



Southern Maryland Rock and Mineral Club



ROCK TALK

MAY 2022

24 MAY 2022 at 1900 (7 PM)
Meeting at OLD WALDORF SCHOOL
(next to the Waldorf JayCees Hall)
North of the RT 301 / RT 5 Intersection

We are coming up on our 1st Anniversary at the Old Waldorf School!!

This means that annual membership will be due shortly... The following message is from our treasurer:

SMRMC Membership Dues are coming up for **Renewal** as follows:

Dues due by July 31, 2022: (Please pay by cash or check to "David Lines" at club meeting or by U.S. Mail to "7970 Bel Alton Newtown Rd., La Plata, MD 20646" please fill out and submit New Membership application form as well. Thank you.)

May Program

This month's program will be from our resident storyteller Dave, telling us about one of his memorable trips to California! Be ready to learn and gaze at specimens of what can be found on the "left" coast!!



In the WINTER 2022 ROCK TALK:	
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2022 PROGRAMS/REFRESHMENTS SCHEDULE		
MONTH	PROGRAM	REFRESHMENTS
MAY 24	California Trip - Dave Lines	Alton and Teresa
JUNE 28	Herkimer Mine - Joe Davis	Paula Davis
JULY 26	Paint Workshop - Kurt Knower	Cheryl Reese
AUGUST 23	Annual Club Auction	Pot Luck
SEPTEMBER 27	Moroccan Agates - Bob Farrar	Greta Gormley
OCTOBER 25	TBA	TBA
NOVEMBER 22	TBA	TBA
DECEMBER TBD	Seasonal Party (??)	Pot Luck (??)

Dates are tentative. Changes are possible due to a multitude of reasons.

MARCH 2022 MINUTES

1900 - Joe opens the meeting with 20 people in attendance.

New People - Bernie and Vicki with their Grandson Ellis. They saw us through Google and Facebook. Grandson was driver for their attendance. Old members returning were Gary and Cindy. Welcome back!

Membership - Meeting started without a person filling the position but Kurt Knower Volunteered for the position. Thank you Kurt!

Meeting minutes - Accepted unanimously.

Programs - Presently need volunteers for October and November Programs and Refreshments.

Treasurer - Current financial standing was briefed. A discussion was then held for the future expenditures for the club. Possible financial shortfalls may occur later this year. This will be monitored monthly by the Treasurer. Noted was the website fee (\$85.00 for five (5) years) was personally paid by the Webmaster. This was a "donation" to the club. Thank you Bob. Keep us the good work!

Field Trips - April Rock Talk has the Trip Reports for Chestnut Ridge, National Limestone, and Morefield. Specimen examples from each trip were on display. Also the farm in Odessa, DE was open for petrified wood collection. Minimal was found. Upcoming trips include another trip to National Limestone on 14 May and the Primitive Valley Park in NW Baltimore on 7 May.

New Business - None.

Old Business - Show Update - 5 November may seem far away but preparation needs to be solidified soonest. Open positions and duties were discussed in detail and most of them were filled. Layout of the tables, processing of people entering the show, and special requirements needed to be met with the limited electrical capability the room currently has. A Vender "Rule List" will be drafted to ensure care is given to the facility. Request was made for volunteers to attend other local shows to advertise our show and recruit possible vendors. Dave is POC for the show.



Calendar of Events

June 04/05, 2022 - Gem Miner's Spring Show, Howard County Fairgrounds, 2210 Fairgrounds Rd., West Friendship, MD 21794

July 23/24, 2022 - Monongahela Rockhound Gem, Mineral, & Fossil Show, West Mifflin VFC #4, 660 Noble Dr., Pittsburg, PA 15122

August 19,20,21-2022, Gem Miner's Jubilee, Lebanon Expo Center, Fairgrounds, Lebanon, PA

September 16,17,18-2022, Shenandoah Valley Gem & Mineral Society Show, Augusta Expo, 277 Expo Rd., Fishersville, VA 22939

