

Southern Maryland Rock and Mineral Club



Rock Talk



December, 2015

Message from the President

Thirty three months ago this club allowed me to become their President and we have seen changes that has brought us into a tight knit group that enjoys the hobby more than ever. And now with my personal workload and family situation, I must step down and allow someone else to take the helm from me to keep the club moving forward into more interesting times. I will still be here to assist when needed, but not as that one who will lead the club further down different paths that will bring even more enjoyment for others. Thanks to all that supported the club in the past years while I had the honor of being President.

In this issue:

November Minutes	2
Upcoming Shows and Events	3
Rocks, Minerals, and Fossils in the News	4
EFMLS/AFMS News	7
Upcoming Field Trips	7
Green Minerals from the Mid-Atlantic Region: Clinocllore	8
Member's Finds	9
Official Field Trip Notice	10

Next Meeting:

December 11, 2015 @ 6:00 PM

Program:

Potluck Christmas Party and Gift Exchange @ the home of Dave and Ann Lines

Refreshments:

Everyone bring a dish to share

Reminder:

Membership dues for 2016 are due!

Dues must be paid if you plan to attend the January 9th JMU field trip.

NOVEMBER MINUTES

Submitted by David Lines

DATE: Meeting was called to order on November 17 2015 at 7:10 pm.

VISITORS: Mary Arnett and Walter Schomburg have been members of the Lapidary Club for about 4 months and want to join the Rock Club.

TREASURER: same as Oct. --- in good shape.

MEMBERSHIP: Dues --- Dilemma --- need dues paid prior to January 9th JMU field trip and Dec meeting is Christmas Party at Dave and Anns' house, but Nature Center computer system won't accept dues until Dec 1st or after. Solution is that tonight Glenda can give you your user ID number and you can go online after Dec 1st and pay dues. If questions, you can call Glenda at the Nature Center at (301) 297-4575.

FIELD TRIPS: Thanks given to Jim White for his leadership doing Field Trips this past year. 2016 field trip chair will have 2 people, Dave and Ralph -- each will plan half of the trips for 2016. Tina said MAGMA had a trip to a new location near Prospect, VA for kyanite. Owner was a MAGMA member who currently lived on the property in a tent. Area had been timbered and kyanite could be found on the surface throughout the cutover. Owner has and wants to sell the contents of ½ of a Rocks Shop which sitting out in the weather in cardboard boxes. Tina email Owner's phone number to us. Tim and Jim went to Churchville, MD on Nov 14th with Montgomery County Club: found long epidote crystals, some pyrite and calcite. Morefield Mine trip, November 21, 2015 – for both Lapidary and Rock Clubs.

January Trip --- Dave --- JMU (James Madison University) on Jan 9th, 2016. Sign-up list passed around. "Short Notice Fossil Trip" sign-up list

passed around --- expect 24 hrs notice max as weather dependent ---- needs 2 days of strong north winds for a "blowout tide" (best conditions). Bad news: Dave announced that Richmond Club had received a letter from Vulcan saying that Vulcan Quarry field trips would no longer be allowed. Gary proposed Field Trip Chairmen from local clubs cooperate on all trips (note --- we currently share field trips with Northern VA and Montgomery County clubs – also with Lynchburg and Richmond.) Specifically, Gary wants to do combined trips with MGS (Maryland Geological Society), Baltimore Gem Cutter's Guild, Chesapeake club and possibly Solomon's Marine Museum. No action taken. Gary also said MGS has 6 trips planned for kids in 2016.

PROGRAMS: Carole --- Need programs for 2016. Tonight's Program is "Micro-Mounting --- Good Things Do Come In Small Packages" by Steve Weinberger (Past President EFMLS)

WEBMASTER: Website getting lots of hits – several hundred per week. Put Rock Talk newsletter and JMU Field Trip mention on website. Bob disappointed that he sent 55 emails about possible SMRMC Show in Spring (May/June timeframe?) at Jug Bay Nature area, BUT he only received 16 replies --- all positive. Bob lamented that our club needs reinvigorating – he had various ideas to do so like simplifying meetings to make more time for interaction of members.

NEWSLETTER: No report.

MINUTES: Minutes from Oct meeting approved. Linda was absent. Dave will take minutes tonight.

