

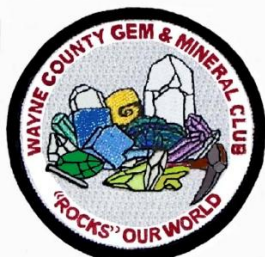
# Wayne County Gem and Mineral Club News

February, 2017

Always Looking for Places to Dig!



*Eldredgeops rana* trilobite from Reeder Creek (see page 2)



<http://www.wcgmc.org/>



**Wollastonite**  
(see page 4)



A January field trip to the Lake Ontario shoreline! (see page 3)

## Next Club Meeting

**Friday February 10<sup>th</sup>, 7:00 PM**

Presbyterian Church, Maple Court, Newark, NY

### PROGRAM: ANNUAL CLUB AUCTION

Club inventory material of all types will be auctioned. There will be a white elephant auction, a raffle auction, and a classic called auction: lots of minerals, lots of fun. Bring a few "quarters" and enjoy.

**WEATHER: Yes, it is that time of year:** An e-mail note will be distributed if a Friday meeting must be cancelled. Or call Bill Lesniak (315-483-8061), Fred Haynes (585-203-1733) or Glenn Weiler (315-594-8478).

## Saturday, February 11th

### WCGMC February Workshop

When: 10:00 AM til mid afternoon

Where: The Weiler's Barn and Club Workshop  
6676 E. Port Bay Rd, Wolcott, NY

Rules: BYOR (Bring your own rocks) to saw, grind, polish or even facet. Training on equipment is available. Eye protection is recommended.  
\$5/adult to offset maintenance costs

At each 2016 WCGMC workshop, a large piece from the club collection was sliced and each participant received a slab. Linda Schmidtgal took each of her slices and prepped a polished cabochon. She mounted them each together with a raw piece of the endcut on a wall in her workshop.

PHOTO TO RIGHT ==>







## Reeder Creek: Fossil Hunting Meets History

By Fred Haynes

Sometimes it is fun to just explore for fossils or minerals by visiting an unknown location, perhaps one with potentially appropriate geology, but not a site with documented fossils or minerals. One may not find much, but occasionally one stumbles onto something completely unexpected and equally interesting. In 2015 Stephen Mayer and I had such an experience when we decided to investigate the geology along Reeder Creek in Varick, NY.



**The Hamilton Group is well exposed along Reeder Creek as it meanders towards Seneca Lake.**

Like the good geologists that we are, we set out along the creek slowly, our heads down observing rocks and working to identify the section we were traversing. It was encouraging that the Middle Devonian section was well exposed in the creek, but not particularly interesting from a fossil point of view. A few brachiopods, one gastropod, but no true fossil-rich bed was found. The only true find of the day was an *Eldredgeops rana* that popped out of what we believe was the Ledyard shale of the Ludlowville Formation. He (or she?) posed for a nice picture of both cast and mold (see page 1), but was too broken for any hope of restoration.

However, as we progressed along the creek heading east from Seneca Lake, we stumbled upon an old foundation nearly at the creek's edge. Piqued by such an isolated structure hidden several hundred meters from any apparent road or other structures I set out to learn what we had found. An online search immediately directed me to the resources of the Tompkins County Public Library and a gold mine of information (Seneca County Records, 1876).



**The old stone walls from what once must have been a multi-room facility of some sort stood stoically amongst the younger deciduous trees growing around and even within the walls of the ruins.**

Turns out, Benjamin Dey acquired Lot 49 on the east shore of Seneca Lake in 1791 and built the first frame house in the town of Romulus on the property 3 years later. Dey constructed a saw mill on the property in 1796 and then a grist mill along Reeder Creek in 1800. It was the foundation of this grist mill, built more than 200 years ago, that we had discovered on our geology investigation!



**Digging a bit deeper led to the discovery of what is believed to be the first published property map of the region.** Dated 1850 this snippet excerpted from a larger map of the East Side of Seneca Lake shows Lot 49 along Reeder Creek. The location of Benjamin Dey's saw mill (✦) and his grist mill (☆) are shown on the map. (<http://www.co.seneca.ny.us/departments/admin-operations/county-historian/maps-of-seneca-county/>)





As the geology map (Luther, 1907) of the area indicates, Reeder Creek traverses the lower formations of the Hamilton Group, cutting into the Ledyard shale of the Ludlowville Formation near Mr. Dey's early 19<sup>th</sup> century mills before traversing the underlying shales of the Skaneateles Formation near the creek's entry into Seneca Lake.