September 23,24,25-2022, Treasures of the Earth Gem, Mineral & Jewelry Show, Richmond International Raceway, 600 E. Laburnum Ave., Richmond, VA 23222

September 24/25,2022 - Central PA Rock Mineral & Gem Show, 2701 N. 3rd St., Harrisburg, PA

October 08, 2022 - PhilaMineralSociety.org/mineral-show, St. Michael Picnic Grove, Mont Claire, PA (near Phoenixville, PA)

October 15/16-2022, Kanawha Rock and Gem Show, so. Charleston Community Ctr, 601 Jefferson Rd., South Charleston, WV 25309

October 29 2022 - ULTRAVIOLATION Show

Where: First United Methodist Church, 840 Trenton Rd, Fairless Hills, PA

When: 9:00 AM to 4:00 PM

What: ULTRAVIOLATION is the ULTIMATE annual show for the fluorescent mineral enthusiast, whether a novice or serious collector. The show features many of the world's premier fluorescent mineral COLLECTORS AND DEALERS who strive each year to bring the biggest, brightest and best fluorescent minerals to satisfy the insatiable cravings of the fluorescent collector. ULTRAVIOLATION highlights fluorescent minerals exclusively and is the next best thing to night collecting. Free admission and a fluorescent mineral specimen for each junior mineralogist 12 years and younger when accompanied by an adult.

Admission: \$2.00 Donation, Children 12 & Under Free

Dealers: 8' TABLE \$30 – ½ TABLE \$15
ADVANCED REGISTRATION FOR DEALERS IS ADVISED. SEND YOUR CHECK MADE PAYABLE TO:

Lee McIlvaine, 8510 Elliston Dr. Wyndmoor, PA 19038 or Paypal electronic payment to leemcilvaine@yahoo.com; 215-713-8020 or email uvgeologist@yahoo.com

November 5, 2022 - SMRMC Show. Old Waldorf School, Waldorf MD.



After 25 Years on Display CMM Megalodon Model Receives A Makeover

January 18, 2022



Figure 1. The Calvert Marine Museum's 37.5-foot long skeletal model of the extinct megatooth shark, *Otodus megalodon*, newly installed.

SOLOMONS, MD – After 25 years, the Calvert Marine Museum's life-sized skeletal model of the extinct shark, *Otodus megalodon*, will receive new teeth! Over many years, paleontologists have made new discoveries that improve understanding of this extinct shark's anatomy, including dental evidence that supports this historic transformation.

The new fossils are referred to as associated dentitions, which are sets of teeth that came from a single shark. These exceptionally rare discoveries allow paleontologists to more confidently reconstruct the tooth patterns exhibited by megalodon. With this new information available, the exhibit is being updated to reflect the most current fossil evidence to make the representation as scientifically accurate as possible.

When megalodon was first described, it was named *Carcharodon megalodon* and was suggested to be the immediate ancestor of the great white shark (*Carcharodon carcharias*). Consequently, the Calvert Marine Museum's skeletal model was created by scaling up the size of a great white shark. However, paleontologists now recognize that the two sharks are more distantly related, and likely last shared a common ancestor more than 65 million years ago.

The most complete set of megalodon teeth was found in the Four Corners phosphate mine in Polk County, Florida (aka the Bone Valley region). A total of 95 teeth were recovered that all originated from one shark! This shark was estimated to be 40.7 ft long, which matches quite closely with the museum's 37.5 ft skeletal model. To improve the accuracy of the model, CMM staff are replacing the teeth with exact replicas of the associated teeth found in the Bone Valley region.

<https://southernmarylandpr.com/2022/01/after-25-years-on-display-cmm-megalodon-model-receives-a-makeover/>



To make these changes to the exhibit, Calvert Marine Museum staff will remove the jaws from the megalodon skeletal model. The jaws will be brought into the Paleontology prep lab for the remodeling. Museum visitors will be able to watch this historic update to this iconic exhibit through the glass window that peers into the prep lab. New information panels will be placed in the exhibit hall, explaining how scientific evidence is utilized to guide the exhibit design.

