

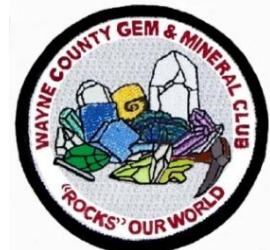
Wayne County Gem and Mineral Club News

September, 2022

Always Looking for Places to Dig!



WCGMC Annual Picnic: August 20, 2022 – Wolcott, New York



<http://www.wcgmc.org>

FACEBOOK link



First Fall Meeting

Friday **September 9th**, 7:00 PM.

Park Presbyterian Church,
Maple Court, Newark, NY

Program: **Salt Mining in New York**
by Bill Glenn (geologist)

The largest salt mine in the United States is in western New York. Come learn a bit about the history, economics, and, of course, the geology of salt mining in New York State. You won't want to miss this opportunity.



American Rock Salt Mine in Mt. Morris, New York

Saturday Club Workshop

September 24th

(10:00 AM until mid-afternoon)

Where: 6676 E. Port Bay Rd, Wolcott, NY

Eye protection is required.

Training on equipment is available.

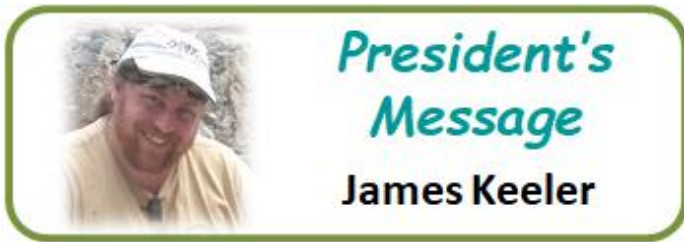
\$5/adult to offset maintenance costs.

Yes, it is Dues Season again!

Our treasurer reports that 32 families paid their club dues for the upcoming year at the picnic in August. Together with several new members who joined at GemFest these folks took advantage of our offer to save \$5 by renewing early. That offer remains in effect at our September meeting. Family membership is normally \$20 annually. It is only \$15 if paid at the September meeting or sent to **WCGMC, P.O. Box 4, Newark, NY 14513** before the end of September. Individual memberships are \$15 annually, but only \$10 until the end of September. You can't beat that!

Paying early saves you money and helps our treasurer do his job. That is called a win-win!

If you are mailing your membership please either print a form from our webpage ([found here](#)) or otherwise provide all your contact information including phone and e-mail address.



Welcome to the 2022-2023 WCGMC season! We're back to regular Friday meetings at 7pm at the church, and we'll be starting out this season with a very special presentation on September 9th.

This is something I have been working on arranging for us over the past year, and the geologist I've been in contact with has agreed to come give his presentation on the salt mining industry for this month's meeting. I assure you - you do NOT want to miss this talk!

We've been having some great times together over the summer between the Mt. Pleasant Mills field trip and the picnic, and the rockhound season isn't over yet! Jeff is planning a trip to Hooper Mine in October before the leaves fall, and I'm still trying to line up a New Hampshire dig (or if that doesn't work out, another field trip of some sort) for us later in September. Details to follow once I get something lined up.

We had some disappointing news in that Dolomite Products has had to cancel the planned October open house dig at the Walworth quarry. It looks like this may be indefinite as it's a liability and insurance issue for the parent company. Penfield quarry has announced that they are planning to host a no-dig open house with food trucks, quarry tours, rock painting, and more from 8AM-1PM on October 1st.

Also, still no news of a release from the restrictions on the commercial operations at Ace of Diamonds, so while fee digging is still definitely allowed and we'll still plan the closing day club dig this year; there hasn't been new material added to the dumps as of yet. While we had to work a bit harder, we still found things opening day and during other personal trips, so it's still a great time - just a bit more work needed and not quite the bountiful amount of Herkimers we have grown accustomed to finding.

All that somewhat less exciting news aside, I was thrilled to see more new faces from new members at the picnic, and hope to see those faces plus all of the regulars (and maybe some folks we don't see too often, too) at the monthly meetings. September's lecture is definitely one you will not want to miss!

Rockhound of the Year

By James Keeler

Each year, the club honors someone who has stood out in the club in some fashion with the Rockhound of the Year Award. Despite the title of the award, it doesn't have to go to someone based on rockhounding activity specifically; and in this case, the recipient's contributions to WCGMC go well beyond rockhounding.

