Wayne County Gem and Mineral Club News



Always Looking for Places to Dig!



Next Club Meeting Friday October 8th, 7:00 PM. Park Presbyterian Church, Maple Court, Newark, NY

Program: MINERAL FAKES Presented by James Keeler

James will tell us how unscrupulous folks generate turquoise by injecting dye into howlite and how amethyst is baked to generate unnatural citrine. Doping minerals or treating their surfaces to create "gems" from less valuable minerals is, unfortunately, big business, especially when purchasing online. James will help us avoid falling for such pieces.

If you have a fake mineral specimen or fossil, or think you might, bring it to the meeting.

We are planning to initiate **a kid's program** at this meeting. Holly Woodworth has volunteered to lead in this effort. At this first meeting she asks that each child who attends:

 Write a paragraph (4-5 sentences) telling us what your favorite rock, mineral, or fossil is and why. We'll share this at the meeting.

Editor's note: and maybe in the next newsletter also!

- 2. Bring a rock that you want to paint. We'll have some for you to pick from also. Wear old clothes if you plan to participate.
- 3. Unscramble the following five rockhound words:

korc aplo sepjea rpiety aslhe

This program will work best if we have lots of kids at the meeting! We will discuss future kid's topics as well. Ideas are welcome.

The CLUB ELECTION will also be conducted at the October meeting. The slate (see page 7) is full of volunteers ready to lead the club forward and the uncontested election of our new officers will be formally undertaken.

Saturday October 23rd

WCGMC Club Workshop (10:00AM until mid-afternoon)

Where: 6676 E. Port Bay Rd, Wolcott, NY A mask must be worn when inside the shop. Eye protection is required.

For those who like to mark their calendars, **the next open workshop date is October 23**rd.



Fall is already here it is beautiful this time of year but that means snow will soon follow. That I can do without.

As most of you know, October is my last month as your president and new officers will be stepping in at the next meeting. Unfortunately I will not be present as it is my great granddaughters 7th birthday and the family will be at Disney world. I will definitely be at the November meeting.

It has been a pleasure being your president. I will continue being active in the club and look forward to future activities. I appreciate all the help members have given me during my two terms (4 years) as president.

As reported previously the picnic was a great success Lots of fun with good food and lots of minerals exchanging hands. The auction netted the club over \$2,000. In September we had the annual bulk rock sale which surpassed all expectations with \$2,500 of sales. It was a beautiful day and members really seemed to like the new location of the club inventory. The sales from both recent events will help to offset the cost of the 20' container that is now sitting behind the workshop with most of the club's remaining inventory. When you visit the workshop you will also see that we have a new water-based saw to replace the tired one that sat in the upper room with the two large oil-based saws.

A big thank you to Glenn and Eva Jane Weiler for agreeing to have the container placed on their property. Now the club's rocks/minerals are located right next to the workshop where they can be accessed when the workshop is open. Several members helped to move the inventory and get it organized. It went very smoothly. It is bittersweet to have the inventory moved. I have enjoyed being the curator all these years and I will continue in that role but I may need a little help going forward.

A big thank you to everyone whether you were available to help move everything or whether you dug deep in your pockets and made the bulk sale a huge success. This is a wonderful club that has given me many rewards over the years. All the luck and support to the new officers.





September 11th WCGMC Bulk Rock Sale in Wolcott: The 20' container in the center of the picture will be the new home for much of the club's collection, right where it is needed. Glenn Weiler has already built shelves along both sides of the unit and he is busy planning to install an electical line and lights so we can actually see what is in there.



SAT, SEP 25 Lakeshore Geology of the Sterling Nature Center, with Geologist Fred Haynes Sterling, NY

Saturday, September 25th was a gorgeous day. The sky was blue, the temperature was just right, and there was a light zephyr blowing off Lake Ontario. It was a perfect time to be enjoying all that the lake has to offer. And 58 folks did just that, visiting Sterling Nature Center in northern Cayuga County to learn a bit about the geology of Lake Ontario while looking at the rock strewn coastline and the truncated drumlin at the site. Sterling Nature Center's Jim D'Angelo organized the event and WCGMC Vice-President Fred Haynes offered the presentation.



The event started with a 45-minute session under the picnic pavilion adjacent to the Sterling Nature Center museum. Photo by J. D'Angelo

Folks learned about the Paleozoic bedrock of western New York including the red/gray Ordovician Grimsby sandstone we would later see on the beach. There was also a discussion of the glacially-formed geomorphological features we all must navigate to get around Monroe, Wayne, and Cayuga Counties. Moraines, eskers, outwash, kettles, and yes, our wonderful drumlins were all discussed. Then we headed to beach. We stopped for a moment at the large glacial erratic boulder about half way down Lake Trail, marveling at how a piece of granite this size could be moved and then unceremoniously dumped by a travelling glacier just 10,000 years ago.