Explore how the prehistoric past, natural environments, and maritime heritage come to life and tell a unique story of the Chesapeake Bay. The Calvert Marine Museum is open daily from 10 a.m. to 5 p.m. Admission is \$9.00 for adults; \$7.00 for seniors, military with valid I.D, AAA and AARP members; \$4.00 for children ages 5 – 12; children under 5 and museum members are admitted free. For more information about the museum, upcoming events, or membership, visit the website at www.calvertmarinemuseum.com or call 410-326-2042. Follow us on Facebook, Instagram, and Twitter.

Meet Fiona! 'Exceptional' 139 million-year-old fossil of a 13ft-long PREGNANT ichthyosaur with several babies in her belly is unearthed in Chile

- By [SHIVALI BEST FOR MAILONLINE](#)

PUBLISHED: 08:07 EDT, 10 May

2022 | **UPDATED:** 11:43 EDT, 16 May 2022

<https://www.dailymail.co.uk/sciencetech/article-10801185/Meet-Fiona-13ft-long-PREGNANT-ichthyosaur-babies-belly-unearthed-Chile.html>

Ichthyosaurs were marine reptiles that lived in the age of the dinosaurs

The remains of a pregnant ichthyosaur were unearthed from a melting glacier

The ichthyosaur is the only pregnant female of Valanginian-Hauterivian age recorded and extracted on the planet

The fossilised remains of a 13ft-long pregnant ichthyosaur have been uncovered in Chile – marking the first time a complete ichthyosaur has been found in the country.

The remains of the creature, named Fiona, were unearthed by researchers from a melting glacier deep in Patagonia.

Fiona was pregnant at the time of her death 139 million years ago, with several embryos still in her belly.

Dr Dean Lomax, a paleontologist from the University of Manchester working on the study, said: 'The fact that these incredible ichthyosaurs are so well preserved in an extreme environment, revealed by a retreating glacier, is unlike anywhere else in the world.'

The considerable number of ichthyosaurs found in the area, including complete skeletons of adults, juveniles, and newborns provides a unique window into the past.'



The remains of the creature, which researchers have named Fiona, were unearthed from a melting glacier deep in the Patagonia



Fiona's remains were uncovered during an expedition to the Tyndall Glacier during March and April 2022. The glacier is a 10-hour-hike or horse ride away, making collecting the specimen particularly difficult

Ichthyosaurs were marine reptiles that lived in the age of the dinosaurs, and are famous for their fish-like shape, resembling today's dolphins.

Fiona's remains were uncovered during an expedition to the Tyndall Glacier during March and April 2022.

The glacier is a 10-hour-hike or horse ride away, making collecting the specimen particularly difficult.

The expedition lasted 31 days and was described by the researchers as an 'almost titanic challenge.'

The ichthyosaur is the only pregnant female of Valanginian-Hauterivian age (between 129 and 139 million years old from the Early Cretaceous) recorded and extracted on the planet.

'At four metres long, complete, and with embryos in gestation, the excavation will help to provide information on its species, on the palaeobiology of embryonic development, and on a disease that affected it during its lifetime,' said Dr Judith Pardo-Perez from the University of Magallanes, who led the study.

Alongside Fiona, 23 other new specimens were discovered during the expedition, making the Tyndall Glacier the most abundant ichthyosaur graveyard in the world, according to the team.

'The results of the expedition met all expectations, and even more than expected,' Dr Pardo-Perez added.

'We hope to obtain results on the diversity, disparity and palaeobiology of the

ichthyosaurs of the Tyndall Glacier locality, establish degrees of bone maturity and ecological niches to evaluate possible dietary transitions that occurred throughout their evolution and that could help to establish palaeobiogeographical connections with ichthyosaurs from other latitudes.'

To excavate Fiona, the researchers constructed a hangar over her remains and had to contend with heavy winds, rain and snow.

They also needed specialist equipment to break through the hard rock.

