

The Petoskey Stone

OAKLAND COUNTY EARTH SCIENCE CLUB
WWW.OCESC.COM

FEBRUARY 2018

**Banquet
Feb 7th Meeting
6:30 PM
note the EARLY
START TIME**

Board Meeting
6:00



Hungry?

Refreshments

**Banquet – to
makeup for our
Holiday Snow
Cancellation!
Starts at 6:30**

President's message- Greg's thoughts from the Grindstone...

Meteors and Meteorites! By now I know you all must have heard about the fireball that crossed our skies on Tuesday, January 16. Did you see it? Did you hear the airburst? I caught a flicker of it out of the corner of my eye while sitting in favorite chair watching television around 8 PM that night. I then looked out the window thinking it was a truck with flashing lights on my very quiet street but nope...no truck. Then my daughter reported news of a flash in the sky hitting the internet social media sites she monitors every minute of the day. Did you know that seismic sensors detected the vibrations from the airburst as far away as Pennsylvania and placed the epicenter of the 2.0 magnitude "quake" north of Chelsea? Turns out most of the pieces that have been recovered are being found in Hamburg township near (and on) Bass, Zukey and Strawberry Lake. On Saturday January 20, I volunteered at the Cranbrook Science Museum for a "meteorite event" where we volunteers were overrun with people who brought rocks thinking they had found (or had in their collection) a meteorite. Most of the people did not find or have a meteorite. However, Two individuals did!. They brought a total of 4 stones that were found a day or two after the meteor passed by. All were found on lakes. Very exciting that I was able to

hold these stones! But not exciting enough. the following day I spent a total of 5 hours walking 6.5 miles over the Manly W. Bennett Park just east of Strawberry lake looking for my own space rock but alas...no stones for me. My legs are still tired as I write this and I'm haunted, knowing there are stones out there waiting for me to find them...I'll be going back. For those of you that know a few things about meteorites... The new Michigan meteorites will likely be classified a Low iron Chondrites. Did you go looking?...Maybe we should have a field trip in the spring? Lastly, It's with sadness that I must report that I cannot attend the **banquet in February**. My work schedule now places me at a conference in Denver CO. for the entire week of the 7th. Have fun without me and as always-
Happy Hounding---Greg

A Long-time Member Passes

We have lost a dear friend and club member on Jan.22, Phyllis Keene has passed. Phyllis was 93 and was always a help at our rock sales and banquets. She had a wonderful, cheery smile for everyone. Our condolences go out to her daughter, Cindy Heide and all of Phyllis' family.

Phyllis' funeral arrangements are at Elton Black and Sons, 1233 Union Lake Rd, White Lake MI. According to Black & Sons website, the family will receive friends on Monday 1/29/18 from 3-8pm. The funeral is Tuesday 1/30/18. Please see Elton Black & Sons for details

Upcoming Events (events can be found at www.rockngem.com or www.amfed.org/mwf/Calendar/) For detailed information, please visit individual club's website.

Grinding room at the Waterford Recreation Center- \$3 per person, per visit, is the fee.

Bead Group – Meeting through February, Sat. 1-4pm. Wire wrap class continues at church, Thursday evenings.

Jan. 27-Feb.10—TUCSON, ARIZONA: Annual show; Martin Zinn Expositions, LLC, Hotel Tucson City Center; 475 N. Granada; Daily 10-6, Sat. 10-5; Free Admission; Dealers from around the world sell minerals, fossils, meteorites, rough and cut gems, lapidary supplies, home decor and so much more

Mar. 16-18—JACKSON, MICHIGAN: Annual show; Michigan Gem and Mineral Society, American One Event Center; 200 W. Ganson St.; Fri. 10-7, Sat. 10-6, Sun. 11-5; Adults \$4, Seniors \$2, Students \$1, Children 5 & under free

2018 Refreshments

Please Note: The Club has set a refreshment reimbursement limit of \$50 per meeting.

Jan. N. Pfauth, L. Sheffer
 Feb. MAKEUP HOLIDAY BANQUET
 Mar.
 April
 May
 June Banquet-Potluck
 Sept.
 Oct.
 Nov. Dec. Potluck

2017 Programs

Jan.
 Feb. Holiday Banquet
 Mar
 April Silent Auction-
 May
 June
 Sept.
 Oct.
 Nov. Club Member Swap/Sale (Election results)
Dec. Potluck -2nd Wednesday

February Birthdays
 Dennis Barlow 20
 Cathleen Fraga 21
 Bryant Hiiter 22
 Roberta Thomas 24
 Patricia Caceres 27



Dues are Payable Now-

If you haven't paid 2018 dues by the February Meeting, you will not be on the 2018 Membership List. Dues are \$20 per year for individuals or a family.