OLD BUSINESS: Michael Patterson needs to get Kyle Lowe's OK to reserve spend \$600 for rental fee for 24 hours to reserve Jug Bay/Patuxent Wildlife Area (exact location name?) for a SMRMC Spring

Rock Show. Bob will ask Michael as soon as possible to reserve location for us. Motion made and approved to reserve above location for a show on one of first 3 Saturday's in June (4, 11, or 18) whichever date is available. Polly (nominating committee chair) reported that all Club Officer positions had volunteers except President as follows:

President --- (no volunteer at this time)

Vice President (Membership) --- Polly Zimmerman.

Vice President (Programs) --- Carole Raucheisen

Field Trips --- Dave Lines and Ralph Gamba

Newsletter Editor --- Tim Foard

Web Master --- Bob Davidson

Treasurer --- Dave Lines

Motion made and approved to accept slate of 2016 Club Officers by acclimation.

NEW BUSINESS: Reminder that the Northern Virginia Show was this weekend Nov 21-22 at George Mason University in Burke, VA off Braddock Road.

ADJOURNED: Meeting was adjourned at 8:00 pm.

Upcoming Shows and Events:

2015-2016

December 17-- Fairless Hills, PA—Leidy Microscopical Society regular club meeting at the Northminster Presbyterian Church 7:30 PM

February 13-14-- Albany, NY—Annual Show; Capital District Mineral Club, New York State Museum, 222 Madison Avenue

March 5-6-- Newark, DE—53rd Annual Earth Science Gem and Mineral Show, hosted by the Delaware Mineralogical Society, Delaware Technical and Community College, 400 Stanton-Christiana Road (@I-95 Exit 4B)

March 19-20-- Sayer, PA—47th Annual Che-Hanna Rock and Mineral Club Show, Athens Twp. Volunteer Fire Hall, 211 Herrick Avenue

Rocks, Minerals, and Fossils in the News



Millers Pond in Durham is a great place for a hike

By Christopher Zajac Special to the Record-Journal

<http://www.myrecordjournal.com/news/lifestyle/shortwalks/8033600-129/millers-pond-in-durham-is-a-great-place-for-a.html>

DURHAM — The tranquility of Millers Pond and the fabulous rock formations surrounding it make for a great short walk. The pond is the centerpiece of Millers Pond State Park, nestled on the eastern side of town along the Haddam town line.

There are some exceptional examples Connecticut's bedrock through the park. The rock outcropping along the south side of the parking area is the first. A guide to the geology of the area on the park's website mentions the pale volcanic gneiss that contains different minerals. Millers Pond was acquired in 1955 by the State Park and Forest Commission. It was originally the 30-acre pond and 170 acres of woodlands. Since then the state has acquired more property and expanded the park.

A wide trail from the parking lot leads to the water's edge. The water is very clear and clean because the pond is primarily spring fed.

The state DEEP website says the pristine waters make the pond excellent for trout and small mouth bass.

I followed the one-and-a-half mile white trail counterclockwise around the pond. After crossing over a small dam, a great area to sit and reflect or have a picnic, I turned left toward the water's edge.

There I came across an outcropping of rock that showed different bands of gneiss and pegmatite. Gneiss, pronounced "nice," is a metamorphic rock with minerals aligned in very pronounced or thin bands. Pegmatite intrusions in volcanic rock in this area show coarse crystals usually of feldspar, quartz and micas. I noted that the rock had different layers, each sticking out slightly differently than the one above or below. The geology guide for the park calls this "differential weathering." The softer rock and minerals exposed to the elements wear away quicker than the harder ones.

I continued along the white trail, sometimes climbing over rock formations. I came to a rock outcropping towering about 20 feet over the edge of the pond. There is a sign that prohibits jumping off the rocks into the shallow water. It is a great place to stop and admire the view and reflect.

The trail descended down to a steel footbridge over a small concrete dam and spillway. It was here that Thomas Miller originally constructed a dam prior to 1704 to feed Sumner Brook to power his gristmill downstream in Middletown.

The white trail continued over the dam and merges with the blue trail along the southern end of the pond. The serene waters of the pond were on my left and large rock formations loomed to my right.

The trail turned north along the eastern side of the pond, I heard the distinct call of wild turkeys and tried to spot them through the dense mountain laurel, but was unsuccessful. The eastern shoreline has fewer rock formations. However, there is a great large rock that juts out into the pond. It was easy to walk out to the tip of the rock and take in the view of almost the whole pond.

Leaving the rock behind, I walked along the white-blazed trail a short distance eventually reaching the place where I began my circular trek. The cool, crisp fall air and the peacefulness of this hidden pond made for a very enjoyable short walk.

