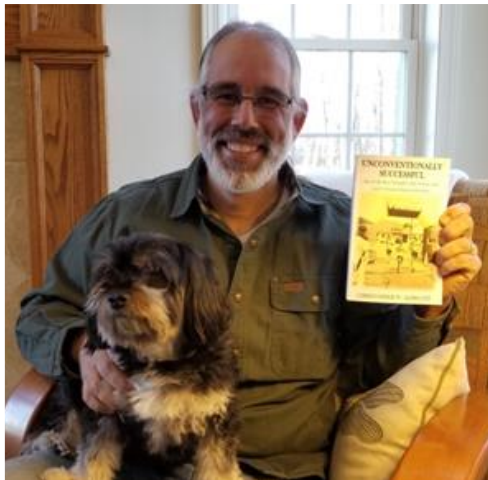


CRACK 'N CAB



Gem & Mineral Society of Syracuse, PO Box 2801, Syracuse, NY
web <https://www.syracusegemsociety.com> Volume 53 Issue 2, **February 2023**
209 Oswego St (Ponderosa Plaza), Unit 15, Liverpool, NY



Monday, Feb. 20 **Meeting Speaker:** **Christopher Albrecht**

All About Amber

Albrecht has been a teacher for over a quarter century in Brockport. He is the 2018 New York State Teacher of the Year and a 2019 Inductee into the National Teachers Hall of Fame.

Also in this issue:

Upcoming Spring Shows – Pages 4 & 5

Flo Ribas is Remembered – Page 6

**“The Cutters Corner” by Bill Verge
– Pages 6 & 7**

**January 16, 2023 Meeting:
Stephen Mayer & Echinoderms
Photo Review - Pages 7 – 10**



Photo by Judy Cook

President's Message

John Sweeney



Amber alert! Okay someone had to say it. At our meeting **this month, Chris Albrecht will be speaking about amber.** The details are elsewhere here in the newsletter; but I have to tell you Chris is an excellent speaker and an expert on amber who has

traveled and collected in many parts of the world. I heard him speak several years ago at an EFMLS convention and it was an excellent presentation. So, you probably want to be there for this one. **If you have some amber, bring it and be part of the discussion.**

I'm excited about our field trip with **Stephen Mayer** coming up this Saturday (Feb. 11), where we'll be looking for fossils. I hope you signed up. After his great presentation on echinoderms, I saw sea cucumbers on the menu at a local restaurant and had to order them. They were excellent and since they were prepared for me, I didn't have to deal with their rather unique defense mechanisms. Thank you again Stephen for a great talk and leading a field trip for us.

Cheryl Brown is leading a cohort of **wire wrappers** busily making some really innovative take home gifts **for our convention attendees this summer.** You should come join her and others at the club to help in this undertaking. It's a great way to learn a new skill and help out the club at the same time. Wire wrapping is a great way to enter into jewelry making and there will be some excellent instruction going on. **There will be several sessions during the next several weeks (see Page 4).**

We will be having our **regular silent auction** and **knowledge corners** preceding our upcoming meeting so bring something to pass on and your curiosity.

Dave Millis will be continuing his **talks on specimens**, and we'll continue on with **case building info.** *If you have suggestions or would like to lead a discussion on a topic, please let me know.* You can find my email address on the website.

Attention would be writers, poets, illustrators - show us what you've got. **We are looking for newsletter additions.** Our **editor Larry Petry** would love to make you famous. Submit: Art, articles, photos, technical articles, field trip summaries, rock lore or

stories to editorgmss@gmail.com. Senior and junior rockhounds are all welcome.

We will be **looking for hospitality volunteers** at our February meeting to bring snacks to our **March meeting. Keep an eye out for sign- up sheets for the show** and keep the dates open. **We'll need all hands on deck come July.** Classes are running in the **skills center** so sign up for a great opportunity to learn cabbing and jewelry making. **We are looking for a new secretary as part of the board.** If you are interested contact me or any of the board members. Thank you, Skylar for all your hard work.

With all that said, it's time to go dust off my collecting tools and dig out my muck boots. It looks like it will be wet for Saturday's collecting. Have a good month, see you at the meeting.

John Sweeney

Secretary's Reports

Skylar Haas

Monthly Member Meeting - January 16, 2023

The silent auction and knowledge corner were held.

