

Southern Maryland Rock and Mineral Club



Rock Talk



July, 2015



Message from the President

Summer is here in its full regalia! This is one of the best times to be out, enjoying the outdoors, and collecting beautiful specimens and samples for one's collection. While doing this, one must always be considerate of the land you are collecting from. Treat it like what you would expect from someone that was collecting on your property. One collector can ruin it for many others and take a long time for that landowner to permit anyone to collect from the site again. Sometime we may be our worse enemy.

Well, I am off to Taiwan for some business and scheduled to be back just before the meeting. I am hoping I get some "quality time" at one of the many "Jade Markets" for some crafts, polished and rough stones, and jewelry. It is always weather dependent and time permitted outside of the work schedule. Take care all!

In this issue:

June Minutes and Wildacres Update	2
Upcoming Field Trips	3
Upcoming Shows and Events	3
EFMLS/AFMS News	4
Rocks, Minerals, and Fossils in the News	5
Green Minerals from the Mid-Atlantic Region: Actinolite	8
Member's Finds	9

**Next Meeting:
July 28, 2015 @ 7:00 PM**

Program: TBD

**Refreshments:
David Lines**

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

JUNE MINUTES

Submitted by Linda Holden

DATE: Meeting was called to order at 7:01pm on June 23, 2015. Dave and Rich brought samples that they collected from the Limestone Quarry.

VISITORS/NEW MEMBERS: No visitors.

MEMBERSHIP: Nothing to report.

NEWSLETTER: Please send reports and other items of interest to Tim as early as possible so he can get the newsletter out on time. Be sure to check out the EFMLS Newsletter.

FIELD TRIPS: Rich reported on Limestone Quarry trip with the Delaware and Montgomery clubs. Everyone found something. Dave and Rich brought samples from the trip. There is a trip to Purse State Park this weekend. Ralph reported on a Pennsylvania site that was mentioned during the program at the last meeting. He and Mary took a side trip there. The area is more developed and they couldn't find the location of the dump.

TREASURER: No report.

MINUTES Approved as written

PROGRAMS: Carole reported that Cheryl and Monty Reese are providing refreshments tonight. Lorna Larson is doing our program. She will be doing a demonstration on Kumihimo. Carole still has some slots that need to be filled. She contacted Steve Weinberger from the Baltimore Mineral Society. He does programs on micromounting, silversmithing and faceting. He will be doing a program for us in November. We need to move the meeting night in November due to Thanksgiving. Carole also contacted Jim Patzer from the American Fossil Federation. He will put a notice in their newsletter

that we are requesting speakers to do programs for our club. We do not have anybody for July. Ralph gave Carole some DVD's. Tim suggested we have a show and tell in July. Gary volunteered to contact Steve from the Calvert Marine Museum to see if he is available to do a program. Carole also needs someone to do refreshments in July. We have our auction for the August meeting. Tim will do a program in September, but we need someone to do refreshments for November.

WEBMASTER: Bob reported things are going well. He is getting lots of pictures.

OLD BUSINESS: Michael said we have a verbal confirmation for February 13th and 14th for the show. Rich pointed out that we need to advertise early so dealers can plan ahead. Michael said the center is busy from now until August so he can't really do anything now dealing with the show. Gary reported for the Organizing Committee. They will need to meet for 1 hour prior to the meeting starting next month. We need to start advertising and dividing up tasks. We need volunteers from the club. Harry said we need an email confirmation for the dates requested and may need to put some money down. Rich asked Michael to go out and get an email confirmation for the dates requested. Dave said he needs at least a four month leeway to advertise the show in three magazines. Michael again said this is the busiest time for the center and he has to focus on programs at the center. He's lost 2 staff people. Gary said the club should be able to take on added responsibility. Gary reported on EFMLS. If anyone is interested in the Wild Acres program in August you need to act now. He still has raffle tickets to sell. He is trying to make connections with other clubs. He went to the Baltimore Gem Cutters Society meeting. They suffer from some of the same problems we do in finding programs.