I had hoped to add to [my collection of \*Pleurodictyum americanum\*](#) colonial corals by finding the Pleurodictyum Bed near the contact of the Ledyard and Wanakah members of the Ludlowville Formation. However it may be that we did not progress far enough upstream in Reeder Creek to locate this horizon or perhaps it was hidden from us under the early fall foliage. Despite the lack of fossil finds along the quiet creek, Stephen and I did not go home empty handed. We had found, and then identified, a little bit of Finger Lake history.

*Reeder Creek, like most creeks along the Finger Lakes is on private property. Permission must be obtained even if the land is not openly posted.*

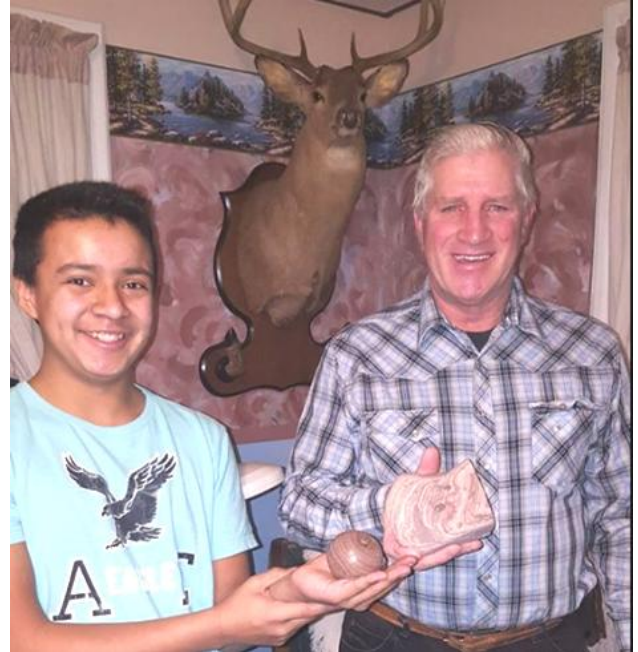
#### References:

Luther, 1907, Geology Map of Seneca Lake, New York Museum Bulletin #128

Seneca County, 1876, History of Seneca County, Reprint – Tompkins County Public library online, p. 153-159. [Link to site](#)

## ALL IN A DAY'S WORK

With temperatures approaching 50 and no snow/ice on the beach, about a dozen of us decided to start the 2017 field season with a January 21<sup>st</sup> trip to a couple rock strewn Wayne County Lake Ontario beaches. As the picture on page 1 will attest to it was a family event with rockhounds of all ages.



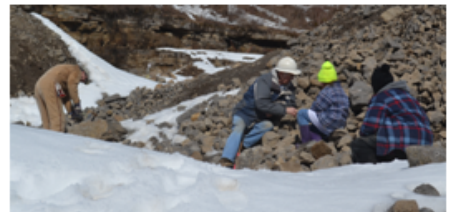
President Glenn and his grandson Cameron not only collected a nicely banded sandstone that AM, but in the afternoon they produced a sphere from a portion of it. By evening they were documenting the event on our Facebook Group page with this photograph. Cameron will take the sphere to school in Pennsylvania with a full understanding of sandstone deposition and the unique glacial processes that brought his rock to its resting site in northern Wayne County. How cool is that!



Both Photos by Trina Martin



Next month we'll have a start for a schedule for our field season, but for now you should make sure to mark April 1 on your calendar for the annual Opening Day trek to Ace of Diamond for Herikmer hunting. It is a Saturday this year! Yeah!