Since this year's Rockhound of the Year is usually involved in selecting the recipient and preparing the award, we had to be extra sneaky. The recipient this year also usually writes the newsletter article, so I am stepping in to fill that role this year.

I want to extend my heartfelt congratulations to Fred Haynes, the 2022 WCGMC Rockhound of the Year. We're exceptionally fortunate to have a down-to-earth doctorate geologist in the club who not only puts up with everyone bringing him random conglomerate rocks asking "what is this", but also puts together a fantastic newsletter, has coordinated innumerable field trips and the gem show, and given many accessible presentations at meetings. Fred does all this with a smile and can-do attitude that has served as one of the key elements holding our club together. His enthusiasm and knowledge makes WCGMC an interesting, exciting, and engaging group to belong to and stay active with.

Thank you so much for your contributions to WCGMC over the years, and for providing a fantastic role model and inspiration for us to follow as we carry the club into the next generation of leadership.





Plate Tectonics in Action by Fred Haynes

Many of you probably know that the bedrock under the glacial cover in western New York is several hundred million years old. You may also know that the rocks are oldest along the Lake Ontario coastline (Ordovician Period, ~485 to 445 million years ago) and become younger as you move into the Finger Lakes region (Devonian Period, ~420 to 360 million years ago). Those who hunt fossils in western New York have also heard that the region was covered by a shallow inland sea and was located south of the equator during the Silurian and Devonian Periods. But have you ever tried to imagine what happened during the next 300-400 million years to get us to where we are now? Or how about the 300 million years or so before the Devonian Period?

There is an interesting interactive webpage that allows you to plug in your home town and scan 750 million years of earth's history in a matter of minutes, or longer is you become fascinated.

LINK: <https://dinosaurpictures.org/ancient-earth#0>

I am not sure why dinosaur is included in the URL: perhaps as a catchy name to grab your attention. Dinosaurs lived, and evolved, for a long portion of earth's history from about 220 to 66 million years ago, but the story told by this interactive website is much longer than that.

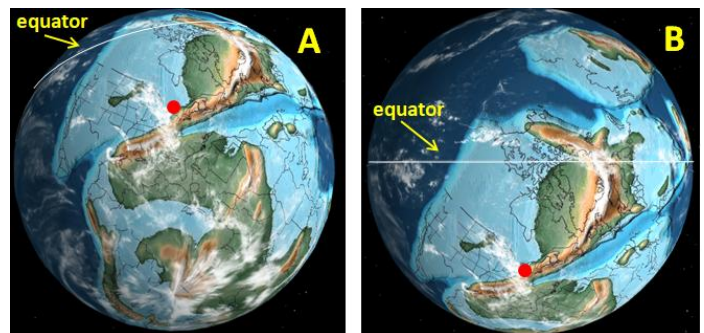


Today's North and South American tectonic plates.

Give it a try. Open the webpage and plug in a location in the small box in the upper left side of the screen. I typed Newark, New York and entered 0 million years in the white box at the top of the screen. I was rewarded with the image shown to the lower left. The North American continent appears as we know it today and Newark, NY is prominently marked by a red dot. You can move your cursor onto the globe and rotate planet earth to whatever position you like

Now let's go back in time. First, select 370 million years (the Devonian Period) from the list available in the pull down menu at the top of the screen. Your image should look like Figure A below. Now, find the Display Options menu in the upper right and make sure "Show Equator" is turned on. It is hard to see, but there is a faint white line well north of Newark (up towards Alaska). I have overprinted that line with a bolder white line in Figure A. below.

Move your cursor onto the globe and rotate the earth until the equator is where it should be, left to right across the center of the global view. Look where Newark, New York is (or should we say was) 370 million years ago (Figure B below). It is also interesting to note the large and long range of mountains just to our east and running from north of the equator almost to the South Pole. These were the ancestral Appalachian Mountains during what is known as the Acadian Orogeny, the third of four orogenies (mountain-building events) that created the mountain range.