Stephen Mayer gave his talk on "Echinoderms - Extinct and Living Marine Animals".

Show Committee Meeting - January 24, 2023

The show theme was chosen. It will be, "New York Rocks".

Individual committee needs and logistics were discussed.

Executive Board Meeting - February 7, 2023

The meeting was called to order by President John Sweeney.

Board Meeting Minutes from December 2022 were accepted.

Secretary Skylar Haas announced she is resigning from the executive board.

Treasurer Linda Clark Sweeney reported that the year-end report and audit for the 2022-2023 year is still in progress.

Vice President Cathy Patterson reported that everything is going well with field trip planning and lecture planning.

Webmaster Amanda Lytle reported that she has renewed the club's domain. There was discussion on potentially utilizing YouTube for the club.

Gem Show 2023 details were discussed.

Clubhouse housekeeping and logistics were discussed.

Respectfully submitted,
Skylar Haas

**Geo Lexis (Puzzle)
By Anne Fitzgerald**

"Dino Dipping in the Desert"

"Did dinosaurs swim?" That is a question I wished I had asked as a young person. I imagine some science teachers would have answered "NO!" Some science teachers may have said "as far as we know, NO!" The best science teachers would have said, "We don't know, but maybe by the time you've grown up, we'll know for sure!"

I still haven't grown up, but now there is good evidence of a non-bird-like dinosaur that probably could swim.

Sungjin Lee from Seoul National University and his colleagues named the dinosaur *Natovenator polydontus*. *The "many-toothed swimming hunter" was found in Mongolia (in the current desert, no less) and was about a foot long and about 71 million years old. From looking at the bones, Lee and his team were able to determine the probable aquatic behavior.*

Part of the conclusion was reached because of the long jaw (think alligator) tiny teeth (think perch) and the swept-back ribs (think penguins.) More research is needed, but it's looking more and more likely that dinosaurs did indeed do some dipping and maybe even some dino paddling.

See if you can guess some common phrases from the six puzzles below. If you need a lifeline, the solution is on Page 5 of this newsletter.

bridge
water

tide
tide
tide

bridge
sad H20s

oceans

oceans

water
swimming

DswimmingEBT

Field Trip News

Cathy Patterson

February 11, we have a couple hardy fossil collectors heading to Rochester to meet trip leader Stephen Mayer of PRI. Winter collecting for us is most unusual, yet Stephen agreed to show our small group a special spot along the canal to find specimens that, come spring, will be underwater and inaccessible. We thank Stephen, a new member, for leading this trip!

Again, **in February and in the spring**, **Dave Arcaro**, fossil collector extraordinaire, has offered to show us a spot he found in Tully where trilobites and coral are exposed and ready to be picked out of the shale. More on this in an upcoming email blast. Thank you, Dave!

Other field trips are being planned for warmer weather. In **April** we will travel to **Colgate University** to the geology department to see their fluorescent room, see a movie, and tour the geology department. Following that we'll lunch at one of the restaurants in the area. **Susan Sharp** has graciously agreed to arrange this trip. More about this in upcoming newsletters. Thank you, Susan!

If you're interested in leading a field trip, know of a good, productive site, or have suggestions for where to go and what to find please see me at a meeting or email me at vp@syracusegemsociety.com. Let's go rockhounding!

Thank you!!

We'd like to thank **Skylar Haas** for her time as Secretary. She must step down for personal reasons and has done a most commendable job! A new member who volunteers for such an important job is laudable! We appreciate Skylar for volunteering for this most important Board position.

EFMLS NEWS

Information for Members of the Eastern Federation of Mineralogical & Lapidary Societies



Volume 70, Number 3
January 2023

For more information on Wildacres' May class schedule, registration form and more EFMLS information, go to www.efmls.org

Upcoming Events

FEB. 18 – Wire wrapping session for July EFMLS convention table favors – 11 am – 3 pm at the Clubhouse (See *President's Message*, Page 2) Contact Cheryl Brown at gmsrocks@gmail.com.

FEB. 20 – GMSS meeting – 7:30 pm, Chris Albrecht will give a presentation on "Amber." Bring your amber or buy some rough pieces that night. Dave Millis will continue his talks on specimens, and we'll continue on with case building info. Also: silent auction (7 pm), Knowledge Corner.



