

The Petoskey Stone
Oakland County Earth Science Club
October 2023
www.OCESC.com

Next Meeting October 4th, 7pm, at the Church

**Greg's thoughts from the grindstone,
This month I have two important topics to speak to.**

1. The first one is easy; We need volunteers to attend the MMS Rock show next month and work the tables. Please contact me to claim a spot. My number is 810-869-0411 and my email is gregnlemke@gmail.com.

This is what the schedule looks like as of 2/22/2023.

78th Greater Detroit Dem, Mineral & Fossil Show			
Friday Oct, 13			
9am - 6pm			
9am - 11am	Greg L		
11am - 1pm	Greg L		
1pm - 3pm	Greg L	Cliff R	
3pm - 6pm	Greg L	Cliff R	
Saturday Oct, 14			
10am - 7pm			
10am - 12pm			
12pm - 2pm			
2pm - 4pm	Bob A		
4pm - 7pm	Bob A		
Sunday Oct, 15			
11am - 5pm			
11am - 1pm			
1pm - 3pm	Dave W	Linda W	
3pm - 5pm	Dave W	Linda W	

2. I have received a letter from the Waterford Township offices and have learned that the township will no longer be renting the space that we use for the grinding room and that our club has until November 31 of this year to vacate the property.

I have placed a call to the township to discuss this but have not spoken to anyone yet.

I am requesting that all OCESC members that can attend our club meeting on Wednesday, October 4th do so. We have a lot to discuss, and we can all benefit from our club members ideas. Please attend if you can.

Happy Hounding,
Greg

Upcoming Shows:

MMS ROCK SHOW, Oct 13-15, Macomb Comm College Sports, 14500 E 12 Mile rd, Macomb MI (**OCESC will have a table here this year**, and needs your help !)

Tony West Rocky Garage Sale, Oct 12-15, Thurs-Sun.and also the following weekend Oct 19-22.

Central Michigan Lapidary Soc. Show, Oct 20-23, County Fairgrounds, 300 Ash st, Mason, MI
<https://www.michrocks.org/annual-show/show-info>

Public Service Announcement

The Federal government has resumed taking orders for free at-home COVID-19 tests as of Sept. 25. The administration is also launching a new infusion of money to boost domestic manufacturing of the test kits.

How to order free COVID tests:

Four free tests are available for each household to request through the government's [COVIDTests.gov portal](https://www.covidtests.gov) starting on Monday, Sept. 25, according to a [release](#). Americans with trouble ordering online can also call [1-800-232-0233](tel:1-800-232-0233) or [1-888-720-7489](tel:1-888-720-7489) for TTY.

Also some test kit expiration dates have been extended. Check if your kits are expired by following this link:

<https://special.usps.com/testkits>

Grinding Room News:

Bob Albertson has, again, graciously volunteered to manage the grinding room on Monday from Noon to 3:30 PM. However you must call or text a day ahead or more to let him know you will be working that Monday. If no one calls/texts Bob to let him know, then he will not be there, and you will not be able to use the grinding room. Bob's number- 248-877-1577.

OAKLAND COUNTY EARTH SCIENCE CLUB
Christ Lutheran Church
5987 Williams Lake Rd.
Waterford MI 48329

Club Web Site—www.OCESC.com

Editor: Laura Sheffer, e-mail: lsheffer1@comcast.net note that the first email ID character is a lower case 'l' as in 'Laura', and the last character is the digit '1' as in '1-2-3'. Or call 248-881-5820

General Meeting: First Wednesday each month, September through June at 7:00 PM Board Meeting: Same day as General meeting, at 6:30 PM General and Board meeting are held at Christ Lutheran Church.

Purpose: To associate the member families, to promote activities that help families learn about Earth sciences and lapidary arts, and to cooperate with other similar organizations.

Grinding classes and workshops are held at the Waterford Recreation Center building- 5640 Williams Lake Rd.

Open hours in the grinding room- CLOSED UNTIL SEPT- \$3.00/person/visit. At least Two persons must be present at all times, for safety.

Officers-2021-2022(elections not yet held for 2023)

President Greg Lemke 810-869-0411
Vice President Dwight Keith. 248-818-0042
Secretary Chris Shull. 248-393-3609
Treasurer Bob Albertson. 248-877-1577

Directors-

Bob Albertson(19-21)) 248-877-1577

Rod Krupka(19-21)) 248-627-6351

Eleanor Snyder (Emerita). 248-698-4386
Anne Marie McFadden (19-21).
Roberta Thomas(17-19) 248-497-2191
Katherine Van Hoy(Emerita). 248-563-5309
Linda Whitehead(17-19). 248-765-7344

OCESC is a member of MWF-AFMS

Committees:

Refreshments-vacant
Membership- Chris Shull
By-laws- members review
Classes- J. Glassbrook

Field Trips- Vacant

Library-L. Whitehead
Historian-L. Whitehead
Sunshine-N. Mathura
Publ.- L. Sheffer
Website-D. Whitehead

Grinding room-B. Albertson, J. Glassbrook,

Banquet - C. Shull

Club meeting program- Vacant

ARTICLES AND ITEMS OF INTEREST are welcome! Please send to the Publ. Editor by the 13th of the month.

MEMBERSHIP- \$20 per year, per household or individual. Only new member fees are pro-rated during the first year of membership. Students pay \$7.50 if not covered by family membership. Club name tag is \$10.00 per person. All adults are required to wear their name tag. Make checks payable to "OCESC" and forward to Chris Shull, or submit cash or check to Chris on meeting night.

Upcoming Events check www.rockngem.com and <https://www.mwfed.org/calendar>. for more—

Grinding Room- HOURS, Monday Noon- 3:30, contact Bob Albertson at least one day ahead to schedule.