I hope to have a copy of the list for members to check over to make sure their information is correct at the Feb. meeting, before I print it. Debbie Rathburg

OCESC Board Meeting Minutes – WEDNESDAY, JANUARY 3, 2018 : Meeting called to order at 6:45 PM. Treasurer's Report: Refund for banquet food; motion made and passed to approve Treasurer's Report. Grinding Room: closed during Xmas break; new members are using the equipment. Bead classes will reopen on Thursday, Jan. 11 at 6:30 pm at the church. Jim Glassbrook will be teaching wire wrapping (\$5 and you will need a few tools). Since we had to cancel the December Banquet, we will reschedule for Feb. 14th. The proposal to buy a large saw did not work out; the owner sold it. We will keep looking for another one. The MMS Banquet is Sat. Jan. 13 at Canterbury Court in Lake Orion. A big thank you to Greg Lemke who took samples of the John Kelly donation and made a very nice commemorative plaque that was then sent to his sister. Tony's friend, Rex Rush was at the meeting to discuss our incorporation and 501(3)c plans. He would be willing to charge \$250. We would have to pay sales tax and send in our yearly reports by the treasurer who would be our resident agent. Motion made and passed to continue with this process. Programs for March will be a speaker from Bishop Airport ; April is our Auction. Adjourned 7:25 pm. OCES GENERAL MEETING MINUTES FOR WEDNESDAY, JANUARY 3, 2018: Called to order at 7:45 pm by President Greg Lemke. Treasurer's Report: Refund for banquet food. Motion made and passed to accept Treasurer's Report. Grinding room will be starting up; new members are participating. We still need a Children's Chairman; perhaps reach out of MMF. Livingston has taught scouts lapidary skills. Could we develop a cover letter to send out to groups? Greg put together a very nice tribute to John Kelly and sent it to his sister. We still have some specimens from the Detroit Show that need to be picked up. Wire wrapping class by Jim will be starting on Thursday, Jan. 11, 6:30 pm at the church. Originally the Board voted to have the Banquet on Feb. 14, but membership voted to have it on WEDNESDAY, FEBRUARY 7. Please bring a dish to pass; chicken and ham will be provided. The effort to purchase a new large saw did not work out; Eric got the old saw working. Rex Rush was at the meeting to discuss our plans to incorporate and form a 501(3)c so that the club could give receipts for tax donations. He would charge \$250. We would have to pay sales tax and have the Treasurer complete the yearly reports as the resident agent. Motioned and passed to continue with process that will shield our membership from any future liability issues. MMS Banquet will be on January 13 at Canterbury Court in Lake Orion. Future programs include a speaker from Bishop Airport and our April Auction. Our thoughts go out to Phyllis Keene and hope she is doing well. THANK YOU to Laura Sheffer and Nancy Pfauth for tonight's food and drink. Adjourned at 8:20 pm. Respectfully Submitted, Chris Shull, Secretary.

Da Vinci Ahead of His Time, Even in Paleontology

During Leonardo da Vinci's lifetime, most people saw fossils not as the remains of creatures that had lived long ago, but as the products of forces inside the earth that were trying to reproduce life within rock, constantly generating the stone "shells" and dark "shark teeth" found many miles from the nearest ocean. But da Vinci thought differently: as Baucon points out, his private notes in the Codex Leicester show that he had figured out that the fossils of the Italian countryside had once been creatures that lived in an ancient sea. His insights into the origin and nature of body fossils anticipated what the naturalist Nicolaus Steno would explain in the mid-17th century.

Here is the English translation of part of the Codex Lecster, from "Leonardo's Notebooks" pgs 170-171, edited by H. A. Suh

"In the course of time the level of the sea became lower, and as the salt water flowed away this mud became changed into stone; and such of these shells as had lost their inhabitants became filled up in their stead with mud... We do not find that the sand mixed with seaweed has been petrified, because the weed which was mingled with it has shrunk away, and this the Po (river) shows us every day in the debris of its banks."



These meteorites were discovered by Longway Planetarium astronomers Todd Slisher and Buddy Stark, by the Flint, Mich., planetarium's content developer Brian Wolff, and by Farmington Community Stargazers member Tony Licata.

The Michigan Meteor of February 16, 2018

By Mathew Cappucci, Jan. 23, 2018

The estimated 6-foot- [1.8-meter-] diameter space rock created a bright fireball that broke up," he tells *Science News for Students*. This was due to the intense pressure, he says, "experienced as it raced through our atmosphere." The meteor traveled at an estimated 45,000 kilometers (28,000 miles) per hour, creating a sonic "boom" that startled many people. That sound shook the ground enough, Gross says, to mimic a magnitude 2.0 earthquake.

Most meteors, including this one, are *chondrites*. They are made of tiny chondrules, mineral bits containing silicon. Meteors also have a lot of iron, nickel and magnesium. The latter is the reason they appear to glow blue. Magnesium burns white, but only the blue rays penetrate to the ground. If a meteor doesn't totally burn up, parts of it can hit the ground. These remains are known as meteorites. But most meteors explode under the extreme heat of friction as they brush against air molecules in the atmosphere. Such an exploding space rock is known as a bolide. When a meteor transforms into a bolide, bits of the initial rock may now spread out and rain down over the surrounding countryside.