Damselfly in Dominican amber, L: 4.6 cm (1½ in.). Private collection. Photo: D. Grimaldi / American Museum of Natural History.

FEB. 28 – "New York Rocks" Show Committee meeting – 7 pm at the Clubhouse. All are invited.

MAR. 7 – GMSS Board meeting – 7 pm at the Clubhouse. All are invited.

MAR. 20 – GMSS meeting – 7:30 pm, Proposed: "Tucson Show Experiences." If you've been to the show, contact Cathy Patterson. Also, silent auction (7 pm), Knowledge Corner.

MAR. 28 – "New York Rocks" Show Committee meeting – 7 pm at the Clubhouse. All are invited.

APR. 4 – GMSS Board meeting – 7 pm at the Clubhouse. All are invited.

APR. 17 – GMSS meeting – 7:30 pm, Len & Susan Sharp will speak about "New York State Geology." Also, silent auction (7 pm), Knowledge Corner.

APR. 28 – "New York Rocks" Show Committee meeting – 7 pm at the Clubhouse. All are invited.

Upcoming Spring Shows:

March 4-5—WILMINGTON, DE: Annual show; Delaware Mineralogical Society; DoubleTree by Hilton, 4727 Concord Pike (Rt-202); Sat. 10-5, Sun. 11-5; Seniors (60+) \$5, Adults (18-59) \$6 (\$5 with coupon), Juniors (12-17) \$3, Scouts in Uniform & Children under 12 Free when accompanied by a paying adult; Family Friendly show features educational exhibits of mineral, lapidary & fossil specimens; a roster of fine dealers of minerals, fossils, gems, jewelry; raffles of interesting specimens & a children's area, where youngsters may purchase inexpensive mineral & fossil specimens; contact Christine Verdi; Email: 1DMS.President@gmail.com; Website: <https://www.facebook.com/Delaware-Mineralogical-Societys-Annual-Gem-Mineral-and-Fossil-Show-109057331950888>

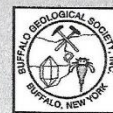
March 4-5—MERIDEN, CT: Annual show; The Lapidary & Mineral Society of Central CT; Maloney High School, Gravel Street; Sat. 9:30-5, Sun. 10-4; Adults \$5; Minerals, gemstones, crystals, exhibits, & much more; contact Tom Benedict; Email: meridenmineralclub@gmail.com; Website: www.lmscc.org

The Buffalo Geological Society, Inc. 53rd ANNUAL Gem Mineral Fossil Show DINOSAURS are coming!

Sat. March 18, 2023 9 am to 7 pm

Sun. March 19, 2023 9 am to 6 pm

1 DAY ADMISSION \$7 PER PERSON
2 DAY ADMISSION \$10 PER PERSON
In the Market, Grango, and NYS Police Buildings located on the Fairgrounds in Hamburg, NY



NEW
Mining for Minerals and Fossils
Mini Mine for Children
A GREAT FIELD TRIP FOR THE FAMILY
& a real learning experience
ALSO SHOWING
DISPLAYS & INFORMATION
NYS Parks & Recreation
Reinstein Woods Nature Center
Buffalo Association of Professional Geologists
Paleontological Research Institute
Penn Dixie

Demonstrations • Beads • Jewelry • Presentations
Private Gem Collections • Unique Gifts
DRAWINGS & REFRESHMENTS

Scouts in uniform & children 12 yrs & under FREE

March 10-11—RICHBORO, PA: Annual show; Leidy Microscopic Society; Advent Lutheran Church, 45 Worthington Mill Rd; Fri. 12-6, Sat. 9-6; \$25 half table - \$40 full table- Visitors \$5 Fri & \$10 Sat (includes lunch on Sat.); 46th Leidy Micromount Symposium Study & explore mineral specimens

enhanced by magnification through the microscope; contact Donald McAlamen, (610) 247-5097; Email: donmcalaman@outlook.com; Website: leidy-microscopical.com