Bob- 248-877-1577- . Grinding room fee \$3.00 per member, per visit. CHECK IN at the Recreation building desk, first floor. Two persons must be present at all times for safety. Dust mask and eye protection are required by Waterford Parks & Rec. Contact Bob Albertson to let him know you are attending that day.

Bead/Chainmaille Group Meets September through March/April, Saturdays 1-4pm, at the church. Contact Laura Sheffer or just drop by!

The mysterious growing rocks of Romania **theweatherchannel.com**

You might have raised an eyebrow after reading the title, but nature is happy to confirm this fact and guarantees to give you the weirdest things in life as always. Trovants are extraordinary rocks that grow and multiply, and you can witness these rocks in Romania. These rocks are composed mainly of a hard stone core, and the rest is made up of sand, which forms around the core as its shell.



Trovants can only be made by highly-porous sand accumulations and sandstone deposits that are cemented by waters rich in calcium carbonate. The name “Trovant” (trovanti) was made and introduced by the naturalist Gh. M. Murgoci in his work “The Tertiary in Oltenia.”

Heading straight to the question: What makes these rocks multiply? Any form of water rich in calcium carbonate is essential in forming a

Trovant, and that is also the key to making the rock grow in the presence of rainwater.

After every heavy rain shower, Trovants absorb the rain’s minerals. The minerals are combined with the chemicals already present in the stone that later creates a reaction and pressure inside. The pressure spontaneously makes the rock grow from the center to its margins and multiply, with a deposition rate of about 4-5 cm in 1000 years.

Trovants usually appear with smooth and edgeless shapes. For example, cylindrical, nodular, and spherical; Trovants develop these inconsistent shapes as they grow and multiply due to irregular cement secretion. You can see these formations grow from a few millimeters to as large as 10 meters.

Trovants aren’t only strange due to their structure and ability to grow and multiply. They can also move from one place to another. Other than that, they also have root-like extensions and age rings visible when you cut the stone, but scientists have yet to find out an explanation of these unique features.



These rocks came into existence because of the earthquakes, which occurred six million years ago. The sand reservoir was created after the successive sedimentation of the detritic material transported by the rivers.

With the combined characteristics of a plant and a rock, it's confusing if these Trovants should be categorized as living or non-living creatures. But whether it's alive or not, these growing stones are indeed interesting to see, touch and use. Besides their widespread use as a building material for tombstones, locals also use these in making souvenirs.

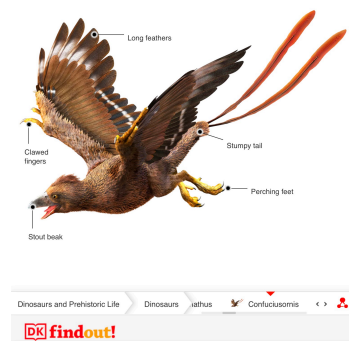
Not only in Romania, but you can also see the growing stones in Russia, the steppes of Kazakhstan, the Czech Republic, and other places.

If you want to see these rocks up-close, then head right away to Romania's Valcea County. You can either go to a sand quarry nearby Costești village or along a river in Gresarea Brook, nearby Oteșani village, approximately 15 km from Horezu. You can also see Trovants at the "Trovants Museum" Natural Reserve, run by the Kogayon association, which aims to raise awareness about protecting the environment. This museum located inside Costești village is protected by the UNESCO.

X-ray evidence of proteins in fossil feathers sheds new light on feather evolution.

Science Daily— University College Cork. "Dinosaur feathers reveal traces of ancient proteins." ScienceDaily. ScienceDaily, 21 September 2023. <www.sciencedaily.com/releases/2023/09/230921154521.htm>.

Previous studies suggested that ancient feathers had a different composition to the feathers of birds today. The new research, however, reveals that the protein composition of modern-day feathers was also present in the feathers of dinosaurs and early birds, confirming that the chemistry of feathers originated much earlier than previously thought.



The research, published today in *Nature Ecology and Evolution*, was led by paleontologists Dr Tiffany Slater and Prof. Maria McNamara of UCC's School of Biological, Earth, and Environmental Science, who teamed with scientists based at Linyi University (China) and the Stanford Synchrotron Radiation Lightsource (USA).

The team analyzed 125-million-year-old feathers from the dinosaur *Sinornithosaurus* and the early bird *Confuciusornis* from China, plus a 50-million-year-old feather from the USA.

"It's really exciting to discover new similarities between dinosaurs and birds," Dr Slater says. "To do this, we developed a new method to detect traces of ancient feather proteins. Using X-rays and infrared light we found that feathers from the dinosaur *Sinornithosaurus* contained lots of beta-proteins, just like feathers of birds today." To help interpret the chemical signals preserved in the fossil feathers, the team also ran experiments to help understand how feather proteins break down during the fossilization process.

"Modern bird feathers are rich in beta-proteins that help strengthen feathers for flight," Dr Slater says. "Previous tests on dinosaur feathers, though, found mostly alpha-proteins. Our experiments can now explain this weird chemistry as the result of protein degradation during the fossilization process. So although some fossil feathers do preserve traces of the original beta-proteins, other fossil feathers are damaged and tell us a false narrative about feather evolution."

This research helps answer a long-standing debate about whether feather proteins, and proteins in general, can preserve in deep time.

Prof. Maria McNamara, senior author on the study, said

"Traces of ancient biomolecules can clearly survive for millions of years, but you can't read the fossil record literally because even seemingly well-preserved fossil tissues have been cooked and squashed during fossilization. We're developing new tools to understand what happens during fossilization and unlock the chemical secrets of fossils. This will give us exciting new insights into the evolution of important tissues and their biomolecules."