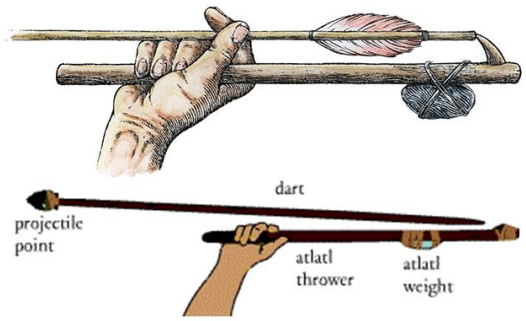
Wayne County Gem and Mineral Club News

August, 2018 **Always Looking for Places to Dig!**



This is an atlatl, but you knew that! (see page 2 for more on a chance to go see one, maybe even use it?)

http://www.wcgmc.org/

FACEBOOK link

Digging clay concretions (Ferry Stones) in Sharon, VT. (see page 4)

==========

Next Club Event is the PICNIC Saturday August 11th

When: 10:00 AM til mid-afternoon. We will plan to eat between noon and 1:00 PM. There will be a full slate of activities before and after we eat.

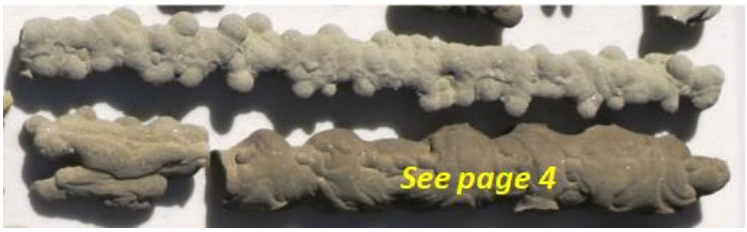
Where: The Weiler's Barn and Club Workshop 6676 E. Port Bay Rd, Wolcott, NY

Food: The club will provide chicken, potatoes and drinks. Bring a side dish or dessert to share.

Other: Bring an outdoor chair. Come prepared to have fun!

Workshop: Yes, the workshop will be open. Bring rocks to show, share, cut or polish

PLEASE send a quick note to Eva Jane Weiler (gwexterior@gmail.com or 315-594-8478) **with an RSVP and a head count if you plan to attend the picnic. We need to make sure we have enough chicken and potatoes for all.**



Membership Renewal Offer

At GemFest we offered an incentive for new members to join at a discount by paying through Sept. 2019. Now we make a similar offer to current members who wish to renew.

The club's current membership year runs until September 30, 2018 and if you are a member your renewal is not due until then. However, if you opt to renew before or at the picnic (August 11th) then the fee for renewal will be reduced by $5. This means your renewal for 2018-2019 would be $10 for an individual and $15 for a family. That amounts to a 33% savings for an individual or a 25% savings for a family membership. What a great deal!

Our objective is to make life easier on our treasurer while also offering members an opportunity to save. With about 100 members, chasing down folks between October and the end of the year is not fun for our treasurer. He needs an accurate count of members to pay our annual insurance premium which is based on membership.

You can renew by sending payment to:

WCGMC, Bill Lesniak
7449 State Street
Sodus, NY 14551

or by bringing payment to the picnic.

Two Unique Events in August

By Fred Haynes

We are about to enter the final full month of summer and the last month before school starts anew. Perhaps you are looking for a somewhat unique event (in addition, of course, to the club picnic) that involves rocks during the "dog days of August"? Well here are two to consider. Unfortunately they both occur the same weekend late in the month, but with creative scheduling it is possible to attend both.

Stone Tool Craftsman Show –

Have you ever heard of flint knapping? Do you know there is an active group of flint knappers in western New York and they hold their annual Stone Tool Craftsman Show every August? The event is August 24-26 in Letchworth State Park, itself a geological wonder worth visiting. For three days members of the Genesee Valley Flint Knappers Association display their wares and share advice on knapping at the Highbanks Recreation Area in the park.

Visitors to the Stone Tool Craftsman Show can see flint knapping demonstrations and learn about a variety of other skills that helped prehistoric cultures survive. In addition to learning about the making of arrowheads, spears, and stone knives, the group holds several athletic competitions involving stone throwing weapons.