March 11-12—NEW YORK, NY: Show & sale; New York Mineralogical Club; High School of Fashion Industries, 225 West 24th St New York GYM 3rd Floor; Sat. 10-6, Sat. 11-5; Admission \$6 per person & 12 years under free with a paid adult; Free lectures & hourly door prices, dealers from far & near with a large selection; contact Mohamed Bary, (347) 247-6568; Email: barygems@gmail.com; Website: barygems.com

March 17-19—SWANNANOVA, NC: Annual show; MAGMA Gem, Mineral & Fossil Show; Land of the Sky Shrine Club, 39 Spring Cove Rd; Fri. 9-6, Sat. 9-6, Sun. 10-5; Free; Numerous vendors offering a great variety of gems, minerals, fossils, jewelry, lapidary equipment, old collections & all sorts of other treasures. Our new venue has heat & air. Clean restrooms & fantastic food served daily! Free admission, Rain or shine; contact Richard Jacquot, (828) 779-4501; Email: rickjacquot@gmail.com; Website: www.AmericanRockhound.com

March 18-19—OLD BETHPAGE, NY: Show; Island Rockhounds; Bethpage Restoration Village Administration Building, 1307 Round Swamp Rd; Sat. 10-5, Sun. 10-4; \$6 for all, children free with paying adult; Jewelry, Gem, & Mineral Dealers! Club Exhibits! The last entry is 45 minutes before closing. Download a coupon on website IslandRockhounds.org for \$1 off each admission; contact Cheryl Neary; Email: IslandRockHoundsAdvertising@gmail.com; Website: IslandRockhounds.org

March 18-19—WINSTED, CT: Retail show; Silver Spiral Creations; Whiting Mills, 100 Whiting St; Sat. 10-4, Sun. 10-4; Free; Crystal, minerals, jewelry, cabochons, stone accessories; contact Lynne Patnode, (860) 459-9165; Email: Silverspiralcreations@gmail.com; Website: silverspiralcreations.com

Mar 24-26—HICKORY, NC: Annual show; Catawba Valley Gem & Mineral Club, Inc; Hickory Metro Convention Center, 1960 13th Ave. Drive, SE; Fri. 10-6, Sat. 10-6, Sun. 10-5; Admission is \$6 good for all three days. Children 12 & under are admitted free. Law enforcement officers & active or retired military with credentials, Scouts & Leaders in uniform will be admitted free anytime during this 3 day event; The Facebook page with show news is Catawba Valley Gem & Mineral Club, Inc. Annual Show; contact Dean Russell, (828) 303-1448; Email: cvgmcsecretary@aol.com; Website: cvgmc.com

March 25-26—PLYMOUTH MEETING, PA: Annual show; Philadelphia Mineralogical Society & The Delaware Valley Paleontological Society; LU Temple, 5140 Butler Pike; Sat. 10-5, Sun. 10-4; \$7 per adult, \$2 kids 12 and under. Scouts in uniform free; Fossils, minerals, gems, speakers & exhibits. Kids mineral corner & fossil dig with free giveaways. Scouting merit badge information available. Food & door prizes throughout both days; contact Douglas M Klieger, (610) 316-8052; Email: dklieger@verizon.net; Website: phillyrocks.org

March 25-26—WYSOX, PA: Annual show; Che-Hanna Rock & Mineral Club, Inc; Wysox Vol. Fire Hall, 111 Lake Rd, PO Box 224; Sat. 9-5, Sun. 10-4; Adults - \$3, Students - \$1, Under 8 free; Special exhibit by Susquehanna River Archaeological Center, fluorescent mineral program, kids mini-mine, geode cutting, dealers selling minerals, gems, fossils, jewelry; contact

Bob McGuire, (570) 928-9238; Email: uvbob1942@gmail.com; Website: www.chehannarocks.com

March 25-26—CANTON, OH: Annual show; Stark County Gem & Mineral Show; Stark County Fairgrounds, 305 Wertz Ave; Sat. 9-5, Sun. 10-5; Adults \$5, Seniors 55 & older \$4, kids (6 to 14) \$1, Scouts in uniform free; Door prizes, gem & mineral dealers with lapidary items, jewelry, beads, rock slabs, gem & mineral specimens. We have a fluorescent display, kids' games, silent auction for kids & adults; contact Vicky Waltz, (330) 862-2162; Email: fwaltz46@live.com