'The rock of the outcrop is so hard that it cannot be excavated with a lump hammer, chisel and brush, and we had to cut, drill and break blocks with diamond and high calibre tools,' said Hector Ortiz, one of the excavators.

Ichthyosaurs — marine predators that ruled the waters in the era of the dinosaurs

Ichthyosaurs were a highly successful group of sea-going reptiles that became extinct around 90 million years ago.

They appeared during the Triassic, reached their peak during the Jurassic, and disappeared during the Cretaceous period.

Often misidentified as swimming dinosaurs, these reptiles appeared before the first dinosaurs had emerged.

They evolved from an as-yet unidentified land reptile that moved back into the water.

The huge animals, which remained at the top of the food chain for millions of years, developed a streamlined, fish-like form built for speed.

Scientists calculate that one species had a cruising speed of 22 mph (36 kph).

The largest species of ichthyosaur is thought to have grown to over 20 metres (65 ft) in length.

The largest complete ichthyologist's fossil ever discovered, at 11 feet (3.5 m), was found to have a foetus still inside its womb.

Scientists said in August 2017 that the incomplete embryo was less than seven centimetres (2.7 inches) long and consisted of preserved vertebrae, a forefin, ribs and a few other bones.

There was evidence the foetus was still developing in the womb when it died.

The find added to evidence that ichthyosaurs gave birth to live young, unlike egg-laying dinosaurs.



To excavate Fiona, the researchers constructed a hangar over her remains to contend with heavy winds, rain and snow



They needed specialist equipment to break through the hard rock. 'The rock of the outcrop is so hard that it cannot be excavated with a lump hammer, chisel and brush, and we had to cut, drill and break blocks with diamond and high calibre tools,' said Hector Ortiz, one of the excavators

'We were only two people who made glacier camp and, in a month of field work, we managed to get the most complete ichthyosaur from the southern tip of America to the world in two helicopter flights.'

Once they had managed to excavate Fiona, they then had to transport her remains from high in the Tyndall Glacier to the Rio Seco Museum of Natural History in Punta Arenas, around 250 miles away.

The ichthyosaur will now be prepared in the palaeontology laboratory at the museum, where it will be temporarily stored for later exhibition.

The other ichthyosaurs found at the site will not be excavated.

'We have almost a hundred ichthyosaurs in the Tyndall Glacier fossil

deposit and many of them, unfortunately, will never be excavated, due to the difficulty of access, being in risk areas (cliff edge), and lack of funds etc,' Dr Pardo-Perez explained.



The ichthyosaur will now be prepared in the palaeontology laboratory at the museum, where it will be temporarily stored for later exhibition



The team hopes to compare the ichthyosaurs found in the Tyndall Glacier with those previously found in Chilean Patagonia



Dr Erin Maxwell, curator at the State Museum of Natural History in Stuttgart and an expert on ichthyosaurs, said: 'The Tyndall locality is very important to fill a gap in our knowledge about the types and general diversity of species that inhabited the ocean in the southern hemisphere, especially in temperate to polar latitudes'

'The ichthyosaurs that will not be excavated need protection and consolidation in situ, as the erosion to which they are being subjected on a daily basis is destroying them.'

The team hopes to compare the ichthyosaurs found in the Tyndall Glacier with remains previously found in Europe.

Dr Erin Maxwell, curator at the State Museum of Natural History in Stuttgart and an expert on ichthyosaurs, added: 'We do not have many marine reptile fossils from this time period worldwide (~130-140 million years ago), and the ones we have are from Europe.'

'The Tyndall locality is very important to fill a gap in our knowledge about the types and general diversity of species that

inhabited the ocean in the southern hemisphere, especially in temperate to polar latitudes.'

Ichthyosaurs had BLUBBER just like whales

From seals to whales, many marine animals have a thick layer of fat directly under their skin, known as blubber.

Now, a new study has shown for the first time that ichthyosaurs – ancient marine reptiles that lived 150 million years ago – also had blubber.

Scientists from the Natural History Museum in Oslo have studied the remains of an ichthyosaur discovered in the Solnhofen area in Southern Germany.

