Wayne County Gem and Mineral Club News

August, 2014 **Always Looking for Places to Dig!**

Bancroft Trip: *Just another red apatite from the Schickler Mine, Wilberforce, Ontario. (see story starting on this page)*

Website
http://www.wcgmc.org//

Heliophyllum halli (var. confluens): *Bill Chapman found this rare coral on our fossil trip to Deep Run July 19th. (more in Sept. issue)*

Upcoming Events

Saturday August 16- Annual Picnic

Where: The Weiler home in Wolcott
6676 E. Port Bay Rd., ~1mile north of Wolcott center
RSVP to gwexterior@gmail.com before August 12th
Club will provide BBQ chicken.
Bring a dish to pass, your favorite drink and a chair.

Courtesy of Dave Millis, there will be craft-related opportunities for folks of all ages from about 10 AM until mid-afternoon. Included will be geode cutting, gem tree and pendent making, and mica creations. All culminated by an exciting mineral raffle.
Lunch will be around 12:30 PM.

Saturday-Sunday August 23-24 St. Lawrence Show and Field Trips (see page 9 for details)

Where: Madrid, NY (Community Ctr. on Hwy. 345)
Saturday Field Trip to Powers Farm in Pierrepont for tourmaline (var. dravite) and more ($5 fee)
Sunday Field Trip to Bush Farm in Richville for tourmaline (var. fluor-uvite) and more ($5 fee)
Both trips depart from Madrid show at 9 AM.

On Friday August 22nd, the Wayne County Club will be collecting en route to the show. Site has yet to be determined. Check with Bill Chapman at the Picnic or in mid-August for details. *Leader – Bill Chapman*

Friday Sept. 12th, Our first fall meeting

Same place, same time as last year
Park Presbyterian Church, 7:00 PM,
Maple Court in beautiful downtown Newark.
Program yet to be determined

Amphiboles, Apatites and a Whole Lot More, Bancroft 2014

By Fred Haynes

Wonderful weather and a glorious suite of minerals greeted the eleven WCGMC members who spent 5 days and 4 July nights camping and collecting in the Bancroft, Ontario area.

It is not raining, but WCGMC President Glenn Weiler is being given the royal treatment as he enjoys a coffee at the campfire after a hard day of mineral collecting. From left to right, Sue Hoch, Glenn, Linda Schmidtgall with the umbrella, Bill Chapman with his omnipresent Mountain Dew and Eva Jane Weiler.

The group did not let moss grown under their collecting feet. After setting up camp on Monday afternoon, it was off to the Graphite Road outcrop north of town for tremolite and biotite and our first set of mosquito bites. As a small and readily accessible roadcut listed in the 2013 Bancroft Chamber of Commerce collecting site book, this

site is heavily visited, but we still found it worthy of an hour or two of dedicated digging and collecting and quite a few pounds of tremolite and biotite went back to the campsite for cleaning and packing. Back at the campsite we enjoyed Eva Jane's chicken casserole and dreamed of the huge apatites and titanites to come.

On the first full day of collecting, the troops headed to the Wilberforce Municipal Building to register for collecting on the crown lands off Mumford Road, notably the Schickler fluorite occurrence. After a thorough application of mosquito repellent and a short hike to the site, digging focused on two spots along the trench where banded light pink calcite and purple fluorite were exposed on the north side of the trench. While the heavy hitters swung sledges and applied prybars to the trench wall, others sifted the dirt on both sides of the trench for the abundant apatite crystals and rarer titanite that nature had already extracted from the calcite, presumably from thousands of years of organic acid treatment around the root zones of trees.

Preparing for the 400m walk into the woods at the Schickler location: make sure you have your hammers and buckets AND MOSQUITO REPELLENT.

The Schickler "Mine" is a NE-SW trending calcite vein cutting hornblende gneiss. Here, Dave Millis and Matt Weiler work the hard rock outcrop of the vein wall for fluorite and apatite, while Linda Schmidtgall sifts the dirt on the opposite side.

Linda scored this 6" long Schickler red apatite in calcite and fluorite matrix from the trench wall.
Photo by Linda Schmidtgall

Back at camp, Sue Hoch examines her red apatite floaters and titanites from the Schickler site.