March 31-April 2—RALEIGH, NC: Annual show; Tar Heel Gem & Mineral Club; Kerr Scott Bldg, NC Fairgrounds, 1025 Blue Ridge Rd; Fri. 3-7, Sat. 10-6, Sun. 10-5; free; Club areas – Hospitality with grab bags, free magazines, membership & raffle prize tickets, Geode of club purchased geodes, cut open, Silent Auction for both children & adults of minerals, fossils & jewelry & Demonstration with artists wire wrapping, making gem trees & cutting stones; contact Cyndy Hummel, (919) 779-6220; Email: mchummel@mindspring.com; Website: tarheelclub.org

Answers to Geo Lexis

bridge water under the bridge
water

bridge bridge over troubled waters
sad H2O's

water swimming underwater
swimming

tide rising tide
tide
tide

oceans oceans oceans apart

DswimmingEBT swimming in debt

Sources and further reading:

Lee, S., Lee, YN., Currie, P.J. *et al.*

A non-avian dinosaur with a streamlined body exhibits potential adaptations for swimming. *Commun Biol* 5, 1185 (2022).

<https://doi.org/10.1038/s42003-022-04119-9>

<https://www.smithsonianmag.com/science-nature/worlds-first-swimming-dinosaur-discovered-in-mongolia-180981217>.

Riley Black 12/1/2022

Long-Timers – NOT Old-Timers: Florence Ribas

By Cathy Patterson

This column serves as a spotlight on our long-time club members who have contributed so much to the heart and soul of the club. Each member is a valuable thread making up the fabric of what makes the GMSS special and so long lasting.

Florence “Flo” Ribas joined the club back in the late 1980’s. None of us can remember Flo collecting minerals or fossils but she may have bought jewelry for her children from some of our lapidaries who were active back then. What we know for sure is Flo was always the first to pay her annual dues. She came to

all the club summer picnics and despite not being a driver or having a car.



We remember in 1993 when the club decided to enhance the food for dealers and members at the July show set up and tear down. Flo did not back away but said, “Count me in!” In addition to buying all the supplies and food for sandwiches and

munchies, drinks and desserts for 2 set-ups per show she organized the club members to assemble and bag everything so it was an easy grab and go or a relaxing rest. This set up gave everyone a place to refresh in a welcoming atmosphere.

For close to 15 years Flo became our Pizza Lady after the show closed on Sunday night. She ordered about 14 sheet pizzas which she had to portion control to try to satisfy the scores of ravenous pizza lovers’ appetites. She ordered it beforehand from Bianchi’s Pizza Pad and paid the delivery person cash with a good tip. The atmosphere in the annex room prior and after the show was warm and welcoming. Tables were decorated with flowers and tablecloths. It set the tone for the show just right. She called everyone “Angel.” What a splendid welcome!

During the show she “womaned” the wholesale table doing it with such good cheer, greeting shoppers and dealers warmly. Meeting Flo made you feel special as she exuded love, warmth, and such positivity. Her energy and enthusiasm seemed limitless.

Flo passed from this world January 11, 2023, at age 94. Though she wasn’t an active member in her later years we all remember the tone she set at our summer shows. She brought something very special to this club for many years. Flo made the club a great place to belong just by her presence.

The Cutters Corner

By Bill Vergé

In the Marie Cole Workshop, we have had a lot of visitors and new students. As you know at the beginning of every meeting all members are invited into the lab to see what is going on and to ask questions about our equipment and about what we are doing in there. Usually, we are just having a lot of fun!!!



In November we had two members take the lapidary course, Laura Coleman and Charles Glahn.

In January we had three members take the lapidary course, Theresa Arnold, Sarah Carr and Wil Hoosty.



We have another class starting February 11. If anyone is interested in taking the class, please contact me. We have a lot of members that have expressed interest but have not committed. As of right now we only have one opening left for February and are starting to schedule for March classes.



The Workshop is open for GMSS members that have taken an approved course on Saturdays 1pm to 4pm. You can use the Lapidary Equipment for cutting cabochons. Or... we have a jewelry workbench set up. I can help you with whatever tools you may need. Just bring your own torch. Ask questions on cutting and/or jewelry making. Any questions on classes you can reach me at b.verge@comcast.net.
 Bill Vergé



**Jan. 16, 2023 - Club Meeting:
 Stephen Mayer & Echinoderms**
 Photos by Judy Cook



It's Silent Auction time!