NEW BUSINESS: Rich suggested November 17th for our November meeting date. A motion was made and approved. Michael also approved the date. Rich reminded us that November elections are coming up so we need to think about new people for club office positions. Dave inquired about the business cards produced by the Nature Center for the club. Paul Holden had one of new ones. Michael will order them. We also need to order new name tags for those that don't have them. They cost \$7.00. Bob said that we haven't received any donations/gifts for the August auction. Members need to bring in items such as rocks, tools, equipment, etc., anything you have that you think others would be interested in and/or you want to get rid of. Mel reported that Wild Acres Program is more expensive than the program at William Holland School of Lapidary Arts.

ADJOURNED: Meeting was adjourned at 7:36 pm.

Wildacres Update

Participants are needed for the Wildacres fall session. The current list of registered students has only a few students, and the fall session is in danger of being cancelled.

Information on the EFMLS Wildacres classes for August 2015 is available in the June/July EFMLS newsletter <http://www.amfed.org/efmls/newsletters.htm>. There is also a registration form and a list of classes in the newsletter for the fall session, which takes place August 24-30. For more information, visit the above web site.

Upcoming Shows and Events: 2015

August 22-23 --50th Annual Rock and Mineral Show sponsored by the St. Lawrence County Rock & Mineral Club. Madrid Community Center, Madrid, NY

September 12-13 --52nd Annual Gem, Mineral, and Fossil Show sponsored by the Northern Berkshire Mineral Club. Franteral Order of eagles, 515 Curran Hyway, MA

September 19-20 --Annual Gem, Mineral, Fossil, Jewelry Show and Sale sponsored by the Mid-Hudson Valley Gem and Mineral Society. Gold's gym and Sports complex, 258 Titusville Road, Poughkeepsie, NY

September 26-27 --51st Annual Gem, Mineral, and Jewelry Show hosted by the Gem Cutters Guild of Baltimore. Howard County Fairgrounds, West Friendship, MD

Upcoming Field Trips

*Combined (with the Gem, Lapidary, and Mineral Society of Montgomery County) at Vulcan's Manassas Quarry, Manassas, Virginia
Saturday July 25th*

*Combined (with the Gem and Mineral Society of Lynchburg, Inc. and the Roanoke Valley Mineral and Gem Society, Inc.)
field trip to Willis Mountain kyanite mine, Dillwyn, Virginia,
on August 22nd*

If interested, contact Jim White
at whitejs1@verizon.net.

EFMLS/AFMS NEWS by Timothy Foard



The June/July newsletter of the AFMS recognizes AFMS rockhounds of the year.

The Austin Gem and Mineral Society's annual show, Gem Capers 2015, will host the American Federation and South Central Federation conventions and show on October 23rd - 25th. There is an lengthy article on the final ruling by the USDA for the National Forest Service regarding rockhounding and casual (unplanned encounter of fossil sites) collecting .

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



The EFMLS Newsletter for June/July has the minutes of the 65th Annual Meeting of the EFMLS convention at Hickory, NC. There is a call for judges to evaluate competitive cases. Training is free and takes place august 14-16, 2015 at the Lodge Hotel and Banquets, 3551 Penridge Drive, Bridgeton, Missouri. An article on James Dwight Dana, the father of the Dana's System of Mineralogy, also is included in the newsletter.

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

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Rocks, Minerals, and Fossils in the News

<http://www.vox.com/2015/6/9/8748035/dinosaur-fossil-blood-proteins>

Scientists just found soft tissue inside a dinosaur fossil. Here's why that's so exciting.