Have you ever heard of an atlatl (see page 1 photo)? These primitive weapons allowed hunters to throw a stone projectile (often flint) hundreds of feet at speeds that can exceed 100 mph. You can see atatl demonstrations and even competitions among some of the best modern-day atlatl users in the country. Learn more about this 3-day event at the Genesee Valley Flint Knappers website.

But this is a rock hound newsletter and I want to talk a bit about the rocks used in flint knapping and the local source of such rocks. A purist may wince when hearing the term flint used in association with most knapping rock. By the original strict definition, flint is chert (or chalcedony) that forms during early diagenesis as silica-rich fluids pass through chalk sediment while it is being lithified. There are chalk beds throughout Europe (i.e. white cliffs of Dover in England), but nearly all chalcedony being knapped in the eastern United States is not formed in chalk. As such it is more properly called chalcedony or chert. But chalcedony knapping just does not have the ring to it, does it?

Consequently, the term flint has become more or less accepted, even by geologists, as a valid name for microcrystalline quartz material formed in all limestones (not just chalk), and sometimes even in other sedimentary rocks. This has led to the naming of geographic regions such as Flint Ridge in central Ohio. The multi-colored chert (or "flint") from that region was prized by Native Americans for its color and knapping quality and continues to be sought after from the same reason.

The best chert/flint for knapping is consistent in its toughness and grain size and lacks any inclusions (Long, 2004). Small vugs due to mineral dissolution also detract from a stone's knapping value. In western New York, the most prolific chert-bearing unit is also the most favorable for knapping. The Onondaga Formation is a gray Middle Devonian limestone that was prone to the formation of dark gray to black chert nodules during lithification. The host Onondaga limestone is also a preferred construction stone and is quarried across western and central New York.

An Onondaga chert arrowhead (Harley Slade webpage) The Onondaga cherts are petrolithic, meaning that they trapped hydrocarbons when they formed. This is partly responsible for their color and it is completely responsible for the scent of crude oil one gets when they are freshly broken or flaked during knapping.

References:

Genesee Valley Flint Knappers Association webpage

Long, D., 2004, A Workability Comparison of three Ontario Cherts, published in *Kewa,* the newsletter of the Ontario Archeological Society.

Onondaga Chert webpage in Archaeowiki

And then for those of you with more of an interest in fossils, there is this:

A Record Breaking Fossil Dig

We have all heard of Penn Dixie Fossil Park and Nature Preserve in Hamburg, New York and if you are a fossil digger you have undoubtedly collected there. Perhaps you have even attended one of their annual "Dig with the Experts" weekends in April. Well, they are planning something quite different and rather ambitious this month.

On August 25th, Penn Dixie hopes to shatter the Guinness World Record for the world's largest fossil dig. The "rules" are rather simple. The event costs $5 and you must actively collect for at least 30 minutes and show the registrar at least two fossils that you have found. Given my experience at the park it should take you less than two minutes to meet that final requirement. And when you are done you will receive a commemorative T-shirt and reusable sample bag, a tool for fossil collecting, and a program guide. Oh, and you can keep all the fossils that you find.

You will be hunting in some of the richest Middle Devonian fossil units on the planet. Most of the exposed units are from the Windom shale member of the Moscow Formation. The Windom contains a series of fossil-rich shales interbedded with more sparsely fossilized and barren units. Once at Penn-Dixie the staff and others can direct visitors to the fossil-rich units. They actually dig into them each year to expose new sections.

Dig with the Experts, April, 2018 at Penn Dixie with 165 "diggers". In August, there will be even more diggers and more fossils found.
Photo from Penn Dixie Website

You will find virtually all the common marine invertebrate species we love to collect and with diversity most other individual sites cannot offer. Many go there in search of trilobites. One of the units, the Smoke Creek Trilobite Bed, is known to contain at least five species, each characterized by varying morphology and size. But even if you do not come home with a wonderful complete trilobite, you are assured of finding many species of brachiopods, numerous corals (both colonial and rugose), some bivalves, and probably a gastropod or two. Even the variation in the form of the crinoid stems leaves one in wonder at what the Middle Devonian oceans must have looked like.