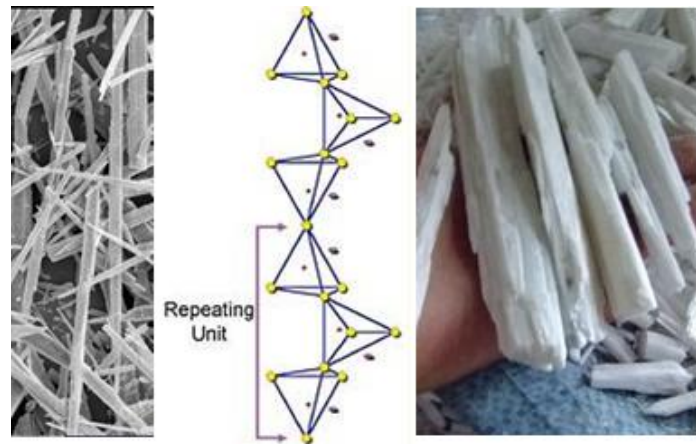
## MINERAL GROUPS YOU'VE NEVER HEARD OF

### Part II: Wollastonite Group

by Fred Haynes

OK, I know, most of us have heard of the mineral wollastonite and many of us have collected it at the Valentine Mine in Harrisville, or at Rose Road in Pitcairn or Cascade Slide in the Adirondacks. You may even know that 100% of North America's mined wollastonite comes from two quarries in New York, the aforementioned Valentine Mine and the Lewis Mine near Willsboro. If you voted in the election of 2013, you may remember Proposition #5 in which the operators of the Lewis Mine sought to trade 1500 acres of their property for 200 acres in Adirondack Park immediately adjacent to the quarries west wall.

But did you know that wollastonite is just one triclinic silicate mineral within what is known as the Wollastonite Group? These minerals are all single chain silicate minerals in which every third silicate tetrahedral is "twisted". Calcium cations connect parallel chains in wollastonite leading the chemical formula  $\text{CaSiO}_3$ . The lesser known members of this mineral group employ different elements as noted in the accompanying table.



**Wollastonite Group Mineral Structure:** The three silicate tetrahedra repeating part of the wollastonite group minerals is depicted in the center (from Ciullo, 2002). Because of this twisted single chain structure, wollastonite group minerals tend to grow acicular (needle-like) masses (right) which are also preserved in their cleavage (how they break). The left photo is a picture from a scanning electron microscope where the laths are measured in tens of microns (a micron is one millionth of a meter). If you have collected the brilliantly white wollastonite in New York you have probably extracted these needles from your finger tips or brushed them from your clothes.

Wollastonite is a common mineral in metamorphosed limestones, particularly in contact style metamorphism with igneous rocks. But it usually

contains significant iron, manganese, and other elements that render it ineffective for industrial use in ceramics, filter applications, pigmentation in paints, etc. The New York deposits are unusually pure.

But enough on wollastonite: What are the other wollastonite group minerals and where might we find them? Here they are from Fleischer, 2014.

Wollastonite	$\text{Ca}_3\text{Si}_3\text{O}_9$
Bustamite	$\text{Ca}_3(\text{Mn},\text{Ca})_3(\text{Si}_3\text{O}_9)_2$
Ferrobustamite	$\text{Ca}_3(\text{Fe},\text{Ca})_3(\text{Si}_3\text{O}_9)_2$
Pectolite	$\text{Ca}_2\text{NaSi}_3\text{O}_8(\text{OH})$
Serandite	$\text{Mn}_2\text{NaSi}_3\text{O}_8(\text{OH})$
Tanohataite	$\text{LiMn}_2\text{Si}_3\text{O}_8(\text{OH})$

You may recall pectolite from last month's newsletter. Larimar is copper-bearing pectolite and highly sought for its color and polished appearance. The mineral itself, pectolite, is similar in structure and chemistry to wollastonite, but is modestly hydrated (a single OH group) and also contains sodium (Na). Unlike wollastonite, which often grows in large parallel masses, acicular prismatic splintered pectolite needles usually form as sprays or radiating aggregates. It is typically found in the linings of basalt cavities or in geodes.



**Pectolite in geode,  
Millington Quarry,  
Somerset, NJ  
Specimen is 9 cm  
across.**

*from online mineral  
museum of John  
Betts*

Serandite is another Wollastonite Group mineral sought after by collectors both as a mineral specimen and in rare occasions as a gemstone. Like many manganese bearing minerals, serandite in salmon-pink in color and like the other minerals in this group crystals are often acicular or radiating. But it can grow quite gemmy and although it only carries a



hardness of 5-5.5, it can be cut into very attractive gemstones. The mineral is not particularly common, but does occur in a number of geologic environments where manganese (Mn) is found. At Mont Saint-Hilaire in Quebec, serandite is found associated with pegmatites cutting syenite intrusives.



Both the miniature **serandite** specimen on the left (4 cm across) and the 6.6 mm (0.45 ct) rectangular step cut gem on the right are from the famous mining and mineral collecting Mont Saint Hilaire District in Quebec.

Bustamite is another manganese-bearing mineral classified in the Wollastonite Group by Fleisher, although its chemistry places it intermediate to the manganese silicate mineral rhodonite (but that's another group for another month!). And yes, with the manganese component bustamite, is also pink. Bustamite is not common, but look for it at Franklin, NJ, or the next time you go to the Broken Hill Mining District in New South Wales, Australia!