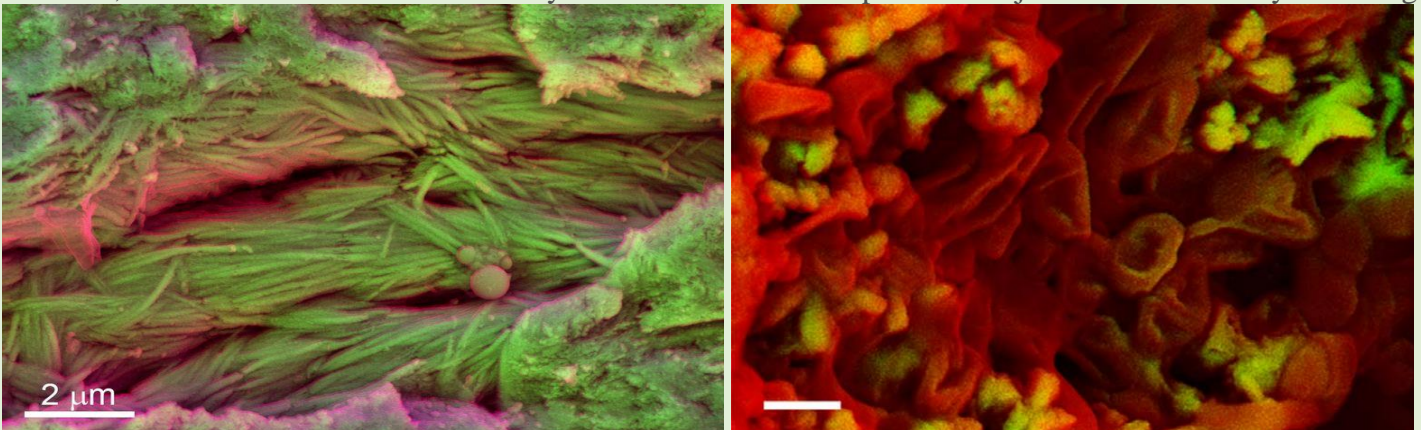
Updated by Joseph Stromberg on June 9, 2015, 11:00 a.m.



A theropod claw fossil, in which microscopic structures resembling red blood cells were found. (Laurent Mekul)

Dinosaur fossils, it was long thought, are simple objects. The fossilization process leaves the overall shape of a dinosaur's bones intact, but all the microscopic structures inside them — the blood cells, connective fibers, and other sorts of soft tissue — inevitably decay over time.

But that view is changing — and it's possible that many ancient fossils may preserve more detail than meets the eye. The sort of biological tissue now being found in some fossils could tell us about dinosaur anatomy, behavior, and evolution in ways that weren't possible just a few years ago.



The photo above, from a new study published in *Nature Communications* and led by Sergio Bertazzo of Imperial College London, shows an extremely zoomed-in view of a 75-million-year-old theropod claw, taken from the London Natural History Museum's collection. When researchers scraped tiny pieces off the fossil and looked at them under an electron microscope, they found tiny structures that look a lot like collagen fibers present in our own ligaments, tendons, and bones.

In other dinosaur fossils, the researchers found features that resemble red blood cells. Tests showed that they have a similar chemical composition to the blood of an emu (a bird thought to be a relatively close relative to dinosaurs). The idea that dinosaur fossils might harbor soft tissue first surfaced about a decade ago, when paleontologist Mary Schweitzer found evidence of blood cells preserved inside *T. rex* fossils.

But what's so exciting about this new study is that the fossils used, unlike Schweitzer's, aren't particularly well-preserved. Susannah Maidment, one of the paleontologists who worked on the paper, called them "crap" specimens. If they have preserved soft tissue inside them, it could be a sign that thousands of other fossils in museum collections do too.

For hundreds of years, most paleontologists never considered that their fossils might preserve these sorts of microscopic soft-tissue features. It was assumed that the proteins and other molecules they're made of would deteriorate in just a few million years.

What's more, looking inside them to confirm this would require that people damage the fossil, either by breaking it open or by dissolving the hard, mineralized outside, as Schweitzer did with her *T. rex*. "No right-thinking paleontologist would do what Mary did with her specimens," paleontologist Thomas Holtz told Smithsonian for a 2006 story on Schweitzer's discovery. "We don't go to all this effort to dig this stuff out of the ground to then destroy it in acid."

Schweitzer did so after a veterinarian at a conference happened to see microscope slides of *T. rex* bone slices and observed that there were red blood cells inside it. But her claim remained controversial among paleontologists — even after her 2006 paper, which presented more thorough testing.

More recent chemical analysis has provided further evidence that the *T. rex* bones do indeed contain blood cells, and Schweitzer has since found soft tissue preserved inside an 80-million-year-old hadrosaur. It's still unclear exactly how this soft tissue is able to survive, but some hypothesize that iron molecules might bind to proteins in the tissue, making it more stable.

This newest paper, conducted with weathered, run-of-the-mill fossils rather than pristine ones, suggests that this process might be the rule, not the exception. If so, these findings could be the first of many to come.