More information: CT DEEP website with trail map: <http://www.ct.gov/deep/cwp/view.asp?a=2716&q=325240>

The spiky 'mud dragon' that lived half a BILLION years ago: Fossils of strange species may reveal how worms evolved

By [ELLIE ZOLFAGHARIFARD FOR DAILYMAIL.COM](http://www.dailymail.com)

<http://www.dailymail.co.uk/sciencetech/article-3335440/The-spiky-mud-dragon-lived-half-BILLION-years-ago-Fossils-strange-species-reveal-worms-evolved.html>

Fossils of a 535 million-year-old 'mud dragon' have been discovered in China.

The creature had an armored body, rows of spines and a mouth ringed with sharp teeth, causing some to liken it to the terrifying sandworms from the 'Dune' sci-fi novels

But while its appearance may sound fearsome, the marine creature was just a few millimetres in length and an early ancestor to today's 'kinorhynch'.

The discovery, made by researchers in China's Nanjiang County, could provide important clues on

how creatures with segmented bodies, such as worms, evolved.



Fossils of a 535 million-year-old 'mud dragon' have been discovered in China. Pictured is an artist's impression. While its appearance may sound fearsome, the marine creature was just a few millimetres in length and an early ancestor to today's 'kinorhynch' species

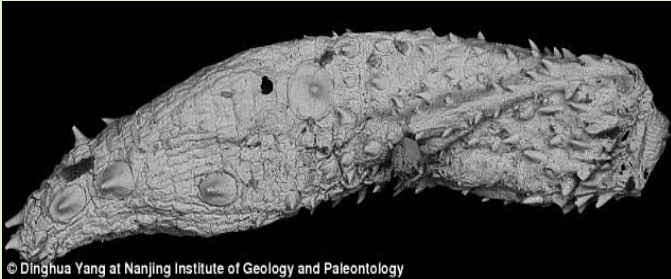
The area studied was once covered by a phosphate-rich ocean, where the newly-discovered creature, dubbed *Eokinorhynchus raru*, thrived.

'These tiny worms probably lived in the interstitial spaces within sandy sediments, so they likely used the spiky spines to anchor themselves when navigating among sand grains,' Virginia Tech's Shuhai Xiao told **IFLScience**.

'They may have also functioned as defensive structures.'

The phosphate in the oceans fossilized the worm-like creatures, causing their bodies to transform into the same material that makes teeth and bones, according to an in-depth report by Live Science.

The creature is believed to have had 20 armored body segments, each one circled by plates and studded with spines.



Pictured is a scanning electron microscopic image of *Eokinorhynchus rarus*. 'These tiny worms probably lived in the interstitial spaces within sandy sediments,' according to the researchers

Mud dragons, also known as kinorhynchans, are 1mm segmented, limbless animals, with a body consisting of a head, neck, and a trunk

It may be an ancestor of marine invertebrates called kinorhynchans, also known as mud dragons, according to the findings published in *Scientific Reports*.

Today, around 240 kinorhynch species exist, and their bodies are divided into three segments; the head, the neck and the trunk.

The head includes a mouth cone with circlets of teeth, and the trunk is further split up into 11 segments.

Earlier studies suggested that the species diverged just before the Cambrian, but up until now, no kinorhynch fossils have been found.

The team found a number of similarities between the new extinct species and today's kinorhynchans to suggest that they may be related.

Both creatures have trunks that are divided into segments, each made up of small plates. They also both have hollow spines called spinose sclerites.

The main difference is that *E. rarus* has five pairs of large spines arranged around the trunk, one spine located in the middle of its body and two pairs of spines located near the anus.

Despite being around for a billion years, the fossil record of kinorhynchans has huge gaps.

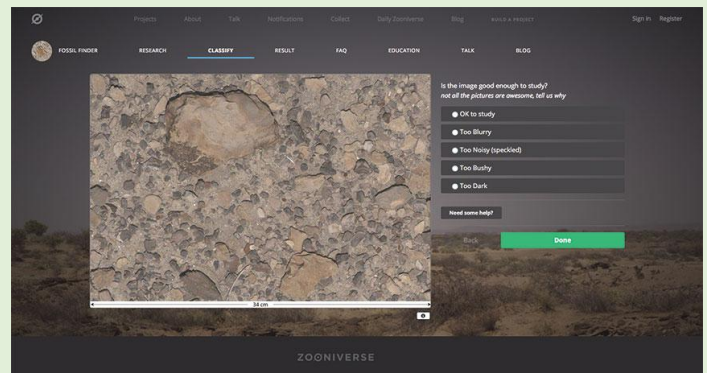
The latest discovery could help provide a clearer understanding of the species, as well as provide vital clues to how segmented bodies evolved.