I could ramble on with more about the site, but for those interested in the August 25th event or the Fossil Park in general, I strongly suggest you first visit the Penn Dixie Fossil Park webpage, and if you seek further detail on the paleontology or geology of the location, I recommend Stokes and Schreiber, 2017: Penn Dixie Fossil Park and Nature Preserve: A Window into the Devonian Period of Western New York. The authors have graciously placed their paper online for all to enjoy.

For those of you whose interests are in the mineral world and/or will be in the Adirondacks that late August weekend, our friends in the St. Lawrence Rock and Mineral Club will hold their 50th Annual Mineral Show in Canton that same weekend.

ST LAWRENCE CO. ROCK & MINERAL CLUB

50th Annual Show
August 25th-26th
Canton Pavillion
90 Lincoln St.
Canton, NY 13617
Admission - Free

- **Friday 8:30 PM Fluorescent Mineral demo**
- **vendors, displays, club giveaways for kids**
- **Swapping/selling all day Sat. and Sun.**
- **Field Trips on Sat. and Sun.**
- **Called auction Saturday evening**

visit St. Lawrence Rock Club webpage for details

SITE OF THE MONTH:
CLAY CONCRETIONS IN SHARON, VERMONT
BY FRED HAYNES

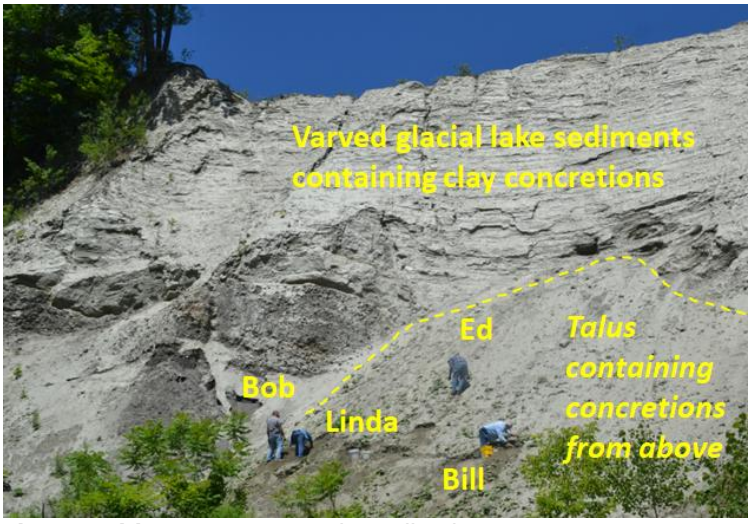
About 15,000 years ago the final of four glacial advances stopped in central Connecticut and a large end moraine was established. As the glacier retreated a large lake formed in what would become the Connecticut River Valley. Varved (seasonal) clay/silt layers were deposited. Debris (fossils, sticks, leaves, etc.) carried in with the clay/silt became nucleation points for calcite cementation and concretions grew in the clays. These unique concretions are now being exposed by erosion. The locals call them "Ferry Stones" or "Mud Babies".

Lake Hitchcock some 13,000 years ago, after the glaciers had retreated, but before the New Britain end moraine breached about 12,400 years ago.
from Amherst College Museum of Natural History

Several of us decided to visit a site along the White River in Sharon, Vermont in search of these "Ferry Stones". There are apparently a number of locations where they can be harvested from the weakly lithified clay-rich ancient lake deposits. We learned about one from Cristofono (2014). Armed with supportive information from two New England Clubs and with permission from the land owner we left a day before the June club trip to western Massachusetts to check out the site.