That's where knowing about the sound becomes useful. The International Meteor Organization notes that "bangs or swishing sounds, or possibly other noises" can be linked with meteors and offer clues to whether they have shattered. Those sounds may arrive several minutes after sighting the burning space rock. The reason? Sound travels much more slowly than light. Last week's incoming meteor, for instance, traveled at Mach-37, according to NASA. That's 37 times the speed of sound. That's very fast. But the speed of light is 874,030 times the speed of sound.

The 1.8-meter wide meteor would have weighed a whopping 1,000 kilograms (2,200 pounds) before it exploded. The sound of its breakup would produce a substantial shock wave through the atmosphere. Imagine throwing a rock into a pond. It would send ripples outwards in concentric rings. That's exactly how the sound waves would have spread. Such an exploding space rock is known as a bolide. When a meteor transforms into a bolide, bits of the initial rock may now spread out and rain down over the surrounding countryside.

A National Weather Service station in White Lake, Mich., runs a Doppler radar system about 35 kilometers (22 miles) from where the meteor entered the atmosphere. As the meteor broke apart, the radar beam bounced off the pieces. It showed bolide debris spreading out as a spattering of broken rocks raining down from the night sky.

More details at <https://www.sciencenewsforstudents.org/article/meteor-explodes-over-michigan>

OAKLAND COUNTY EARTH SCIENCE CLUB
 Christ Lutheran Church
 5987 Williams Lake Road
 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’

Midwest Federation Library: Rentals are open to all club members. \$5 each DVD- contact Pat Powers, e-mail SLCNewsletter@aol.com

General Meeting: First Wednesday each month (except December), September through June at 7:30 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- \$3.00/person/day.

Officers – 2018	
President: Greg Lemke	
Vice-Pres: Dwight Keith	
Secretary: Chris Shull	
Treasurer: Leon Pearson	
Directors	
Bob Albertson (17-19)	
Jim Glassbrook (16-18)	
Rod Krupka (16-18)	
Gerry Runkle (18)	
Eleanor Snyder (Emerita)	
Terry Swindlehurst (17-19)	
Roberta Thomas (17-19)	
Katherine Van Hoy (Emerita)	
Linda Whitehead (17-19)	

**OCESC is a member of
MWF-AFMS**

Committees:
 Refreshments- Monica Rowe
Programs- Open position
 Classes- Tony West, Jim Glassbrook
 Field Trips- J. Rives
 Children’s - **open position**
 Membership- D. Rathburg
 By-Laws- C. Roller, P. Brady, L. Pearson
 Library- L. Whitehead
 Historian- L. Whitehead
 Silversmith-**open position**
 Scholarship- **open position**
 Rock Raffle- **open position**
 Shows- **open position**
 Sunshine- N. Mathura
 Publ.- L. Sheffer
 Website- D. Whitehead
 Grinding Room- L. Pearson, G. Runkle, B. Albertson
 Banquet- N. Pfauth, C. Shull
Newsletter Contributions- All Members:
 Articles and items of interest are welcome! – Please send them to the editor (US Mail or E-mail) by the 13th of the month. See above for Editor’s address.

INCORPORATION CONTACT- Leon’s e-mail address is pearsonleon@sbcglobal.net and phone number is 248-673-5479.

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 Debbie Rathburg, or submit cash or check to her on the meeting night.

OAKLAND COUNTY EARTH SCIENCE CLUB
C/O CHRIST LUTHERAN CHURCH
5987 WILLIAMS LAKE RD.
WATERFORD, MI 48329

FIRST CLASS MAIL

More on Michigan's Recent Meteor Event

According to tracking analyzed by American Meteor Society, the meteor traveled West - Northwest and was first visible near US-23 and Hyne Rd in Brighton. It then traveled and was visible to an area just south of Highland Rd and west of Byron Rd in Howell. The Michigan fireball announced its arrival in another way via a 2.0 magnitude seismic event recorded by the U.S. Geological Survey. NOT from the impact itself but from the pressure wave created during the explosive breakup of the object. The epicenter was reported as eight kilometers West-Southwest of New Haven, Mich. A preliminary analysis indicates it's possibly an L6 chondrite, a common stony meteorite type. The "L" stands for low iron and "6" (on a scale from 3 to 7 from least to most altered by heat) indicates that the meteorite was strongly heated, so it likely came from a larger asteroid. Samples are on their way now to the Chicago Field Museum for more detailed analysis and classification.

Shop Tip, from Lapidary Journal Jewelry Artist, Dec. 2017 pg 87

Joanne Box of Graham WA shares this tip- A small metal block covered with double-sided carpet will hold a cab firmly while I shape a bezel around it. Its great for layout of a design and working out spacings. And it keeps the elements together while working on it. Carpet tape is available in most hardware stores and departments.