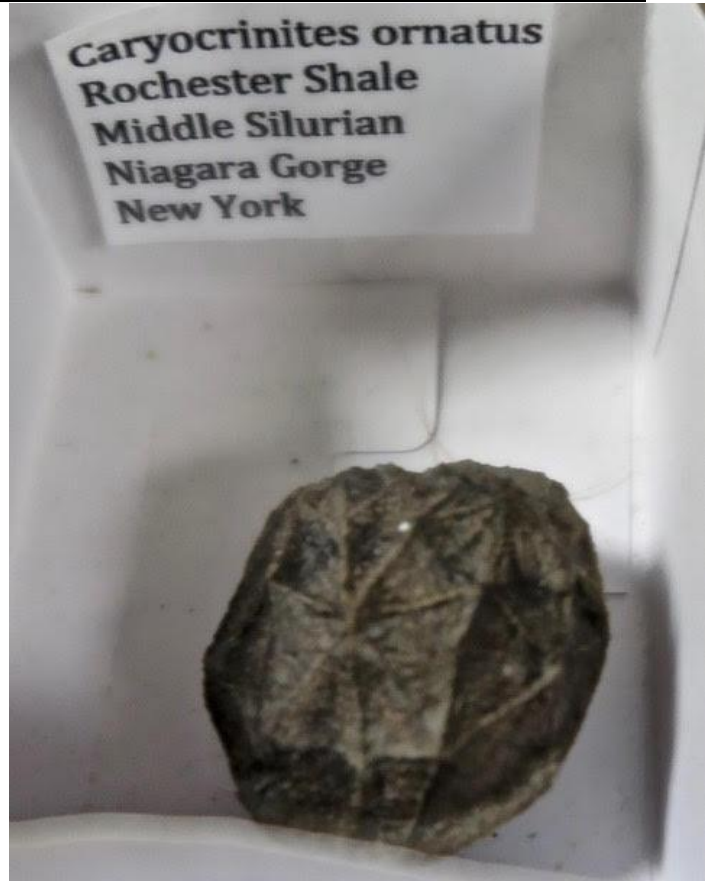
Dave Millis exhibits one of his mica creations.

No question, Stephen loves studying and presenting about Echinoderms. It was a fascinating and informative presentation. Stephen also brought in some fossils and more recent examples of these creatures. His wife Tammy is an enthusiastic partner in these endeavors.



Flexibilia with spines on axillaries
Deep Run Shale Member
Kipp Road Bed
Unnamed creek south of Hall Rd.,
E. side of Canandaigua Lake





There are a total of about 7,000 extant species of echinoderm as well as about 13,000 extinct species.

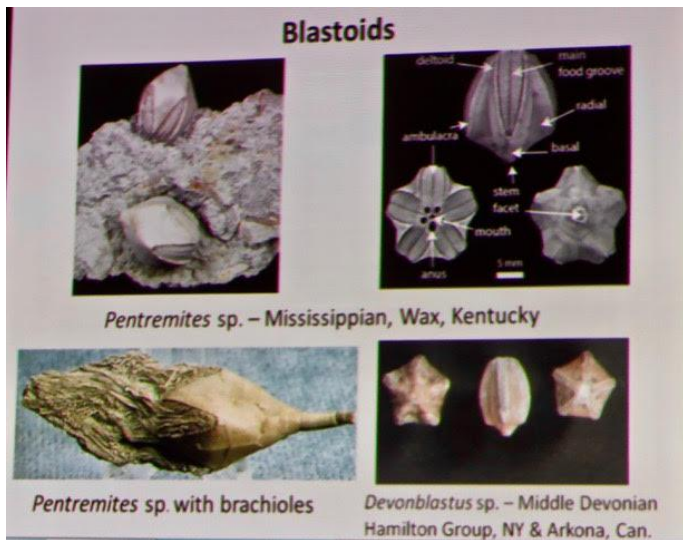
Distinguishing characteristics

1. Skeleton of calcitic perforated plates called stereom (diagnostic of primitive forms)
2. Typically, "spiny skinned" or covered by hard calcareous plates
3. Pentamerous radial symmetry (divided externally into 5 or more equal parts)
4. Water vascular system with canals and tube feet
5. Sexual or asexual reproduction
6. Rudimentary nervous system but no brains nor eyes

Cystoids

Caryocrinites ornatus – Niagara Gorge, New York and Indiana





And, In the News...