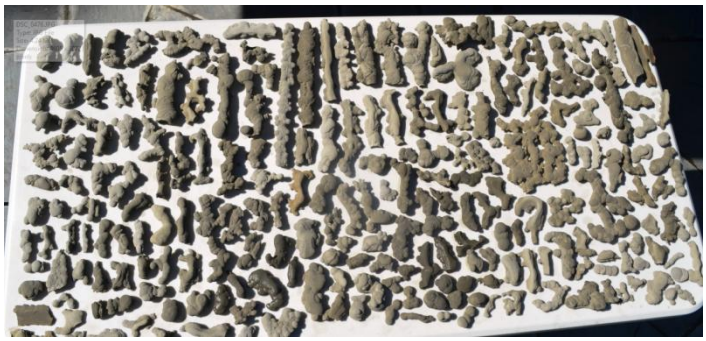
The varved lake deposits consist of alternating layers of fine silt and clay. Glacial run-off into the lake was full of silt and suspended rock flour produced by the grinding erosive action of the ice. Each summer "coarser" silt units were introduced to the lake and deposited. During the winter when the lake froze over, the suspended fine clay and rock flour slowly settled to the bottom. The resulting varves can be counted like tree rings. Their variable thicknesses permit geologists to correlate varve sequences up and down the Connecticut River Valley. Careful description, detailed mapping and radiocarbon dating of these varves provide insight into environmental and climatic changes for much of the 2500 year period during which the glacier retreated and the lake evolved (Ridge and Larsen, 1990). .

The concretions within the varved clays are both interesting and prolific. They apparently formed in the coarser silt units that were deposited each summer. In contrast to the clay units, the silt sections contained abundant decaying organic debris (leaves, sticks, etc.). Ground water flow when the sediments were buried just a few meters would have been focused along the siltier, more porous and permeable portions of the varves (Rittenour). The interesting shapes of the concretions likely reflect the nature of the organic matter upon which the calcite nucleated. The porosity of the silt was filled by calcite cement creating the concretion.



Sharon Ridge, Vermont: The collecting was very easy. For the most part, we opted to collect from the eroded talus slope where the varved clays had been recently eroded.

I had reservations that the concretions might be fragile or otherwise hard to protect/preserve. However, those thoughts were unwarranted. We loaded them gently into buckets and pushed them into the far recesses of our vehicles and proceeded with the rest of the 5-day trip. Once home they only needed a quick rinse to remove loose clay and expose the cemented concentric concretions. Because we collected in the weathered talis some were broken, but many appear to be complete.



A table full of clay concretions from Sharon, VT

A closer look at several: These concretions are all 2-3" in the long dimension.

And a few more! What do you see in these shapes?

The Sharon site, and apparently others along the White River, is on private property. Permission to collect should be obtained prior to visiting.

References:

Cristofono, P., 2014, Rockhounding New England, A Falcon Guide, p. 131-132.

Ridge, J. C., and Larsen, F. D., 1990, Re-evalulation of Antevs' New England vare chronology and new radiocarbon dates of sediments from glacial Lake Hitchcock, GSA Bulletin v. 102, p. 889-899.

Rittenour, T., Glacial Lake Hitchcock, web entry

Wikipedia entry on Ancient Glacial Lake Hitchcock

==========

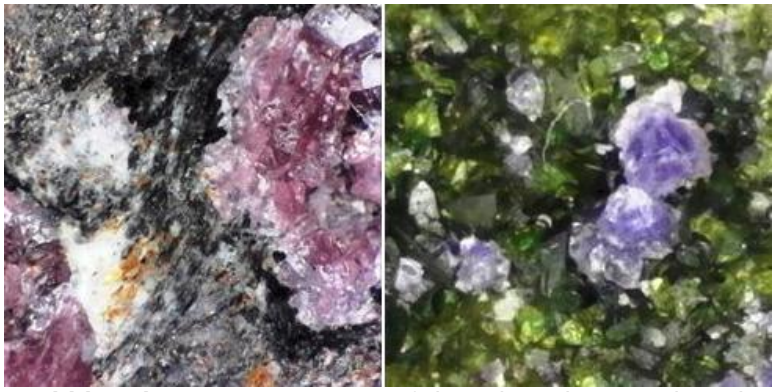
NEVER DOUBT THE POWER OF A ROCK: from somewhere on Elephant Mountain in Greville, Maine. *News Center Maine July 19, 2018*

==========

Massachusetts Micromounts

by Fred Haynes

One of the sites visited during the June Massachusetts trip was the large dump beside the Quabbin Aqueduct shaft #10 in Hardwick, Massachusetts. The 25 mile aqueduct connecting the Quabbin Reservoir to Boston was completed in 1939 and has been a primary source of water for the Boston region ever since. Rocks excavated from the #10 shaft include the Hardwick granite, the Monson gneiss, and a number of other metamorphic rocks. The dump is expansive and although it is becoming overgrown it remains a local site for mineral collectors.