Search for fossils from the comfort of home

New citizen science website seeks help classifying photos

By [Erin Wayman](#)

<https://www.sciencenews.org/article/search-fossils-comfort-home?mode=magazine&context=191158>



‘Armchair anthropologist’ takes on new meaning at [FossilFinder.org](#). The citizen science website is seeking volunteers to look for fossils and stone tools and to classify rocks captured in aerial photos of Kenya’s Lake Turkana Basin. The basin has been home to important discoveries in human evolution, including many hominid fossils and the earliest known stone tools (*Science News: 6/13/15, p. 6*).

Researchers at the University of Bradford in England and the Turkana Basin Institute teamed up to create Fossil Finder. Using radio-controlled helicopters, as well as cameras hung from kites and photographic poles, the team has collected more than 900,000 images from a roughly 4-hectare swath of land. About 46,000 of these photos are online and more are being added regularly, says project coinvestigator Adrian Evans of Bradford.

“The aim is to surpass what could be ordinarily achieved with a more traditional boots-on-the-ground model of exploration,” Evans says. With more eyes carefully surveying the area, the team hopes to get a better look at Lake Turkana’s past environment.

Using Fossil Finder doesn’t require special skill, but it does take some practice. The website lacks a tutorial, but helpful pop-up windows explain what to look for and how to classify various types of rocks, fossils and other objects. The quality of the photos vary: Some have a resolution as high as 0.3 millimeters while others are too blurry to classify. Users have already analyzed over 32,000 images, and have uncovered some neat finds, including an extinct crocodile specimen, hippopotamus teeth and stone tools.

In February, Evans says, the team intends to visit Lake Turkana to investigate these and other promising discoveries.

EFMLS/AFMS NEWS by Timothy Foard



The December newsletter recognizes the AFMS rockhounds of the year from the various region federations. The Austin convention recap and the changes to the AFMA Uniform Rules are also present in this issue.

In addition, the results of the competitive exhibit, web site competition, editors contest, and the All American awards are published in this issue.

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



The EFMLS Newsletter for December has the registration info on the 2016 EFMLS workshop at Wildacres in North Carolina. There is an article by Gary Lohman on the contribution of clubs in kindling the interest of youth to the earth sciences when there are so many distractions competing for their attention. The “Safety Matters” article gives the importance of short, but informative safety talks to club members. The winners of the Eastern Federation rockhound and of the year and bulletin editors are also included in the December newsletter.

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

Upcoming Field Trips

Our annual field trip to JMU (James Madison University) Geology Dept. has been confirmed with Dr. Lance Kearns and will be held on Saturday Jan 9th, 2016

If interested, contact David Lines at dave.lines@earthlink.net (be sure to include your name, email, and cell phone number where you may be reached in an emergency or if a cancellation occurs.)

Green Minerals of the Mid-Atlantic Region: Clinochlore

Timothy Foard



Chlorite(Clinochlore)Sheet R.Weller/Cochise College.

<http://skywalker.cochise.edu/wellerr/mineral/chlorite/chlorite1.htm>

Clinochlore ($(Mg,Al)_6(Si,Al)_4O_{10}(OH)_8$) is a member of the chlorite group, which consist of about a dozen greenish minerals that are similar in composition, and sometimes, appearance to the micas. The first part of its name refers to its inclined optical axis which is revealed when a section of the mineral is viewed under polarizing microscope, and the second part of its name refers to its characteristic green color. Clinochlore was initially called chlorite, but now the former is often used to refer to any number of green minerals.

It is one of the most common members of the chlorite group and was first discovered in 1851 in Chester County, Pennsylvania. The crystals are monoclinic in nature, but pseudo-hexagonal crystals occur. It has a hardness of 2-2.5 and perfect cleavage in one

direction. It sometimes takes the appearance of one of the green micas, but the sheets are often described as flexible, but lack the elasticity which is characteristic of the micas.

The mineral also occurs in massive and granular forms. It forms a solid solution with an iron containing chlorite mineral, chamosite, which is almost as common. Despite its abundance, large, well-formed crystals are not common. It is a secondary mineral of low-grade metamorphism of other silicates such as amphibole or biotite and occurs in schists and serpentine, in part contributing to the green color of these rocks. It is also present as a coating to other minerals such as quartz and calcite and sometimes occurs as inclusions within these minerals.

Clinochlore has limited use as a gemstone because it is a relatively soft mineral, but they make attractive cabochons. A deep purple chromium containing variety, kammererite, is very popular among collectors.