Fred attempted to identify several hundred rocks over the course of a couple of hours. Photo by J. D'Angelo

At the beach, everyone started searching for a favorite rock or two. Several cephalopod fossils were found in limestone cobbles and the search for garnets intensified when one of the younger among the group found a nice garnet gneiss. Epidote was identified and pretty cobbles of orange quartzite were identified. Although dominated by the local red/gray Grimsby sandstone that was stripped to form the lake and is continuing to be eroded by streams and rivers, there were rocks of all flavors to be found. Metamorphic schist, gneiss, quartzite and marble and igneous granite and diorite are just a few that were found in a couple hours on the lake front.

We moved west along the shoreline to see the actual drumlin cliff faces where angular versions of these foreign rocks are floating in a mud/clay matrix just waiting for the next winter season when they will be released into the fury of Lake Ontario and naturally tumbled into new "beach" rocks.

Sterling Nature Center made an exception to their no collecting rule and all who attended were able to take home a few of their favorite finds.

<u>Sterling Nature Center</u> is just east of Wayne County and if you have not visited the site, you should consider doing so. In addition to the glorious rocky shoreline and the Nature Center, the 1400 acre park boasts 10 miles of trails that cross meadows, penetrate both hardwood and conifer forests and traverse swamps. There is something for everyone.

Yardangs and Zeugen by Fred Haynes

It is time for a vocabulary lesson. Who knows what yardangs and zeugen are? They may sound like words from Harry Potter's world or from the shire where Bilbo and Frodo Baggins lived. But these are not fictional terms. Rather they are the names of geologic features found in arid windy deserts. Once you learn about these features, and how to spell them, they can become handy words to know the next time you play Scrabble. Just don't add an s to zeugen as it is already plural.

A **yardang** is a sharp irregular ridge of compacted sand lying in the direction of the current wind in an exposed desert region. Yardangs are formed by the wind erosion of adjacent material that is less resistant. They form in rocks (or weakly consolidated sediments) that have **vertical** bands of harder and softer rock. The zones of harder rocks usually reflect slightly more consolidation or even cementation along joints or weaknesses.



Yardang from the Edwards Air Force Base in southern California - from McGuire (2004)

Zeugen also form in desert regions with little active water and where erosion is mostly by wind coming from a dominant direction. Like yardangs, zeugen are formed by the abrasive action of wind-blown sand, but a **horizontal** layer or resistant rock above less resistive units is the driving mechanism behind their formation. Like yardangs, zeugen formation requires a strong prevailing wind direction.

Perhaps the most photographed zeugen in the world are in the Middle East where carbonate sand units displaying wonderful cross-bedding are overlain by thin calcified beach deposits that are more consolidated than the units below.. These hard units hold up long linear features as wind driven sand abrades and erodes the softer underlying unit.



Zeuge in United Arab Emirates (from Kirkham, 1998)

You won't find any yardangs or zeugen in Wayne County. Sorry, drumlins do not count. At times it may seem windy enough for such features to form, but the wind is not directionally consistent and there is not enough sand to act as an abrasive. And it rains too much. Erosion in our area is accomplished primarily by water. There are small yardangs in places like White Sands National Monument. Much larger ones can be found in the Middle East.

Geologists studying Mars know all about yardangs. With little or no water flowing on Mars, and lots of sand and wind, yardangs are common on the red planet. The winds on Mars may actually cut through deposits of volcanic ash in generating the features.



Yardang-dominated terrain on Mars as viewed from NASA's Mars Reconnaissance Orbiter in 2015. The curving brighter terrain running vertical on this photo are the yardangs. Smaller and shorter transverse sand ridges are running across this view between the yardangs.

References:

Kirkham, A., 1998, Pleistocene carbonate seif dunes of the UAE, Geoarabia, vol. 3 #1

McGuire, T., 2004, Universities Space Research Association, Earth Science Picture of the Day

Runyon, K., 2015, <u>Yardangs in Arsinoes Chaos</u>, University of Arizona Lunar and Planetary Laboratory webpage





Something New to Collect by Fred Haynes

Sometimes rather ordinary rocks some might call leaverite can become guite attractive when they are adorned by colorful or symmetrically appealing forms of lichen. I found one such candidate recently. The host rock is a drab, gray-brown sandstone. At first glance one might think that the concentric patterns resting on what appears to be a bedding plane might be a mineral coating or even a fossil. But it is most certainly not.



My recently acquired lichen sample

An online search supported by a recently acquired Guidebook to Lichens of the North Woods by Joe Welewski allowed me to identify this as Porpidia crustulata, otherwise known as concentric boulder lichen. This species of lichen grows on siliceous rocks and prefers full sun.

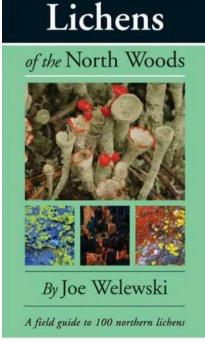
The blackish cup-shaped bodies that are arranged concentrically atop the brownish flat base lichen are called apothecia (or apothecium when speaking of just one). They are the spore-bearing structure, or fruiting body, of the fungal portion of the lichen. The spores will disperse and new fungi will form, but they will not produce new lichens. Lichens are complex combinations of fungus and algae species. For a new lichen to grow the fungus and the algae must disperse together,



The cup-shaped apothecia in this example of Porpidia crestalata are between 0.5 and 1.0mm in diameter. This close-up image is from the center of the lichen just to the right of the dime in the picture to the left.