**Pink bustamite, with willemite**, from the Franklin, NJ  
(from online mineral museum of John Betts)

#### References:

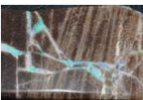
Ciullo, P.A., 2002, Wollastonite: A Versatile Functional Filler, Paints and Coatings Industry Magazine, Nov.

Fleischer, M. E., 2014, Fleischer's Glossary of Mineral Species, Publ. by Mineralogical Record Inc., 420 p.

Mindat, Minerals.net, and Wikipedia webpages



January was a busy month on "workshop Saturday". It will be busy again on February 11<sup>th</sup>.



*Boulder Opal*



## UPCOMING SHOWS AND EVENTS

**Feb 18-19:** James Campbell Memorial Gem, Mineral, and Fossil Show and Sale, Capital District Mineral Club, in ALBANY, NY at New York State Museum For details visit [CapitalDistrictMineralClub.com](http://CapitalDistrictMineralClub.com)

**March 25-26;** Buffalo Geological Society Annual Show at the Hamburg Fairgrounds, for details visit [BGS Show at Fairgrounds](http://BGS Show at Fairgrounds)

**March 25 -26** Che-Hanna Rock & Mineral Show, NEW LOCATION: Wycox Vol. Fire Co. Social Hall, 111 Lake Road, Wycox, PA for details visit [Chehannarocks show page](http://Chehannarocks show page)



**Surely looks like these two Wyoming troopers could have used our help earlier this winter.**

*Photo from [www.wystatetrooper.com](http://www.wystatetrooper.com)*



## FIELD TRIP AND FACETING FUN IN 2016

by Ed Smith



We have had some very fine field trips in 2016. I love collecting rocks and minerals with the guys and gals of WCGMC. Last field trip of the year was in early December. We got together for some beach combing at Chimney Bluffs which was fun. But it was not my last trip! My last field day was Christmas Eve when I braved a walk down to the lakeshore. Most of the ice was melted, but one little misstep and I almost went down hard on those softball size rocks. It is kind of cool to see the different rocks that had been washed in by the recent storms. I did not stay long as I was killing time before a holiday celebration at the relatives. The reward was a nice seven inch diameter piece of white calcite with green mineral (serpentine?) and a small amount of pyrite running through it.

Some field trips this summer were successful, and specimen quality minerals were collected. However, it is often the non-specimen gem quality minerals that really pique my interest: smoky quartz, aquamarine, tourmaline and Herkimer diamonds among others. As you know we collected all of these this year. The Herkimer "diamonds" (quartz) are a great example and I have been very lucky in finding some great specimens over the years. But Herkimers are a win/win for me since I am a faceter. Yep, that is true, I am the guy that sits there grinding and polishing until I get the angles and facets just right.

I am not a commercial faceter. That would be too easy and less time consuming. I am a hobbyist and spend the time to make all the points meet. Not just by eye but with a loop also. This is a challenge. Are there any cracks in the rough, any defects that are objectionable? Is it big enough to be worth faceting? Is it gem quality and or a precious gem? I look at the

piece of rough quite a bit for defects. Some of the more common defects are inclusions. They are acceptable in some stones. In Herkimers there are often fluid inclusions, little bubbles, trapped when the quartz crystals were growing inside the vugs in the dolostone. And they are not a problem as long as they don't occur on the surface of a facet.

How can you go wrong with a Herkimer diamond? I selected a large piece of rough that had to be cut out of the matrix. This crystal was not in a nice vug just waiting to be plucked out, so I brought it home to carefully cut it free from the dolomite. The reward was a large uncracked piece suitable for faceting. It was one of the larger Herkimer diamonds I have worked. Only Rocky Rowe has one of my faceted Herkimer diamonds that is larger.



The Herkimer diamond on the left is cut in a Standard Round Brilliant shape. It is a little over 12mm wide and 5.8 carats. The specimens on the right are rough Herkimer diamonds.

Another quartz crystal, collected this summer from the Palermo mine in New Hampshire, was really cool to work. At first I thought it was a large boulder of rose quartz from the core of the pegmatite in the main quarry. But, once pieces were chipped off, it was obvious the rose color was coming from staining within the cracks that ran through the massive quartz, probably from hematite. All the same, it was very interesting quartz, quite clear, and I collected several pieces. I later selected one to facet. Since it would take ten to twelve hours to finish this is a significant time investment. The piece was not gem quality and not nearly as clear as something like a Herkimer diamond but definitely interesting enough to take a chance.



Ed Smith faceting at the WCGMC workshop.