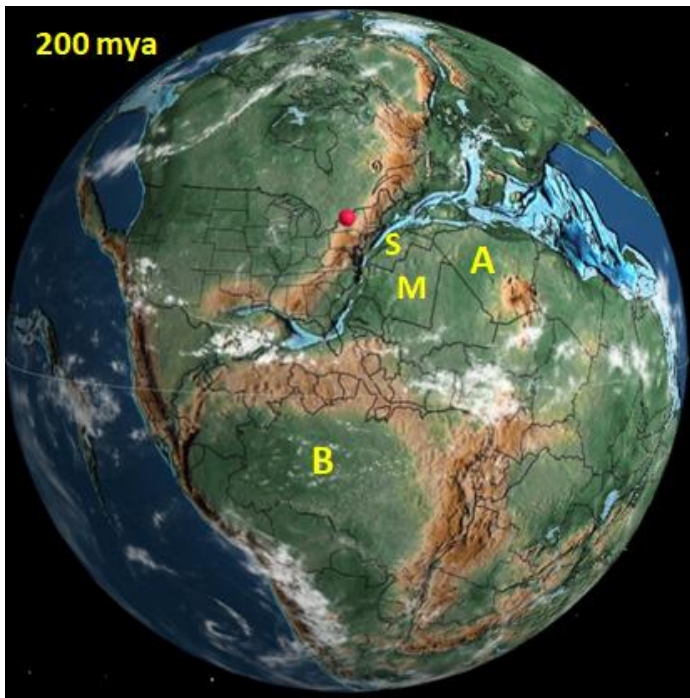
Devonian Time – 370 million years ago.

The lighter blue regions on the reconstruction represent regions of shallow sea water, comparable to continental shelf margins today. Notice how much of the North America continent was covered by shallow oceans during the Devonian. The current US state boundaries are there to help you get located. Compare that to today's picture to the left. Rotate the planet for a full picture and think a bit about the implications. There are many.

continued on the next page

If you want to see how things evolved over the 270 million years after the Devonian you can stop about every 20-30 million years to watch Newark move north and the continents change position. For example, let's look at 200 million years ago. Newark has migrated across the equator and is now right in to the middle of a vast continental region. If you look closely you can see the outline of Brazil (B) up close to the southern US and the North African nations of Western Sahara (S), Mauritania (M) and Algeria (A) pushing into the east coast of the United States.

I chose 200 million years (Late Triassic Period) because you can just see the beginning stages of the continental rifting that is starting to separate the super-continent of Pangaea (or Pangea) apart along what will become the mid-Atlantic Ridge. Back up to 220 million years ago and these rifts had yet to form.



Continental reconstruction 200 million years ago.

The Appalachian Mountains remain a dominant mountain range 200 million years ago, a product of the collision of Africa and North America. However, they have already begun their gradual descent due to erosion now that the continents have begun to rift apart. Today we roam around in the roots of these mountains.

If you scroll through the Mesozoic Era (220 to 66 million years ago), when dinosaurs roamed the earth, you will note that western New York was in a terrestrial setting (above sea level) throughout that time. Certainly, dinosaurs must have thrived in the temperate climate of the mid-latitude location that

New York occupied. You might wonder why we do not find dinosaur bones or other evidence of their presence anywhere in western New York.

The answer is rather simple. Sediments or even lithified sedimentary rocks that were laid down in our area over that time period were subsequently eroded away, during the 65 million years of the Cenozoic Era or by the many stages of continental glaciation that passed over the region in just the last several hundred thousand years. The youngest sedimentary rocks present in western New York are found in the southern tier and they are Mississippian in age (260-320 million years old). The first dinosaurs did not appear until 100 million years later in the Triassic Period. The entire geological record of the Mesozoic Era in western New York has been wiped away!

The online site provides additional information about each of the time periods for which the continental reconstruction is provided. For example, the text in their lower left of the screen when the Devonian Period is selected reads.

Late Devonian: Life on land becomes more complex as plants develop. Insects diversify and fish develop sturdy fins, which eventually evolve into limbs. The first vertebrates walk on land. Oceans and coral reefs host a diverse range of fish, sharks, sea scorpions, and cephalopods. A mass extinction is about to take place that will stress marine life.

Here is a homework assignment

Check out 66 million years ago, which is the end of the Cretaceous Period when terrestrial dinosaurs met the final demise, and answer the following questions.

