fossils and C&D canal





(Delaware) fossils. Ralph wrote a “thank you” note to the Adams County “Greenstone Quarry” for their gift of native copper specimens that we gave out as door prizes.

**PROGRAMS:** Carole said upcoming program presentations were: Tonight, Linda Holden “Jewelry Making”; Door prizes – Dave donated rock, mineral and fossil specimens tonight for door prizes. We drew numbers and lowest number started --- each person had 30 seconds to claim his/her door prize. 10 door prizes handed out. We will continue this in future. February-- DVD video “The Gemstone Journey” with snacks by Bill Curtin. March -- DVD video, August 2016 of Joe Dorris’ presentation to the Dallas Mineral Symposium re “Mining Amazonite and Smoky Quartz in Colorado” with snacks by Tim Smith; April -- Dave Lines, slide presentation of October 2016 visit to California to include rockhounding and a special visit to a private collection with snacks by Paul and Linda Holden

**WEBMASTER:** No report.

**NEWSLETTER:** Tim said Rock Talk was sent out early and he thanked people for their contributions and urged everyone to send pictures of their “finds” for each newsletter.

**MINUTES:** none for December, since it was the Christmas Party.

**OLD BUSINESS:** --- a pair of black women’s (?) gloves left at Christmas Party --- no one has claimed them.

**NEW BUSINESS:** Morefield Mine being mined by Martin Marietta – not open to public. Region IV Rock Swap at Gilbert Run park near La Plata this coming June --- annual pavilion rental reservation

“call in” starts at 8:00 a.m. on Feb 1st . Dave asked for and was voted approval to rent a pavilion for the swap.

**ADJOURNED:** Meeting was adjourned at 7:50 pm.

### Upcoming Shows and Events: 2017

**March 4-5--** Wilmington, DE, 54<sup>th</sup> 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, 41<sup>st</sup> 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 25-26 --** Wysox, PA - The 48<sup>th</sup> 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.

**SMRMC OFFICERS****PRESIDENT**

(position open)

Bob Davidson acting President

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[Bob.Davidson2@Yahoo.com](mailto:Bob.Davidson2@Yahoo.com)**Rocks, Minerals, and Fossils in the News****Forget Atlantis — “lost continent” found under Mauritius**<http://www.zmescience.com/science/geology/lost-continent-geology-mauritius-02022017/>

Geologists have confirmed the existence of a “lost continent” off the island of Mauritius, but don’t get overly excited yet. It’s all geology, no mystic civilization.

The lost continent



Lead author Prof. Lewis D. Ashwal studying an outcropping of trachyte rocks in Mauritius. Such samples are about 6 million years old, but surprisingly contain zircon grains as old as 3000 million years. Credit: Susan Webb/Wits University

Some 200 million years ago, the Supercontinent Gondwana contained today’s Antarctica, South America, Africa, Madagascar, and the Australian continent, as well as the Arabian Peninsula and the Indian Subcontinent. As it started to break apart, a teeny tiny bit of it was left behind. Studying a mineral called zircon, geologists have found some of this “lost continent”.

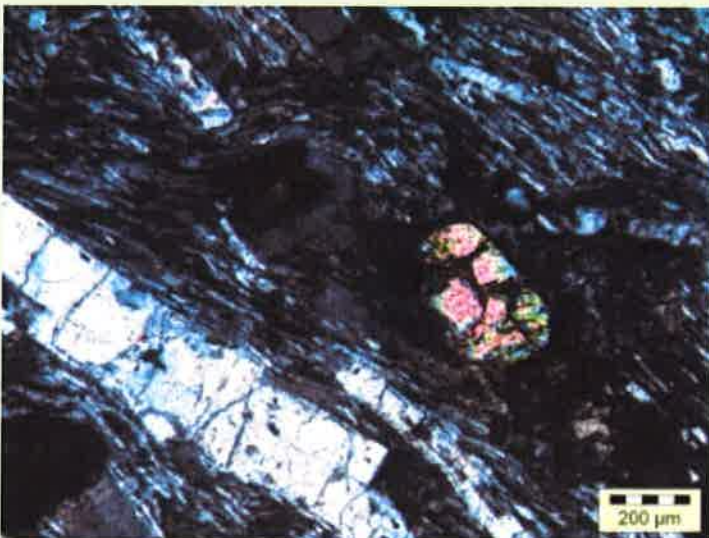
“Earth is made up of two parts – continents, which are old, and oceans, which are “young”. On the continents you find rocks that are over four billion years old, but you find nothing like that in the oceans,



as this is where new rocks are formed,” explains Ashwal. “Mauritius is an island, and there is no rock older than 9 million years old on the island. However, by studying the rocks on the island, we have found zircons that are as old as 3 billion years.”