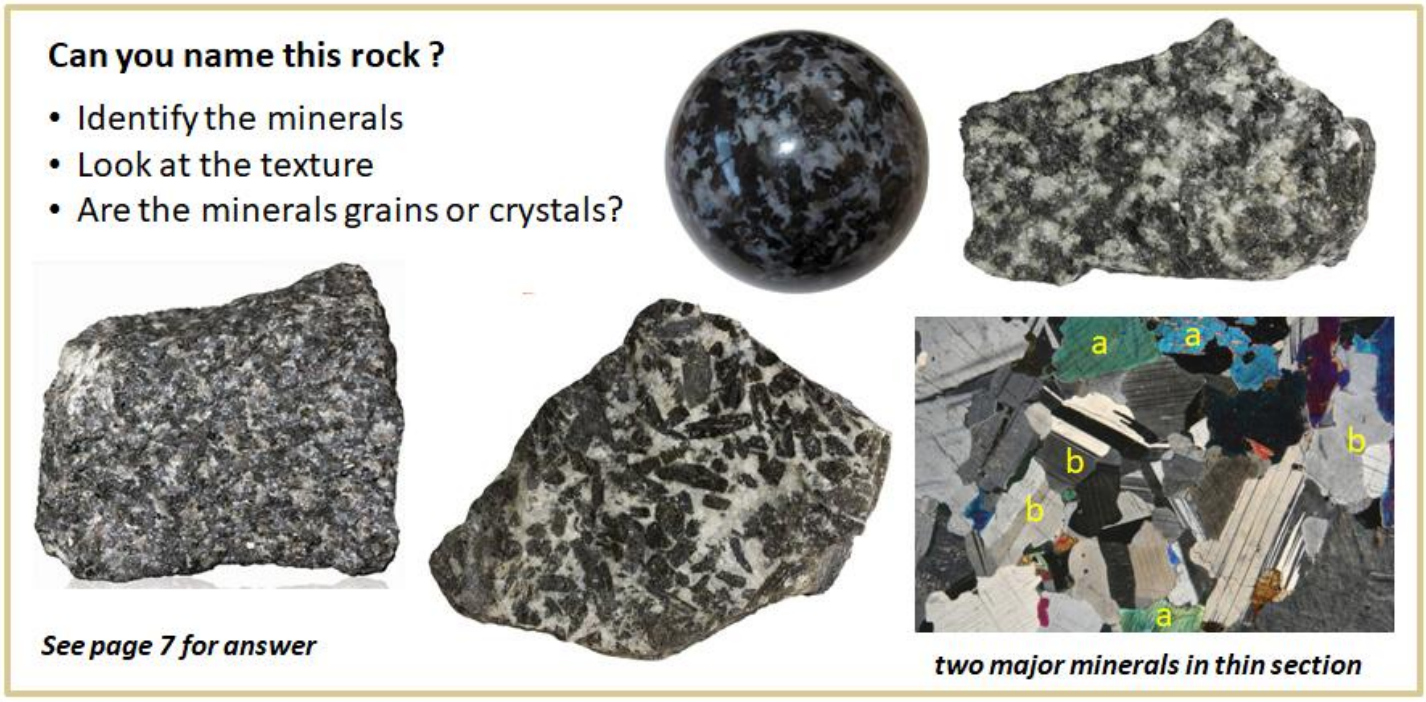


Quabbin micromounts: Many of the prizes that remain to be found on the expansive dump are small, in fact they are micromounts. But they are colorful. I took these pictures with a zOrb digital "microscope". The field of view in each photo is less than 4mm.

The almandine garnets in the biotite schist are brightly pink and the bright green epidote coating granite fractures is equally vibrant. But until I got home I did not know that several of the fracture linings had sub mm-sized, brilliantly purple fluorites resting on the epidote.