The specimen includes the complete internal skeleton, which was stunningly preserved thanks to its blubber, according to the team.

<https://www.dailymail.co.uk/sciencetech/article-10695593/Ichthyosaurs-BLUBBER-just-like-whales-study-finds.html>



Odds and Ends

Cleaning and Preparing Mineral Specimens

<https://www.youtube.com/watch?v=VM4bzWBERdA>

Jon Voelter - Introduction to Mineral

Cleaning and Preparation

<https://www.youtube.com/watch?v=8gbZcSfkraQ>

How to Clean Rocks and Minerals

<https://www.youtube.com/watch?v=qC9JVjLWqHs>

What's the BEST Way to Clean your Rocks?

| Trying 2 Popular Methods!

https://www.youtube.com/watch?v=uDn_pultHis

Cleaning Crystals With Acid

<https://www.youtube.com/watch?v=2zBAvn-OHH8>

HOW TO CLEAN CRYSTALS with Oxalic Acid

| Cheap & Simple DIY Mineral Cleaning

https://www.youtube.com/watch?v=NEq3_4h_Do8

How To Clean Quartz Crystals & Amethyst

<https://www.youtube.com/watch?v=qLZZk0bKnkU>

New easy method of cleaning Quartz crystals, alternative for Iron Out and Waller's method

<https://www.youtube.com/watch?v=Hb2arVYdOFc>

Cleaning a Quartz Crystal Cluster

<https://www.youtube.com/watch?v=z6wFIZm9d8U>

20 Most Dangerous Minerals in The World

https://www.youtube.com/watch?v=5MwSV1_vgFA

Cleaning Chalcedony • Oxalic Acid vs Oxidisation

<https://www.youtube.com/watch?v=PG6jJYL0HS8>

Cleaning Quartz Crystals With Muriatic ACID - My First Attempt

<https://www.youtube.com/watch?v=tAloVxJKYhw>

Using TOXIC ACID to Clean Agates, Crystals, and Geodes (Plus a Surprise!) | Montana Rockhounding

https://www.youtube.com/watch?v=D5_bjV7IB4w

Cleaning Agates & Chalcedony, Citric Acid VS Creek Scum

<https://www.youtube.com/watch?v=52YHX TgC04E>

Rockhounding Calcite Crystals in Maryland

<https://www.youtube.com/watch?v=zBatt3hOCEQ>

Exploring the Maryland Ore Banks

<https://www.youtube.com/watch?v=bPnrpZ8YUZA>

Glacial Till Gold Everywhere in Maryland!

<https://www.youtube.com/watch?v=rgWe46ZguNA>

Geology of Baltimore County, MD with Jeri Jones

<https://www.youtube.com/watch?v=qQm8U83UqLQ>

Point of Rocks Maryland

<https://www.youtube.com/watch?v=T9Ayt43Cx6s>

Searching for Patuxent River Stones (the most embarrassing state gem ever)

<https://www.youtube.com/watch?v=WXIROw3TPBg>

Fossil Hunting Maryland - What, Where, When & How

<https://www.youtube.com/watch?v=3xqkir kBp4Y>

Collecting Paleocene Fossils in Maryland, Ray Fossils and Shark Teeth

<https://www.youtube.com/watch?v=GmDI47lM0rs>

Fossil Hunting Southern Maryland (100 fossils!)

<https://www.youtube.com/watch?v=KF3E9r-770Q>

Miocene Fossils of Calvert Cliffs, presented by Dr. Stephen J. Godfrey

<https://www.youtube.com/watch?v=q1NzZkh-tml>

Finding Fossils on a Beautiful Day | Calvert Cliffs Fossil Hunt

<https://www.youtube.com/watch?v=N00jU2sAwBA>

**AFMS Code of Ethics**

- I will respect both private and public property and will do no collecting on privately owned land without the owner's permission.
- I will keep informed on all laws, regulations of rules governing collecting on public lands and will observe them.
- I will to the best of my ability, ascertain the boundary lines of property on which I plan to collect.
- I will use no firearms or blasting material in collecting areas.
- I will cause no willful damage to property of any kind—fences, signs, buildings.
- I will leave all gates as found.
- I will build fires in designated or safe places only and will be certain they are completely extinguished before leaving the area.
- I will discard no burning material—matches, cigarettes, etc.
- I will fill all excavation holes which may be dangerous to livestock.
- I will not contaminate wells, creeks or other water supply.
- I will cause no willful damage to collecting material and will take home only what I can reasonably use.