- 1) Where did the Appalachian Mountains go?
- 2) Could terrestrial dinosaurs have inhabited Florida?
- 3) Rotate the globe and find India. Where is it? Now move to 35 million years ago. Can you see the Himalayan Mountains and imagine how they formed?

References:

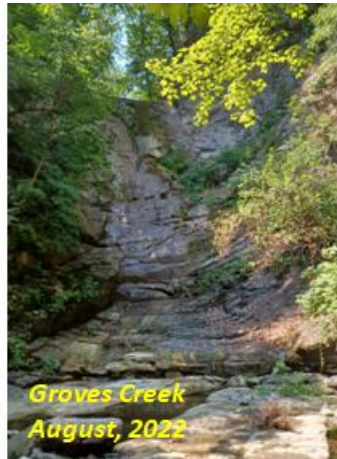
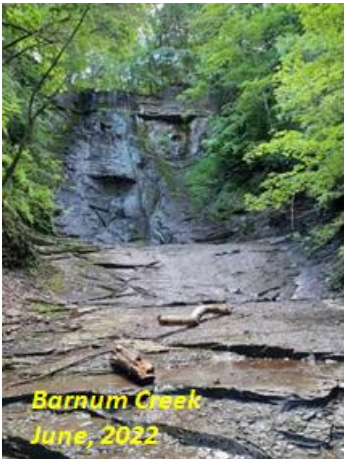
Scotese, C. R. [Plate Tectonic and paleogeographic Maps](https://www.earthbyte.org/paleomap-paleoatlas-for-gplates), A PALEOMAP Project, For more information visit: <https://www.earthbyte.org/paleomap-paleoatlas-for-gplates> & www.globalgeology.com. Read more about the methods used [here](#).

Solly, M. 2019, [This Map Lets You Plug in Your Address to See How It's Changed Over the Past 750 Million Years](#), Smithsonian Magazine Webpage



Hiatus Concretions by Stephen Mayer

Two times this summer I have been out searching for hiatus concretions. They can be found in at least two beds in the stratigraphic section of western New York. These are the Barnum Creek Bed and the Bloomer Creek Bed of the King Ferry Member of the Ludlowville Formation. It should be noted that both sites are on private property and both require owner permission to enter and collect.



In June I visited Barnum Creek on the west side of Cayuga Lake. The hiatus concretions are weathering out of the Bloomer Creek Bed at the prominent ledge approximately 20-25 meters below the lip of the falls formed by the Tichenor-equivalent Portland Point Limestone succession.



Hiatus concretions from the Bloomer Bed at Barnum Creek. The concretions were used as substrate for *Pleurodictyum* corals.

Cayuga Lake. After a strenuous descent, several hiatus concretions were found, again in the Bloomer Bed at the base of the falls. Although hiatus concretions are plentiful in the Barnum Bed, none were collected at either ravine.



Auloporidae corals (*Cladochonus* sp.) are growing atop this hiatus concretion from Groves Creek.

For those familiar with septarian nodules, hiatus concretions have a completely different origin. The concretions initially form diagenetically beneath the sediment-water interface. During periods with slow to no sediment accumulation coupled with submarine erosion by underwater currents the concretions can be exhumed. They are exposed at the sediment surface where they remain for a short period of time (a hiatus in geologic activity). These periods of times are known as diastems. During diastems the concretions may roll around where they can become abraded until they come to rest on the seafloor.

Organisms often burrow into the concretions forming vasiform-type Trypanites burrows. Moreover, the concretions may be colonized by, or covered by encrusting organisms, which typically include the tabulate corals *Pleurodictyum* and *Cladochonus*. Since the water column above the seafloor was generally clear and warm, many organisms found this environment hospitable and supportive of a diverse ecosystem. This included *Eldredgeops* and *Greenops* trilobites, *Athyris* brachiopods, the rugosan coral *Stereolasma*, bryozoans as well as crinoids. At some point, sediment accumulation resumed (the diastem ended) and these concretions and associated taxa were buried once again.