Unusually large fossilized flower preserved in amber identified

By [Katie Hunt](#), CNN Updated 5:03 PM EST, Thu Jan. 12, 2023



Carola Radke/MfN

CNN —
Almost 40 million years ago a flower bloomed in a Baltic conifer forest. Dripping tree resin encased the petals and pollen, forever showcasing an ephemeral moment in our planet's past.

Scientists have taken a fresh look at the unique amber fossil, which was first documented in 1872 as belonging to a pharmacist called Kowalewski in what's now Kaliningrad, Russia.

The striking fossil had been languishing largely forgotten in the collection of the Federal Institute for Geosciences and Natural Resources in Berlin (BGR), according to Eva-Maria Sadowski, a postdoctoral researcher at the Museum für Naturkunde, Berlin's natural history museum, and author of the new study.

At 28 millimeters (1.1 inches) across, it's the largest known flower to be fossilized in amber – three times the size of similar fossils. Sadowski extracted and examined pollen from the amber. She found that the

flower had been misidentified when it was first studied.

"The original genus name of this specimen was *Stewartia* of the plant family Theaceae. But we could show in our study that this was not correct, mainly based on the pollen morphology. But when the specimen was first studied in the 19th century, they (had) not discovered or studied the pollen," she said.

Originally named *Stewartia kowalewskii*, the authors propose a new name for the flower of *Symplocos kowalewskii*.

Amber fossils offer a tantalizing, three dimensional look at the past. As well as [plants](#) and [flowers](#), a [dinosaur tail](#), a [crab](#), a [hell ant](#), a [spider mom and her young](#), an [ancient bird's foot](#) and a [lizard's skull](#) have been found entombed in globs of tree resin.

How's that for a nice tie in?

9-year-old Maryland girl finds 15-million-year-old Megalodon shark tooth

by CAROLINE PATRICKIS | WJLA Tuesday, January 24th 2023

CALVERT COUNTY, Md. (WJLA) — A 9-year-old Maryland girl, Molly Sampson, is taking pride in her once-in-a-lifetime discovery. [Molly found a Megalodon shark tooth on Calvert County Cliffs](#) that experts said is 15 million years old.



(Photo: Caroline Patrickis/WJLA)

She said she asked for waders for Christmas so she can continue her treasure hunt for fossils and shark teeth. A low tide and perfect conditions led to the rare discovery.

On Christmas Day, the tide at Calvert Cliffs was exceptionally low, which, combined with her Christmas present, enabled Molly to wade further out into the water than normal, Alicia said. This likely helped her to snag the massive tooth.

"We were looking around and I just looked over in the water. And I looked down and I saw something big," Molly said. "I went closer to it, and I tried scooping it up, but I couldn't because it was so big and then I just reached in really quick and grabbed it and I was screeching."

Experts at the Calvert Marine Museum in Solomon's Island confirmed she found a Megalodon shark tooth dating back millions of years. Calvert Cliffs is a hotspot for fossilized shark teeth, including megalodon gnashers, because the cliffs are made from layers of seafloor sediment left behind from an ancient ocean that covered the area during most of the Miocene Epoch (23 million to 5.3 million years ago), according to the [Maryland Geological Survey](#). As the cliffs are worn down by wave action and crumble into the water below, they release ancient teeth trapped within the sediment.

Molly said she wants to be a paleontologist when she grows up.

So, everybody grab your waders & head down!

Meteorite Hunters Discover Extraordinary 17-Pound Space Rock in Antarctica

By FIELD MUSEUM JANUARY 25, 2023

Antarctica is a tough place to work, however, it's one of the best places in the world to hunt for meteorites. That's partly because Antarctica is a desert, and its dry climate limits the degree of weathering the meteorites experience. Also, the landscape is ideal for meteorite hunting: the black space rocks stand out clearly against snowy fields.