If kept moderately moist the brownish region between the apothecia of this species would be grayish green. This rock was part of a collection that had been in storage for a long time and the lichen had dried out, turning brown and hard. This does not mean that the lichen is dead. It may be merely dormant. Returning this rock to an environment with adequate moisture might allow it to absorb water and become soft and fleshy again.

Key Reference: If you think you might want to start a lichen collection just identify or lichen vou find growing on the ground, on trees, or on rocks, this guidebook small might be for you. I've identified eight different lichens using this book since acquiring it a month about Maybe next ado. year we can share lichen stories and lichen swap specimens?



Splendid Sands Calendar

October 2021 Golden Gate National Recreation Area. Sausalito, CA



Photo by Leo Kenney

by Leo Kenney, Kate Clover & Carol Hopper Brill

Black Sand Beach is in Golden Gate Recreation Area. Here the rock erodes from the Marin Headland's steep coastal bluffs. Composed of pillow basalts and radiolarian chert, these rocks originally formed on the seafloor and were plastered onto the continental margin by subduction zone processes.

Red and green grains are radiolarian chert. Radiolaria are unicellular planktonic organisms with insoluble silica shells that accumulate in seafloor sediments as they died. The colors result from iron impurities and reflect the presence of or absence of oxygen when the sediments lithified. If oxygen is present, the chert becomes red or brown; if absent, the chert is green. Radiolarian fossils in the chert appear as silt to sand-sized flecks visible with a hand lens (see grain at six o'clock and below left)).

Semi-translucent orange grains are chalcedony. Black grains are basalt from oceanic continental crust. The well rounded and beautifully polished grains indicate aggressive tumbling in the surf.



IS IT A MOLD OR A CAST?



In 1962, the Netherlands issued a semi-postal stamp featuring an ammonite. If you rotate one of the stamps 180 degrees so that it is upside down you will see an interesting optical effect. The upside-down stamp on the left looks like an external cast. However, when the stamp is viewed right side up, it looks like an internal mold. Both clearly show the outside of the fossil ammonite, but they certainly look different. This stamp was part of a five-stamp set commemorating the International Congress of Museum Exports, held in July of 1962 in Amsterdam.

For those of you who are not stamp collectors a semipostal stamp means that the second denomination on the stamp (in this case 4ct) is a donation that the postal service will make on behalf of the purchaser of the stamp. Often these stamps have a clearly designated charity, but I am not sure that this one did back in 1962. The catalog simply says that "the surtax was to be used for social and cultural purposes".



A few more ammonite fossils on postage stamps.



Some additional scenes from the WCGMC September Bulk Rock Sale

Rochester Gem, Mineral, Jewelry, and Fossil Show & Sale

Saturday October 23rd 10:00 – 6:00 PM Sunday October 24th 10:00 – 5:00 PM Total Sports Experience – 435 W. Commercial St. East Rochester, NY 14445, just off Interstate 490

Admission \$6, kids under 12 admitted free

Educational displays, beads, crystals, fossils, minerals, jewelry, carvings, spheres, hourly door prizes, and much more. For more info visit: <u>www.rochesterlapidary.org/show</u> Dolomite Products regrets that it has had to cancel the Walworth Open House scheduled for October 9th and 10th at their Walworth Quarry. They fully anticipate renewing the annual event during Columbus Day weekend in 2022.

Wayna County Com & Minaral Contacta	APPOINTED POSITIONS
Wayne County Gem & Mineral Contacts ELECTED OFFICERS President - Linda Schmidtgall <u>lees(at)tds.net</u> 315-365-2448 Vice-President - Fred Haynes <u>fredmhaynes55(at)gmail.com</u> 585-203-1733 Secretary - Debbie Breeze	Bill Chapman – Field Trip Chair Fred Haynes – Newsletter Editor <u>fredmhaynes55(at)gmail.com</u> Bill Lesniak – Website Coordinator Glenn Weiler – Workshop Coordinator
Treasurer - Bill Lesniak Board of Directors	Linda Schmidtgall – Collection Curator Fred Haynes – Facebook Administrator Jim Rienhardt – Sand Chapter
Gary Thomas Bob Linderbery Heidi Morgenstern James Keeler Past President - Glenn Weiler	Club meets 2 nd Friday of each month starting in Sept. Social meeting at 6:30 PM Regular meeting at 7:00 PM Park Presbyterian Church, Maple Court, Newark, NY Website – <u>http://www.wcgmc.org/</u>
Visit us on Facebook: https://www.facebook.com/groups/1675855046010058/	Dues are only \$15 individual or \$20 family for a full season of fun. Renewal is in October. Send to: WCGMC, P.O. Box 4, Newark, NY 14513