Travelling along South Baptiste Road to our campsite, we made a stop at a rare-mineral bearing outcrop known to contain several unusual borate minerals. The minerals occur in dolomitic crystalline limestone at contact with granitic rocks. (Sabina, 1986). With Van King along to help us , we could identify these microminerals in the host limestone. We are comfortable that we all saw and sampled warwickite, observing the 2-3mm black prismatic needle-like crystals offset on the white limestone. Some appear grayish and altered, presumably to anatase. Again with Van's help, we confidently picked out the yellowish green transparent irregular ball-like masses that are likely sinhalite, also 2-4 mm and set in white to buff limestone. It is very likely that our specimens also contain szaibelyite, chondrodite, and tochilinite (as per Sabina, 1986), but these identifications will require more than a hand lens to confirm.

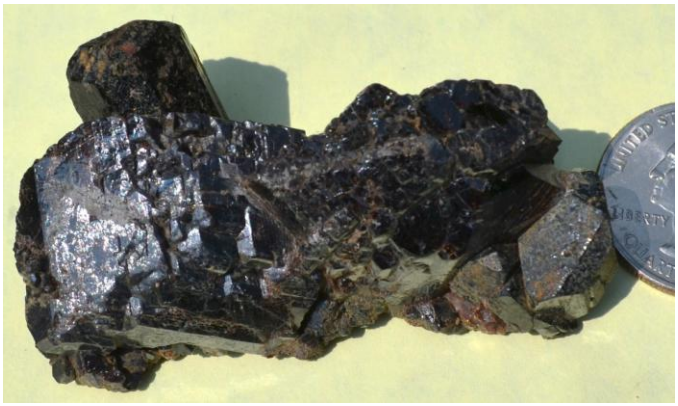
Van King and Fred Haynes looking for warwickite, sinhalite and other goodies at the South Baptiste roadcut. Photo by Janet Nemetz

Wednesday was a new day and a new site for the WCGMC. I led the group to a site 75 minutes east of Bancroft that the Buffalo Geological Society had taken me to earlier in the summer. About 6 miles west of Eganville, Ontario, this fee-based private site consists of a number of trenches and diggings into numerous calcite veins which contain the full suite of Grenville minerals. Included are amphibole and pyroxene lined fractures, bright pink calcite with apatite, titanites hidden among microclines and pyroxenes, and biotite books the size of Encyclopedia Britannica volumes (for those of you who remember what those looked like). And to cap it off a trench hidden 150m into the woods exposes that special kind of microcline we all call amazonite.

And again, whether you like smashing hard rock with a sledge to expose new material or digging in the soft dirt for floaters, this site has it all. Everyone ran out of energy to dig before they ran out of enthusiasm for the site. Black flies notwithstanding, the word awesome was used many times by multiple folks as they sought out the best place to sink their hammer or shovel.

Left to right: Janet Nemetz, Sue Hoch, Bill Chapman and Linda Schmidtgall sift for apatites and titanites.

Bill Chapman exposed this monster red apatite and worked to get it out. We'll have to see what it looks like once cleaned.



How about this for a cluster of titanite crystals? Many single titanites were found in float, but Linda did not know she had this until she inspected her floaters back in New York. The photo does not do this piece justice.

Bill chisels behind a 10" biotite protruding from the trench wall. His hard work was rewarded with a fine hexagonal biotite book on matrix.

We understand this trench at the site was cleaned out by Don Lapham on the BGS trip in early July. The huge pyroxenes(?) he exposed are simply too gorgeous in place to extract and we all hope no one decides otherwise. Hidden in the mix are small apatites.

What none of us knew while collecting in Eganville was how wonderful the calcite, feldspar and other minerals would respond to a black light. Once washed and spread around the campsites, we only had to wait until dark to find out. After enjoying Linda's chili, it did eventually get dark enough for a UV show. The pink calcite fluoresced deep orange and the feldspar showed a deep velvety red. Lots of oohs and ahs followed as we inspected our finds. We will have more to do once home to learn exactly what causes all the variations in UV response: maybe even some scapolite in there?

Pat Chapman under the tarp back at "headquarters". Note the crew on the right (Linda, Bill, and Sue) using the power washer to clean all the day's finds. Did I really survive 4 nights in that little tan thing in the foreground?