Sources

Clinochlore Mindat.org.

<http://www.mindat.org/min-1070.html>

Dana's Textbook of Mineralogy, with an Extended Treatise on Crystallography and Physical Mineralogy, by Edward Salisbury Dana. Fourth Edition, 1932. John Wiley and Sons, 851 pp.

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

The Mineral Clinochlore. Minerals.net

<http://www.minerals.net/mineral/clinochlore.aspx>

Member's Finds

These specimens of blue kyanite, which is a silicate of aluminum, came from a site near Prospect, Virginia. They were collected by Tina and Harry League during a MAGMA field trip.



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.

SMRMC OFFICERS

PRESIDENT

Membership Chairman

Polly Zimmerman

polly.zimmerman@verizon.net

Programs Chairman

Carole Raucheson

caroleal@verizon.net

Secretary

Linda Holden

lhholden@aol.com

Field Trip Chairman

David Lines

Dave.lines@earthlink.net

Ralph Gamba

rgamba@verivon.net

Treasurer

Cheryl Reese

cheryl_59@comcast.net

Editor

Timothy Foard

bmorebugman@yahoo.com

Webmaster

Bob Davidson

Bob.Davidson2@Yahoo.com

OFFICIAL Southern MD Rock and Mineral Club FIELD TRIP**SATURDAY, JANUARY 9, 2016 (weather permitting)****9AM until NOON****JAMES MADISON UNIVERSITY, Harrisonburg, Virginia
GEOLOGY DEPARTMENT and MINERAL MUSEUM**

Sign-up required...call me, e-mail me or see me at the Christmas Party on Dec 11th at my house

We may have to limit the attendance due to the size of the facilities.

This will be a Joint Trip with the Montgomery County, MD Club.

This is a great trip and the only one where you can buy high quality specimens at very reasonable prices --- plus learn something and see some super rocks and minerals in JMU's Mineral Museum. Dr. Kearns really likes Rockhounds and devotes a Saturday morning every year for us. Upon arrival, he even has coffee and pastries to welcome us.

We will all provide our own transportation and park in the JMU parking lot in the front of the new facility, Memorial Hall (The old Harrisonburg High School). Plan to arrive between 8:45 to 9AM. See the directions below and walk directly to the Geology Lab. If you need transportation or any other information, please call or e-mail me for assistance. If the weather is bad, use your own best judgment before driving.

JMU has a fully equipped geology lab with state of the art equipment. Dr. Kearns is well known in his profession and has generously allowed us to visit his lab, museum and dedicate this Saturday morning to our clubs.

If you have any minerals that you need to identify, bring them along. We should have time to run five or six specimens thru the x-ray diffraction equipment. There will be microscopes available and other equipment for testing and viewing. Dr. Kearns also has a large fluorescent mineral collection for our viewing pleasure. Dr. Kearns may have some surplus mineral books, specimens, miniatures and micros for sale to benefit the museum, be sure to bring cash or your checkbook. This material will be first class and all the proceeds go toward future museum purchases. Since some items you may pay any price you decide, PLEASE be GENEROUS. The museum will be open for our viewing pleasure.

DRIVING DIRECTIONS TO JMU HARRISONBURG, VA. WASHINGTON, D.C. AREA

[The physical address of the JMU Geology Dept. is "395 S. High St., Harrisonburg, VA 22807"]

* I-495 to I-66 (west) to I-81(south) to Harrisonburg, VA. (About 120 miles [2 hours driving time] from intersection of I-495/I-66).

* Exit 245 (Turn right on Port Republic Road --- go 0.5 miles)

* Proceed to S. Main Street (Rt. 11) and turn right at the light.

* Proceed northward on S. Main Street --- go 0.6 miles --- and turn left on Martin Luther King St.

* Proceed over the bridge to the traffic light on South High Street (RT. 42).

* Memorial Hall (the old Harrisonburg High School) is directly in front of you. Go straight into the parking lot on your left. Try to arrive between 8:45 and 9:00 AM.

- * To enter the Geology Department, walk around the building to the left (Grace Street Side)
- * When you enter the building, go down the flight of stairs on your left. Enter the double doors and you are in the Geology Department. Walk around to your left and follow the hall. The mineralogy lab will be open on your right.
- * The Mineral Museum will be open so be sure to spend some time here.
The Southern Maryland Rock and Mineral Club
Dave Lines, Field Trip Leader.....E-mail dave.lines@earthlink.net Cell phone-----240-427-7062



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**