Then, in early August, Gary Thomas and I visited Groves Creek, another tributary on the west side of

Splendid Sands Calendar

September, 2022

**Restricted Diamond Area,
Tsua Ikaeb National Park, Namibia**



Photo by Leo Kenney

by Leo Kenney, Kate Clover & Carol Hopper Brill

In 1908, a diamond rush began when alluvial diamonds were found in beach sediments near Lüderitz in the former German colony Southwest Africa (now Namibia). A land rush ensued and within six months the Germans created a restricted mining area (the Sperrgebiet) that extended 100 km inland and 320 km along the coast.

The alluvial diamonds originated from kimberlite pipes on the high plateaus of South Africa's interior. Over millions of years, ancient river systems transported the diamonds to the oceans where waves and currents deposited them along the shore and on the ocean bottom. In those early days, diamonds were recovered from ancient and contemporary beaches and riverbeds. Today, many diamonds are recovered from the seafloor using vacuum extractors and dredgers.

Hoping to find a diamond? That's probably a long shot. In rich kimberlite ore miners recover about one carat per ton of ore. Yes, diamonds are rare. But the naturally polished mineral and rock sand grains do still make for a colorful sand.

In 2008, the Tsua Ikahaeb (formerly Sperrgebiet) National Park was created. However, security and access make casual visitation difficult.

The search for diamonds



Speaking of diamonds in sand, there is a place in the United States where diamonds can be found in sand: Crater of Diamonds State Park in southwest Arkansas. About 100 million years ago pipes of igneous rock called kimberlites rose from the mantle into the overlying Paleozoic section. A rare few carried diamonds. Subsequent erosion has exposed and weathered the kimberlite. For a small fee, visitors can look for diamonds and keep what they find.



This is a sample of coarse sand and fine gravel (sieved fraction from 1-3 mm) from the site. Do you see any diamonds?



This is what you hope to find hidden amongst all the other weathered rock fragments from the kimberlite: raw diamonds

AUGUST 20TH was picnic time for WCGMC

Rocks, food, and friendship were the themes once again as over 80 WCGMC members came together to party, acquire new rocks, and otherwise enjoy a wonderful sunny summer day. We have a lot of people to thank for the day. Folks arrived on Friday to help set the up the 40' by 60' tent and we sure needed that shade come Saturday. Holly Woodworth and Linda Schmidtgal did wonderful work organizing the event and the auction that concluded the day. But, as always it was Eva Jane and Glenn Weiler that deserve the biggest kudos for a job well done. Glenn cooked the chicken Thursday

night and trekked to Penn Yan to pick up the tent, tables and chairs on Friday morning. We rent them from the Haitian Benefit Relief organization so our payment is actually a direct 100% donation to a worthy cause. Eva Jane cooked the potatoes and managed all the logistics at the venue. When the fun ended about 4 PM on Saturday there was a willing group of members ready to take the tent down and pack the trailer for its trek back to Penn Yan on Monday. But enough words, here are a few pictures from the event.



Of course, we ate well. Thanks to all the fine chefs in the club.



Why, of course, there was dessert!



Kathleen Cappon came through with another unique contribution: birthstone cupcakes!



There were free rocks for all.



Lots and lots of free rocks!



But all good things must come to an end.

Fortunately, we had lots of helpers to lighten the work.



Wayne County Gem & Mineral Contacts

ELECTED OFFICERS

President – James Keeler

[jamesrocks\(at\)keeler.com](mailto:jamesrocks(at)keeler.com)

Vice-President – Holly Woodworth

[autum14513\(at\)yahoo.com](mailto:autum14513(at)yahoo.com)

Secretary – Beth Webster

Treasurer - Bill Lesniak

Board of Directors

Bob Linderbery

Heidi Morgenstern

Karen Wilkins

Ed Smith

Past President – Linda Schmidtgal

Visit us on Facebook:

<https://www.facebook.com/groups/1675855046010058/>

APPOINTED POSITIONS

Field Trip Leader – Teresa Ferris, *help wanted*

Fossil Field Trip Leader - Stephen Mayer

Fred Haynes – Newsletter Editor

[fredmhaynes55\(at\)gmail.com](mailto:fredmhaynes55(at)gmail.com)

Bill Lesniak – Website Coordinator

Glenn Weiler – Workshop Coordinator

Linda Schmidtgal – Collection Curator

Fred Haynes – Facebook Administrator

Jim Rienhardt – Sand Chapter

Club meets 2nd 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 – <http://www.wcgmc.org/>

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