On Thursday it was off to one of WCGMC's favorite haunts in the area. Referred to alternately as Bear Lake East and Gibson's Road, this site is very close to Tory Hill and actually is comprised of two adjacent locations. Millar's Apatite Mine, where phosphate was recovered in the first decade of the 20th century, lies to the west of Gibson's Road. Just 100 yards farther along the road and in the steep hillslope to the east, mineral collectors have dug pits and trenches for the past 30-40 years. Apatite and titanite are the primary collectible minerals although the somewhat lustrous amphiboles are also interesting, particularly when green apatite is set amongst the black amphibole.

Sue scored this dandy at Gibson Road East. Amphiboles and apatite just sitting in a trench waiting for her.

Glenn explores the depths of a narrow trench at Gibson Road East while Sue and Bill dig in the dirt for titanite. Linda found a nice fully terminated 1" titanite right where she is in this picture.

By Thursday everyone knew better than to show someone else a black prismatic silicate thing and ask what is was. The answer would be "well, it looks like an amphibole, but it could be a pyroxene". Heck, if it is pretty and you like it, keep it. If not, it is leaverite and the next guy/gal might take a fancy to it.

One cannot visit the Tory Hill region without stopping at the famous fluoro-richerite roadcut along the Essonville Line, so we did before returning to camp.. Some rock is hard, some is harder, but the crystallized calcite hosting fluor-richterite in this roadcut is the hardest rock known to man, or at least it seemed so as we applied hammer and chisel. We did get a little, but the crew that returned Friday morning to purchase pieces from a local land owner who had acquired a truckload of it when the road was built in the 1980's now has even more.

Fluoro-richterite is a rare black lustrous amphibole that is exposed in a roadcut in Tory Hill. I carved these pieces and a few other similar ones from the small roadcut. The surrounding calcite is hard as cement, but much more fluorescent!

Teamwork extends beyond the field. Dave saws wood and Bill holds the wood steady, while Linda supervises and Glenn and Eva Jane kibitz from their camp chairs.

Dave Millis may have summed up the trip best when he stated, "It is like we are just one happy family except that everyone is very protective of their hard won minerals." Do you see the bicycle in the picture above? Eva Jane stayed back one day and walked to town. Rather than walk back she supported the local economy by buying a new bike at Canadian Tire and riding the 3 miles back to camp! Glenn was spotted later that night riding the bike over to the shower.

It was Bill Chapman's turn to cook dinner on Thursday. Chicken wings and french fries for all.

This was my first WCGMC Bancroft trip, but I sure hope it is not my last. If you enjoy camping, collecting, cooking and camaraderie (the 4 C's of successive rockhounding) then think about joining us next summer when we are sure to venture north again.

References:

Bancroft Chamber of Commerce, 2013, Bancroft and District Regional Mineral Collecting Guidebook, 69 pgs.

Joyce, D. K., 2006, Calcite Vein Dikes of the Grenville Province, Rocks and Minerals, v.81, p. 34-42.

Sabina, A., 1986, Rocks and Minerals for the Collector Bancroft – Parry Sound Area and Southern Ontario, Geol. Survey of Canada Misc. Paper Report #39, 182 pgs.

Thermistocleous, S. G., 1981, Geology of the Clontarf Area, Renfrew County, Ontario Geological Survey Report 209, 64 pg.

Mineral Musings
by Fred Haynes

Can you count the number of collecting trips the Wayne County Gem and Mineral Club has conducted or attended so far in 2014? Hint: you will need your toes. If you visit our webpage (www.wcgmc.org) and link to the calendar page you can count them. In the first seven months of 2014 (and we did not start until late March) our club has taken part in 15 digs! We did not plan every one of them: the Penn-Dixie Expert Dig, the Penfield Open House, and the Sterling Hills Super Dig were outside functions.

Five of these digs involved overnight stays. Two, including the recent 5 day adventure to the self-proclaimed "Mineral collecting capital of Canada" around Bancroft, Ontario, involved camping. We've been to St. Lawrence County 3 times. We've been to Pennsylvania and New Jersey. We've collected fossils in seven counties in New York and two in Pennsylvania. We've explored the Precambrian in the Adirondacks and in Ontario, the Devonian and Silurian in western New York, and the Carboniferous in Pennsylvania.