An international team of researchers who just got back from Antarctica can attest to the continent's meteorite-hunter-friendliness: they returned with five new meteorites, including one that weighs 16.7 pounds (7.6 kg).



The researchers with their 16.7-pound find. White helmet: Maria Schönbacher. Green helmet: Maria Valdes. Black helmet: Ryoga Maeda. Orange helmet: Vinciane Debaille. Credit: Photo courtesy of Maria Valdes

Earth's mantle has a gooey layer we never knew about

By [Stephanie Pappas](#) 2/10/23 [livescience.com](#)

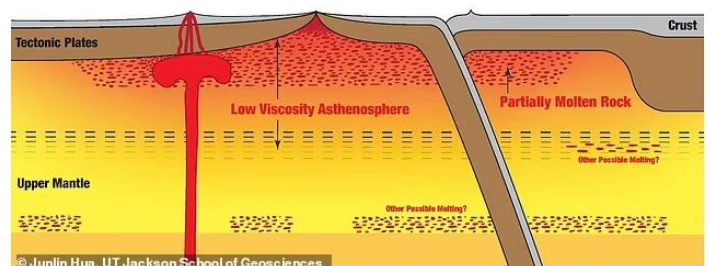
While the mantle is mostly solid, a layer about 93 miles (150 kilometers) down is melty, new research finds.

Most of Earth's mantle is hot but solid, with rocks that deform slowly rather than cracking like the cooler rocks of the crust do. But new research finds that around 93 miles (150 kilometers) below Earth's surface, there is a worldwide layer of melted rock.

Discovering this gooey layer will help researchers better understand how the tectonic plates "float" on top of this mantle layer, study first author [Junlin Hua](#), a postdoctoral researcher in geosciences at the University of Texas at Austin, told Live Science.

The melted rock is in the asthenosphere, the upper layer of the mantle that sits between about 50 miles (80 km) and 124 miles (200 km) below Earth's surface. The only way to peer into this layer of the mantle is with seismic waves from earthquakes.

To find out, Hua and his colleagues collected data from thousands of seismic waves detected at 716 stations around the world. They found that rather than holding small areas of melt, the asthenosphere appears to contain a partially melted layer that extends around the globe, under at least 44% of the planet. This area is broadly distributed across the globe and could be much larger, the researchers found, because they were unable to probe under the ocean, which is likely to overlay a layer of melt and which takes up much more area than the continents.



Scientists identified a previously unknown layer of Earth. The newly discovered region of molten rock sits 100 miles below the crust.



Gem & Mineral Society of Syracuse
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www.amfed.org www.amfed.org/efmls [Future Rockhounds](#)

Eight people organized the Gem and Mineral Society of Syracuse in 1951. Since that time it has grown in membership to include adults, families, and young folk. The Society was incorporated in 1969 under the same name.

The objectives of the Society are to stimulate interest in mineralogy, paleontology, and the lapidary arts. Member interests include collecting, identification, and display of minerals, gems, fossils. Members share and develop their artistic skills in jewelry design and creation.

Our monthly meetings provide social and educational experiences. Field trips give collectors chances to find specimens and enjoy the out of doors, exercise and time with old and new friends.

Meetings - 3rd Monday of the month
Future Rockhounds @ 6:30 - General Meeting @ 7:30
(NO Meetings Jul, Aug, Dec)
209 Oswego St (Ponderosa Plaza) Unit 14 & 15, Liverpool, NY
Visitors are ALWAYS welcome!

See online Newsletter <http://gmss.us/resources/newsletter>
 You can also visit our facebook and flickr pages
Annual member dues
Adult \$10 • Family/Couple \$15 • Junior \$5 • Life \$5

If you would like to join or renew membership download the application form (PDF), see <http://gmss.us/about/membershipform.pdf> You can get a form at a meeting or send requests to **GMSS, PO Box 2801, Syracuse, NY 13220** We will mail an application/renewal form to you.

2022 – 2023 GMSS Officers/Contacts

-President: John Sweeney
pres@syracusegemsociety.com

-Vice-President: Cathy Patterson
vp@syracusegemsociety.com

-Treasurer: Linda Clark
treasurer@syracusegemsociety.com

-Secretary: Skylar Haas
secretary@syracusegemsociety.com

-Jr Rockhounds: Rick Moore
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