Researchers have found very old zircon on the island before, but it hadn't been placed into a broader context. These zircons mostly occur in continental granites — so old rocks. They contain trace amounts of uranium, thorium, and lead, which enables scientists to date them accurately. We know that these rocks and minerals come from an ancient crust, but this crust was subsequently covered by young lava during volcanic eruptions, which prevented their discovery until now. Now, researchers believe they've figured out the source of these granites in an ancient continent — a piece that broke off from Gondwana. Most of the rocks didn't make it through the geological process, but the tough zircons did.

“The fact that we have found zircons of this age proves that there are much older crustal materials under Mauritius that could only have originated from a continent,” says Ashwal.



Variably sized crystals of alkali feldspar like the large white one at lower left are aligned by magmatic flow. A large zircon crystal appears as the brightly coloured grain just right of centre. Image here is taken through a petrographic microscope, cross-polarized light. Colors are not real. Credit: Wits University

Ashwal has now found several pieces of various sizes. He previously discovered several small zircons in the beach sand, but his study then was criticized with some geologists arguing that the minerals may have been brought there by wind.

“The fact that we found the ancient zircons in rock (6-million-year-old trachyte), corroborates the previous study and refutes any suggestion of wind-blown, wave-transported or pumice-rafted zircons for explaining the earlier results,” says Ashwal.

This information could help geologists reconstruct the Earth's tectonic past, like a 3D jigsaw puzzle that shifts in time.

“We are studying the break-up process of the continents, in order to understand the geological history of the planet,” says Wits geologist, Professor Lewis Ashwal, lead author on the paper

The article, “Archaean zircons in Miocene oceanic hotspot rocks establish ancient continental crust beneath Mauritius”, has been published in the prestigious journal Nature Communications.

## Fossil Fish Festival Feb. 18 at UW in Honor of Wyoming State Fossil

<http://www.uwyo.edu/uw/news/2017/02/fossil-fish-festival-feb-18-at-uw-in-honor-of-wyoming-state-fossil.html>



This fossil of *Knightsia coecaena* -- the focus of a Fossil Fish Festival Saturday, Feb. 18 -- is among many curated in the UW fossil vertebrate collection housed in UW's Department of Geology and Geophysics. (UW Photo)

The public is invited to attend a Fossil Fish Festival Saturday, Feb. 18, at the University of Wyoming in honor of *Knightsia*, the extinct fossil fish that has served as Wyoming's state fossil for 30 years.

The event will run from 11 a.m.-3 p.m. at UW's Berry Biodiversity Conservation Center. The Wyoming State Geological Survey (WSGS) is collaborating on the celebration with the UW Biodiversity Institute and the UW Geological Museum.

"The festival is a great opportunity for children and adults to interact with fossil fish that evolved roughly 50 million years ago," says the Biodiversity Institute's director of science programs, Brian Barber. Attendees at the family-fun event will have the opportunity to see *Knightsia* and other fossils from the WSGS collection; learn how to prepare a fossil fish; and tour the UW Geological Museum and wet collections of the UW Museum of Vertebrates located in the Berry Center. There will be fossil fish relief activities, face painting, raffles and presentations. Admission is free

"Fossils, like *Knightsia*, spark the imagination and curiosity of people of all ages," says WSGS Director Tom Drea. "Just looking at them makes one think about how the Earth and Wyoming have changed over expansive periods of time." *Knightsia* were the first fossils discovered in Wyoming and are a common fossil fish of the Eocene Green River formation. They are related to modern-day herring and once lived in an ancient lake system in southwestern Wyoming. The fossil fish was named after Wilbur C. Knight, pioneer Wyoming geologist who served as the first Wyoming state geologist (1897-1902) and UW Geological Museum curator. According to the Wyoming State Museum, third-graders at Anderson Elementary School in Cheyenne started the *Knightsia* Fossil Club and campaigned for their mascot to be the state fossil. The club achieved

its goal Feb. 18, 1987, with a law enacted by the Wyoming Legislature.

"Wyoming's fossil *Knightsia* are perhaps some of the most widespread and well-known fossils in the world, because one can find this small piece of Wyoming in nearly all museums and rock shops today," says Laura Vietti, Geological Museum and collections manager. "Through the Fossil Fish Festival, we hope to provide a fun, engaging and educational set of activities for Wyoming's public to learn about this famous Wyoming fossil and celebrate its significance to science and to our state's heritage."



## Tucson 2017

by Dave Lines

Immediately after the January Rock Club business meeting, my wife Ann and I went to BWI Airport and flew the next day to Arizona. We arrived in Phoenix around noon, rented a car and headed north to Sedona for a true "out-of-Southern Maryland experience". It has just snowed in Sedona and the scenery was magnificent --- red rock cliffs contrasting with the white snow and blue skies. Just incredible beauty.