No one has attended all 15 digs. I'm not sure who the leader would be in that department. I do know that I have attended ten including all the overnight trips. And I have enjoyed every one of them. Some trips and locations were better than others for specimen acquisition. Some were better than others for weather conditions; the four of us that ventured along the Erie Canal off Long Pond Road in March literally froze as we tried to find trilobites in the Rochester shale. But all provided fun, and camaraderie with fellow collectors who have become good friends. All provided good memories. I cannot think of too many locations that I would not return to in a heartbeat.

I suspect I am not alone wondering when and how I am going to sort, clean and organize my new possessions. Oh sure, some of the best, or the most interesting, have been taken out and cleaned, and some have even won lofty positions in the display case or cabinet. But many, many more from tourmaline to travertine, from fluorite to wavellite to scapolite, from brachiopod to coral, reside in their dirty collected state waiting for what, perhaps winter?

Right now it is far more fun to plan new trips and collect more than to head to the garage or basement with a bucket of soapy water, an old toothbrush and a dental pick.

If you enjoy rockhounding/mineral and fossil collecting and you have not been with us on these trips, shame on you. But don't fret, we will have more trips and we will return to most of our favorite sites again, and probably again after that. But we also seek new sites. Our motto is "Always Looking for Places to Dig", but I think many of us might wish to amend that slogan to read "Always Looking for **New** Places to Dig". So, if you know of a site with fossils or minerals that doesn't show up on our list, we want to hear from you. We will travel, within reason, Afghanistan or Ecuador are probably out of our reach. But most of all, we hope to see more of you on our future trips or at our fall/winter monthly meetings, the first of which will be Friday evening September 12th, right where it was last year, the Park Presbyterian Church in Newark.

Enjoy the remaining collecting days of summer.

Cold Water Travertine at Ilion

By Fred Haynes

Some 30 years ago, Herkimer County decided that the annual flooding and requisite road repair on Jerusalem Road (Co. Rd 16) south of Ilion was not worth the cost and effort and a one mile section of the road was permanently closed. In the 30 years hence, the road has been washed out repeatedly and is now a mere paved path in the woods. However, about half way along this section of road there is a series of springs which exit the shale that is exposed in the gully. At this point fractures in the shale have been partially filled and coated with travertine (a form of calcite). Varying in color from yellow to orange to various shades of brown this material has become a favorite of local collectors. Our club has generally scheduled an annual trip to this location. This year nine of us visited on June 24th and were not disappointed.

Ilion Gorge: There is not much left of Jerusalem Road as the creek and the eroded blocks (many of which are coated with travertine) have all but obliterated the old road.

Although calcite crystals are not available, collectors can focus on recovering colorful botryoidal specimens that grew in fractures with sufficient open space to produce the attractive geometry. Or one can look for highly banded more massive travertine that can be polished or slabbed. This form of travertine is often termed flowstone. Occasionally, or maybe rarely, one can find stalactites where the travertine must have grown on the roof of an opening, perhaps caused by the collapse and removal of shale below.

Botryiodal orange travertine from Ilion Gorge collected by Fred Haynes.

Generally, we think of travertine as a product of thermal spring activity such as Mammoth Hot Springs in Yellowstone or the deposits in Hot Springs, Arkansas. However travertine can form in low temperature environments also. At Ilion, the ridges along both the north and south side of the gorge are capped by limestone while the gorge has cut into the underlying shale. Carbon dioxide-laden rain water slowly dissolves the limestone along underground cracks and fissures. When it enters the underlying shale, the ground water is now fully saturated with calcium carbonate and carries elevated dissolved carbon dioxide gas. When this water emerges in springs along the gorge walls the carbon dioxide is rapidly released to the atmosphere resulting in a sudden and dramatic increase in pH. With pH increasing calcium carbonate (calcite) is no longer soluble and travertine is precipitated.

Banded travertine from Ilion Gorge

Often this travertine is mixed with algal material or inorganic ions such as iron yielding colorful layering (see photo on previous page). Banding or layering in the travertine can reflect seasonal changes in the chemistry of the spring water or the surface conditions when the travertine formed. Slabbed travertine from this material can be particularly pretty.