You can only learn so much about an organism from its bones. As much as we've discovered from the hundreds of thousands of dinosaur fossils excavated around the world, we're still debating whether dinosaurs were warm- or cold-blooded and how many of them had feathers.

Peering inside these dinosaurs' bones — to look at their blood cells, connective tissue, and other microscopic features — could dramatically improve our understanding of their biology as a whole. The structure of their blood cells, for instance, could hint at their behavior and physiology in ways that their bones simply can't.

The new information might also help scientists better understand evolutionary relationships between species. In the study, researchers found that the proteins inside the collagen-like fibers are well-preserved, with the specific sequence of amino acids that they're built from largely intact. Amino acid sequences in proteins gradually evolve over time and vary from species to species, somewhat like DNA — so analyzing them in dinosaurs could lead to better knowledge about the evolutionary relationships between them and other species, like birds.

But there's one thing we can't do with this soft tissue: extract dinosaur DNA and make *Jurassic Park* a reality. Compared with collagen fibers and red blood cells, DNA is much, much smaller and more fragile.

Perhaps DNA could also be more readily preserved than thought. But scientists currently estimate that it has a half-life of just 521 years, and dinosaurs largely died off 65 million years ago.

<http://www.dailymail.co.uk/news/article-3141610/Bobbie-Oskarson-finds-diamond-Arkansas-Crater-Diamonds-State-Park-20-minutes-searching.html#ixzz3gNgdrT6w>

Diamond in the rough: Woman finds 8.52 carat diamond in Arkansas state park after only 20 minutes of searching

By [EVAN BLEIER FOR DAILYMAIL.COM](#) and [ASSOCIATED PRESS](#)

PUBLISHED: 11:50 EST, 27 June 2015 | **UPDATED:** 12:52 EST, 27 June 2015

A Colorado woman found an 8.52-carat diamond at Arkansas' Crater of Diamonds State Park at Murfreesboro on Wednesday after only 20 minutes of looking in the park's 37.5-acre search field. Park officials said that the gem found by Bobbie Oskarson of Longmont is the fifth largest diamond discovered since the park was established in 1972 but could not provide an estimate of the value. She named it Esperanza for her niece's name and the Spanish word for 'hope' and plans to keep the valuable diamond.



A Colorado woman found an 8.52-carat diamond at Arkansas' Crater of Diamonds State Park at Murfreesboro. The gem found by Bobbie Oskarson of Longmont is the fifth largest diamond found at the park since 1972.

The diamond is about three-quarters of an inch long and as big around as a standard No 2 pencil, according to park interpreter Waymon Cox. Oskarson found the diamond in an area known as the Pig Pen, which is 'aptly named because it is the muddiest part of the search area after a good rain'. She was visiting the park for the first time with her boyfriend Travis Dillon. Cox said: 'It was hot and sunny at the park, but Ms Oskarson was staying cool by searching in a tree-shaded area when she found her diamond. 'Ms Oskarson's 8.5-carat diamond is absolutely stunning, sparkling with a metallic shine, and appears to be an unbroken, capsule-shaped crystal. 'It features smooth, curved facets, a characteristic shared by all unbroken diamonds from the Crater of Diamonds.'

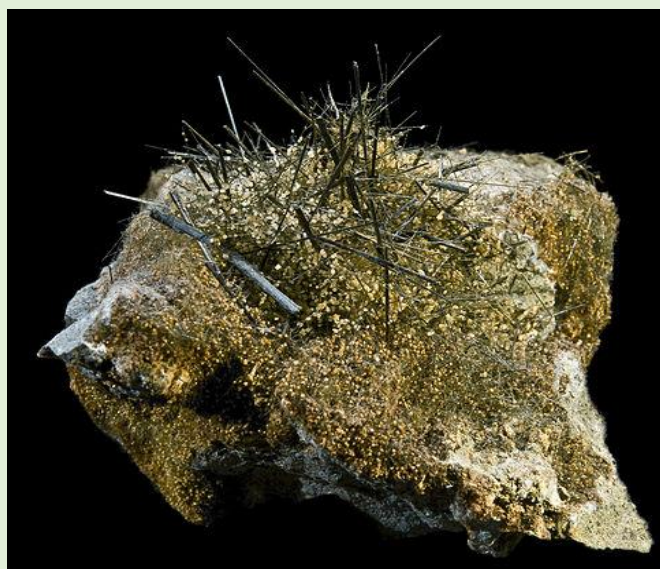


Oskarson's find is the 227th diamond certified by Crater of Diamonds State Park staff this year