The site is best known for babingtonite, a rare calcium-iron-manganese silicate, which is also the state mineral of Massachusetts. It is also generally found in very small crystals and I had hoped I might encounter some when I cleaned the epidote-fracture coated pieces I carried out and looked at them carefully. But alas, no babingtonite for me and I must share a picture that Peter Cristofono posted to Mindat in 2010.

1.5 mm babingtonite on epidote from Quabbin aqueduct shaft #10. From Mindat



Wayne County Gem and Mineral Club 2018 Schedule *last update July 26*

August means picnic time for WCGMC, but we also have a fossil trip in early August and will be joining on a North Carolina Club's trip over Labor Day. September will take us to the Adirondacks.

August 4th (Saturday)– Green's Landing for Middle Devonian fossils (joint with RAS Fossil Section). We will meet at Deep Run parking lot at 9:00 AM and caravan/car pool to the location which is ½ mile away. This trip involves a 1200' walk along the creek to the outcrop location. See this write-up about a previous visit

August 11th – Saturday (WCGMC PICNIC, PLEASE RSVP TO Eva Jane Weiler)

August 31-Sept 3 (Labor Day) – 3 day plus trip to **Kentucky** with CVGMC of NC (fluorite, geodes, etc.) Fred Haynes is the contact for more information on this trip. As of late July several folks have sought information, but few have committed. You would need to work your own transportation and accommodations on this one.

September 14th - First Fall club meeting. Workshop in September is not yet scheduled.

September 21-23 – Adirondack weekend (Rose Road, Benson Mines, and more). Details by picnic time.

October may include a return to Vermont or possibly other local sites. And, of course, Walworth !!

November: Can we possibly go south again?

==========

UPCOMING GEM AND MINERAL SHOWS

August 10-12 East Coast Gem, Mineral and Fossil Show, Eastern States Exposition, 1305 Memorail Ave., West Springfield, MA webpage link for details

August 25-26 St. Lawrence County Annual Show, visit stlawrencecountymineralclub.org/show for details

October 27-28 **Rochester Gem, Mineral, Jewelry and Fossil Show**, 435 West Commercial Street, East Rochester, NY www.Facebook.com/ROCGemShow

answer from page 6

Gabbro

I am a coarse-grained, intrusive igneous rock comprised primarily of pyroxene (a) and plagioclase feldspar (b) with minor olivine and biotite. My extrusive igneous equivalent is basalt. I form deep in the ocean crust or in some continental settings.

I am used as a crushed stone at construction sites or you might see me as a shiny beautiful dark countertop. I really get upset though when people call me a granite countertop. I am NOT granite.

Wayne County Gem & Mineral Contacts

ELECTED OFFICERS

Glenn Weiler – President gwexterior@gmail.com
315-594-8478
Jerry Donahue – VP Chester145322@yahoo.com
585-548-3200
Eva Jane Weiler – Secretary gwexterior@gmail.com
315-594-8478
Bill Lesniak – Treasurer/Webmaster
Dirtman300@aol.com 315-483-8061

Board of Directors

Ken Rowe gotrox88@twc.com 315-331-1438
Linda Schmidtgall lees@tds.net 315-365-2448
Gary Thomas gfthomas956@gmail.com 585-489-2162
Fred Haynes fredmhaynes55@gmail.com 585-203-1733

Visit us on Facebook:
https://www.facebook.com/groups/1675855046010058/

APPOINTED POSITIONS

Bill Chapman – Field Trip Chair
batnpill@empacc.net 607-868-4649
Fred Haynes – Newsletter Editor
fredmhaynes55@gmail.com 585-203-1733

Bill Lesniak – Website Coordinator
Glenn Weiler – Workshop Coordinator
Linda Schmidtgall – Collection Curator
Eric Elias: GEMFEST Show Chair
thecrystalnetwork@hotmail.com
Fred Haynes – Facebook Administrator

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:
Bill Lesniak (WCGMC) 7449 State St., Sodus, NY 14551

The Public is always welcome!
First Class: Dated, Meetings & Time Valued

Wayne County Gem and Mineral Club
P.O. Box 4
Newark, New York 14513