Given the constantly wet nature of a spring filled gorge, moss lines the gully walls in many places. This creates another interesting geologic condition. When the carbon dioxide release from emanating spring water occurs in a moss laden region of the gorge, the moss can be calcified, preserving the actual texture of the plant itself.

Calcified moss from Ilion Gorge

In places, the moss along a significant section of the south facing gorge wall just west of the main travertine site seems to have been fully calcified. Often, fresh moss is growing directly atop a calcified moss base creating a very interesting and dynamic interplay between biology and geology.

References:
Chamberlain, S. C., and Robinson, G. W., 2013, The Collector's Guide to the Minerals of New York State, Schiffer Publ., p. 33-35.
Walter, M.,2004, Travertine from Ilion Gorge, New York, Rock and Gem November issue

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FINAL NOTE: Although Jerusalem Road was closed a few decades ago this does not mean that the problem of landslides and road closures has ended for the region. On March 31st of this year Route 51, also in Ilion Gorge, was closed for a short while as a landslide obstructed the road. The highway department labeled the event as minor and the road was only closed briefly.

Geology in action in Ilion Gorge: March 31, 2014 landslide on route 51. *From WIBX950AM website*.

TRAVERTINE IN A HOT SPRING ENVIRON

The travertine in the Mammoth Hot Spring region at Yellowstone has a similar origin to Ilion travertine, but with a twist. Like Ilion, the waters exiting onto the Mammoth terraces have passed through thick limestone section and become saturated with calcium carbonate. Unlike Ilion, the highly elevated carbon dioxide in the subsurface water is from hot gases discharged from the rising magma deep beneath Yellowstone. But, just like Ilion when this carbon dioxide laden water is exposed to air, some carbon dioxide escapes . This upsets the carbonate equilibrium and causes calcite to precipitate as travertine. As at Ilion variation in the chemical composition of the water impacts the color of each travertine layer. However, in the hot spring environment, sulfur in solution is an added player, lending a bright yellow to the color scheme and imparting the noxious and distinct smell of rotten eggs to those who wander too close.

Wayne County Gem and Mineral Club 2014 Field Trip Schedule

last update (8/1)

This list is tentative and subject to change. As the summer progresses and the fall season commences, updates will be provided in the newsletter and on the website. You can always contact our field trip leader, Bill Chapman, if you are uncertain whether you have the latest information.

August activities are in red. The next monthly meeting will be September 12th.. Happy Collecting.

August 16 (Saturday) –Club picnic at the Weiler home, 6676 E. Port Bay Rd., ~1mile north of Wolcott center
RSVP to gwexterior@gmail.com with number attending before August 12th
Chicken provided by club, bring a dish to pass, your drink, and a chair. Lunch ~ 12:30 PM.
Craft activities organized by Dave Millis from ~10:00 – noon and from 2:00 – 3:30 PM

August 22nd (Friday) - We will find a place to collect en route to the St. Lawrence Club show
Site to be determined (contact Bill Chapman in mid-August for details)

August 23-24 – St. Lawrence County Trip #3 (part of the St. Lawrence Club annual show in Madrid, NY
Saturday – Powers Farm in Pierrepont for dravite and more
Sunday – Bush Farm in Gouverneur for root beer tourmaline, tremolite and more

September 20 (Saturday) - We are invited to join the SUNY-Plattsburg Geology Club Fall trip. They will visit Benson Mines in the AM and Rose Road in Pitcairn in the PM. Two neat sites
SUNY Plattsburg Leader – Dr. Mary Roden-Tice, WCGMC Leader – Fred Haynes

WE WON'T STOP HERE, but for now this is what is tentatively slated for 2014

SHOWS and OTHER EVENTS TO KEEP ON YOUR RADAR

Aug 8-10 Springfield, MA Gem and Mineral Show

Aug 22-24 St. Lawrence County Club Show, Madrid, NY (see below)

Oct 25-26 Rochester Gem, Mineral, Jewelry and Fossil Show and Sale (see below)

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Club meets 2nd Friday of each month starting in Sept.
Mini-miner 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. Send to WCGMC, P. O. Box 4, Newark, NY 14513