**SOUTHERN MARYLAND ROCK, MINERAL,
AND FOSSIL SHOW**

**SATURDAY NOVEMBER 5,
2022**

9 am to 4 pm

OLD WALDORF SCHOOL (next to JayCees
Hall) 3074 CRAIN HIGHWAY (Rt 301), WALDORF MD
20601

ADMISSION DONATION: ADULTS \$5.00, SENIORS
(65+)\$4.00, JUNIORS (17-7) \$3.00, UNDER 7 FREE

THE HOLIDAYS ARE COMING**STOP BY,
WE HAVE LOTS OF

UNIQUE GIFTS

FREE PARKING * DOOR PRIZES * OVER 45 TABLES
*ROCKS *CRYSTALS *FOSSILS *HANDCRAFTED JEWELRY
*LAPIDARY *MINERALS *FLUORESCENT TENT *DISPLAYS

SPONSORED BY SOUTHERN MARYLAND ROCK AND
MINERAL CLUB WEBSITE: WWW.SMRMC.ORG
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Mineral Club

VENDOR APPLICATIONS OR QUESTIONS? CONTACT
DAVE LINES THRU WEBSITE: SMRMC.org

HAINES & KIBBLEHOUSE PENN-MARYLAND QUARRY
MINERAL LISTING

M C G U I N N E S S I T E Y S
 A N T I G O R I T E E Y E E E
 G Z L I Z A R D I T E K T T R
 N B T K L K P O I M D I I F P
 E E H R O R B I P L S M C E E
 T T L O A H R I A E O A U R N
 I I H S C U C B N R H C R U T
 T B E H A R Q G H K L O B G I
 E L O K O J A C O B H O C G N
 J A A L J M A G N E S I T E E
 O N I B O H E T I L Y E W E D
 Y T A R A G O N I T E H K J L
 E B D P E N N E T I N O M I L
 Z Y C H R Y S O T I L E K J B
 H Q U A E T I L U C I M R E V

These 14 minerals are listed as findable minerals at the Haines & Kibblehouse (H&K) Penn/MD Materials Quarry at <https://www.mindat.org/loc-167699.html>. Pictures of these minerals can also be found at the listed URL.

ALBITE
ANTIGORITE
ARAGONITE
BRUCITE
CHROMITE
CHRYSOTILE
DEWEYLITE

HYDROMAGNESITE
LIMONITE
LIZARDITE
MAGANESITE
MAGNETITE
MCGUINNESSITE
NAKAURIITE

QUARTZ
PRASE
SERPENTINE
PICROLITE
VERMICULITE



The Southern Maryland Rock and Mineral Club
Meetings take place on the 4th Tuesday of each month at
7:00pm
Held at the OLD WALDORF SCHOOL
Next to the Waldorf JayCees Hall
3074 Crain Highway, Waldorf, MD 20601
North of the RT 301 / RT 5 intersection
We're on the web: SMRMC.ORG

SMRMC OFFICERS
PRESIDENT
Joe Davis

Program Vice President Carole Raucheson	Membership Vice President <i>Kurt Knower</i>
Secretary Cheryl Reese	Webmaster Bob Davidson
Field Trip Chairman David Lines	Treasurer David Lines

Rock Talk Editor
Rich Simcsak

ITEMS WANTED/FOR SALE

For Sale – Virginia Unakite slabs (approx ¼ inch thick) – \$0.50 per square inch (this is half off regular price). Call Dave (240) 427-7062