I consider the results from the Palermo pink quartz to be rather stunning. From the rough quartz on the left, I faceted a pattern called Sun Dial and the ghost like quality of the stone gives an interesting reflection off all the facets, something you don't see in perfectly clear stones. Sometimes you take a chance and you are rewarded. This turned out to be a great piece. It is 14 mm in diameter and 8.7 carats.

Another of the fine stones that came back from the Palermo mine was some aquamarine. At the end of the collecting day the mine owners had a box of aqua and we were each allowed to select a piece. I thought this was a very decent thing for them to do. These pieces were too small for them to cut into fine gem stones, but I pawed through the box and found a couple that I could get a nice stone out of. This is a very clear aquamarine and light blue. It is much smaller than the rough material it came from due to the cracks and defects.



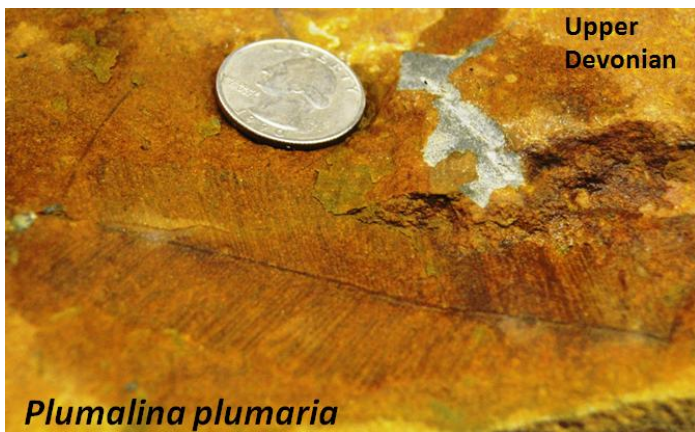
The results speak for themselves. From the rough stone on the right, this standard Round Brilliant was cut. It is 0.84 carats and 6mm wide.

All of this and I have much more to cut this winter. We trekked in to Moat Mountain on the New Hampshire trip and I have many smoky quartz points from that visit. With time and when the spirit moves I will cut a couple of those in a Barion Square cut. The plan would be to capture the stones clarity and it would be nice to cut a matched pair of two carat earrings.

Yes, I like the specimens but I also like to cut things. Winter is the perfect time for me to get caught up on projects. Between faceting at home and finishing things at the great monthly club workshops I should get closer to finishing some projects. Of course, there is always the Tucson show in February if I get close to finishing my projects and want to get warm. And soon the 2017 field season will be upon us.

## FOSSIL OF THE MONTH

### *Plumalina plumaria*



Bill Chapman found this *Plumalina plumaria* in an Upper Devonian sandy siltstone (Canadaway Group) in Hornell, NY. They have also been documented in a roadcut in Hoxie Gorge near Cortland, NY (Wilson, 2009).

Leave it to our field trip leader, Bill Chapman, to find something new! Well, not exactly new, but certainly unusual. *Plumalina plumaria* were first described by Hall (1878). Yes, they look like feathers, and one might want to classify them as ferns or plants of some sort, but the latest understanding of these rather rare fossils is that they were hydroids (Muscente and Allmon, 2013). Hydroids are a class of small predators that are related to jellyfish. Dominated by soft-body parts hydroids are not well preserved in the fossil record causing extinct species to often be labeled Incertae Sedis in many fossil lists. Incertae Sedis are extinct organisms with unknown or uncertain relation to known phyla.

#### References:

- Hall, J., 1878, Note on the Genus Plumalina, 30<sup>th</sup> Annual Report, NYSM, p. 255-256
- Muscante, A.D. and Allmon, W.D., 2013, Revision of the Hydroid Plumalina Hall, 1858 in the Silurian and Devonian of New York, Jour. of Paleontology, v. 87(4), p. 710-725.
- Wilson, K.A., 2009, Hoxie Gorge- Upper Devonian Site for *Plumalina plumaria*, ([website link](#))
- Wilson, K.A., 2014, Field Guide to the Devonian Fossils of New York, PRI Publication, p. 244-245.

## Wayne County Gem & Mineral Contacts

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Bill Lesniak – Website Coordinator

Glenn Weiler – Workshop Coordinator

Linda Schmidtgall – Collection Curator

Eric Elias: GEMFEST Show Chair

[thecrystalnetwork@hotmail.com](mailto:thecrystalnetwork@hotmail.com)

Fred Haynes – Facebook Administrator

Club meets 2<sup>nd</sup> 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

The Public is always welcome  
First Class, Dated, Meetings & Time Values



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