Oskarson's find is the 227th diamond certified by park staff this year. The largest diamond found at the park was 16.37-carats and was discovered in 1975 by a Texan. Before the site was established as a park, the largest diamond ever discovered in the US was unearthed at Crater in 1956. The white diamond with a pink cast weighed 40.23-carats and was named the Uncle Sam. More than 75,000 diamonds have been unearthed at the site since they were first found in 1906.

Green Minerals from the Mid-Atlantic Region: Actinolite

Timothy Foard



Actinolite from Portugal (Photo from Wikipedia)

From the Greek "aktina" for "ray", because of the fibrous appearance of the mineral, actinolite is a calcium magnesium iron silicate hydroxide ($\{Ca_2\} \{Mg, Fe^{2+}\}_5 (Si_8O_{22})(OH)_2$), a member of the amphibole mineral group. It occurs in many shades of green, but black specimens are known. The darker

the color, the more iron the specimen contains. It has a colorless streak and breaks in a splintery, uneven fracture. Its monoclinic crystals are often present as elongated, bladed, acicular, or fibrous masses. The mineral is moderately hard (5.5-6.0) with a vitreous, silky luster.

Actinolite occurs as a secondary mineral in basalt and diabase and in contact and regional metamorphic rocks and serpentine deposits. It forms a series with another mineral, tremolite, which is identical in chemical formula, but tremolite contains a higher percent of magnesium than iron and is generally lighter in color. A number of varieties of both minerals are known. A form of asbestos is common to both (tremolite especially) which consists of movable, flexible fibers which are small enough to become airborne and enter the lungs and damage alveolar tissues. Mountain Leather is a thickly fibrous leathery form with a felt-like feel. A very dense form of actinolite mostly, called nephrite, consists of tough interwoven fibers, and is considered a form of jade. Byssolite is a form of actinolite which consists of tiny matted fibers, giving a hair-like appearance to the mineral.

Actinolite has been found in Austria, Italy, Poland, Norway, Namibia, Pakistan, the United States, and Canada. Locally, specimens have been found in the diabase quarries in northern Virginia, northern Maryland, and southern Pennsylvania.

Besides nephrite, gem quality actinolite specimens are known. A translucent chatoyant form is sometimes called cat's eye actinolite or cat's eye jade. A rare, transparent form occurs, and is sometimes faceted as a gemstone.

Sources

Simon and Schuster's guide to Rocks and Minerals, by Annibale Mottana, Rodolfo Crespi, and Giuseppe Liborio. Published by Simon and Schuster, Inc, 1978, 607 pp.

Actinolite Gemstone Information

<http://gemselect.com/gem-info/actinolite-info.php>

Actinolite

<http://en.m.wikipedia.org/wiki/Actinolite>

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.

Actinolite. Mindat.org.

<http://www.mindat.org/min-18.html>

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

Member's Finds

Top and middle photos are specimens of the mineral wavellite, bottom photo is massive limestone with fluorite, from collections of David Lines and Richard Simcsak, collected from a limestone quarry in Mt Pleasant Mills, Pennsylvania.



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.

Regional Mineralogical Societies
Web Pages

www.amfed.org

American Federation of Mineralogical
Societies

www.amfed.org/sfms/index.html

Southeast Federation of Mineralogical
Societies, Inc.

www.amfed.org/efmls/

The Eastern Federatonm of
Mineralogical and Lapidary Societies,
Inc

www.cfmsinc.org

California Federation of Mineralogical
Societies, Inc

www.amfed.org/mwf/

Midwest Federation of Mineralogical &
Geological Societies

www.amfed.org/nfms/

Northwest Federation Mineralogical
Society

www.rmfmms.org

Rocky Mountain Federation of
Mineralogical Societies

www.scfms.net

South Central Federation of Mineral
Societies



**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**