And for those folks who appreciate "crystal squeezers", Sedona had some really weird folks and businesses. It seemed like every aging hippie from the late 60's had moved there and set up shops ranging from very upscale to the very strange and bizarre. I saw signs painted on the sides of buildings



that proclaimed “energy crystals for sale”. One said “The vortex is here”. Another sign offered “Night time UFO sighting tours”. Another downtown business had six foot tall replicas of “ET” for sale. No kidding.

We took a Sedona day tour which included a stop where about 10 local Native Americans were selling turquoise jewelry as well as other rocks. We visited a gorgeous church designed by Frank Lloyd Wright which was built into the side of a red rock cliff. An exquisite design that perfectly matched its natural setting. After about 24 hours in Sedona, we drove down to Tucson to meet our son Jeff. He been there a full day and had already checked out several mineral shows. It was only Thursday January 26<sup>th</sup> which was before the rock shows (over 40 now) officially opened, yet we spent the next 2 days visiting motel room after motel room and various tents set up all over the city trying to decide what to buy. It was a blurr. I spoke with Joe Dorris and his lovely daughter Krystle and thanked Joe for taking the time to pose for a picture with my good 88 year old (?) friend and rock mentor, Saralee, when she and Jeff visited his Smoky Hawk Mine near Crystal Peak, Colorado last summer.

In the evenings, we went out to eat with Jeff and his rock/mineral friends. I met Andy Siebel who showed Jeff around Munich 2 years ago. I also ran into Bob Farrar at the Executive Inn Show (now named the Fortuna Inn) --- recall that Bob has presented at least 2 programs for our club in the recent past.

I thoroughly enjoy meeting and talking with some of the literally thousands of vendors in Tucson. But it is exhausting. I have never seen so many rocks in my life --- more and more each year -- and the quality and quantity of both the specimens and the displays is several quanta above just 10 years ago. I did not take many pictures this year, but I saw some astounding specimens --- one that stands out in my memory was a 14 ton amethyst geode from South America --- it was 20 feet long and 6 feet in diameter. A giant.



I stopped in an “all India minerals” show --- they filled a warehouse and divided it into several rooms. Outside hung large banners that said things like “World’s Largest Apophyllite and Stilbite Crystal”. I had to see this --- it was free to look. I paced off the biggest – it was a geode-like pocket that was 10 feet long and 4 feet in diameter. They had a whole room full of them which were each the size of a kitchen stove or a refrigerator. They had one large 100’x50’ room with tables covered with beautiful flawless clusters of this same India zeolite material. In another location, I saw a plate of Moroccan fossils that looked like brown jellyfish all over a lighter tan matrix --- it was easily 10 feet tall and 15 feet wide and about 6 inches thick. How in the world do they ship such gigantic specimens?



What did I bring home? Not as much as some previous visits, but I had fun. I carefully picked out

20 rose quartz spheres ranging from 1-1/2" to 3" diameter that all have a perfect 6 point star. I also brought back a fabulous flat of 19 spectacularly perfect double (penetrating twin) pyrite crystals from Navajun, Spain. I found some very nicely crystalized native copper with nice patterns/shapes from New Mexico. Other specimens include a nice cubic galena (lead sulfide) crystal with many skeletal faces from Elmwood, Tennessee (unusual for that location). I picked up some fluorite and some galena on marcasite; a small quartz xls cluster with iridescent hematite from a new location (for me) near Mt. Ida, Ark and two polished gemmy dinosaur bone slabs from Colorado. I also got a nifty battery powered portable UV Light made in Germany.

Overall, we did less rock shopping this time and did more travel plus socializing with son Jeff and family friends. If you have never been to Tucson, you owe it to yourself to attend at least once. It's a blast.

### Member's Finds

Some of the mineral and fossils from Dave Line's extensive collection that were given away as door prizes.



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

The American Fossil Federation (AFF) will be holding its 6<sup>th</sup> annual fossil auction on Sunday March 12, 2017 at the North Bowie Community Center (3209 Stonybrook Dr., Bowie, MD).

Doors open at 11:30 AM.

Business meeting begins at noon.

Auction will begin at 12:30.

All sales are **Cash Only**.

AFF club members bring in an assortment of fossils from various localities and times periods along with other fossil related materials (posters, fossil replicas, display cases, books, and other items related to fossil collecting) to be included in the auction.

Admission is free.

Your participation is highly desired.





Just a quick note to let all of you know that the 2017 SuperDig IS ON for Saturday, April 29th.

Some major changes this year, which we will tell you about in future Tripmaster Letters.

For now, Save the Date !!

Just a reminder: Daylight Savings Time begins Sunday March 12 at 2 AM. Be sure to set your clocks (forward) accordingly.

### 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](mailto:blayj@si.edu) or at [blayajorge@gmail.com](mailto: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 4<sup>th</sup> 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](http://SMRMC.org)**