Wayne County Gem and Mineral Club News

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

Teamwork yields titanite and apatite at the Miller Property in Eganville, Ontario (see multiple stories in this issue)

Website
http://www.wcgmc.org/
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ALWAYS LOOKING FOR PLACES TO DIG

Collecting pyroxene and feldspar at the skarn in Fine, NY in June. (See story on 5)

Upcoming Events

Friday October 10th, - Club Meeting
7:00 PM, First Presbyterian Church, Newark, NY

Program by Bill Lesniak
Benson Mines – Past and Present
Including a review of the recent club trip
The next newsletter will include more on this trip.

Two days to collect in Walworth Quarry

Saturday and Sunday October 11th-12th
1200 Atlantic Ave, Walworth, NY

Once a year, Dolomite Products Co. Inc. opens the Walworth Quarry to the general public. Last year over 100 folks from several states and Canada visited the quarry to dig for the elusive clear and purple cubic fluorites hiding in vugs in the Silurian Lockport Dolomite. Dolomite, dogtooth calcite, selenite and some fossils can also be found.

The quarry will be open from 7:00 AM – 2:00 PM on Saturday and from 7:00 AM – noon on Sunday. Arrive early for a safety briefing before driving into the quarry. You must have strong shoes, a hard hat, and safety glasses. The rock is very hard so bring large hammers, chisels, and wedges. The club will rent a saw for club members to share on Saturday.

Any questions, call Bill Chapman

CANADA REVISITED

Four of us (Linda Schmidtgall, Bill Chapman, Ken St. John, Fred Haynes) decided one summer trip to eastern Ontario was simply not enough and we returned for 4 days in early September. The highlight was a return to the Miller Property in Eganville, but we managed to squeeze three other sites into the trip, including a pair of lesser known sites in the Bancroft Chamber of Commerce 2013 collecting book.

We started with a visit to the well known Beryl Pit in Quadeville. Fred had visited with the Rochester Club in July and since that time the owners (Dave and Renee Paterson) had excavated a significant amount of material in the floor of the pegmatite

(continued on page 5, see Ontario Collecting)

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Ready for a fossil hunt: Member Stephen Mayer led this motley group up Green's Landing on Lake Canandaigua on Sept. 27th. You will be able to read all about their successful trip in the next WCGMC newsletter. **Photo by Bill Lesniak**

Titanite on stamp from Switzerland

Mineral Musings
by Fred Haynes

Titanite is Everywhere!

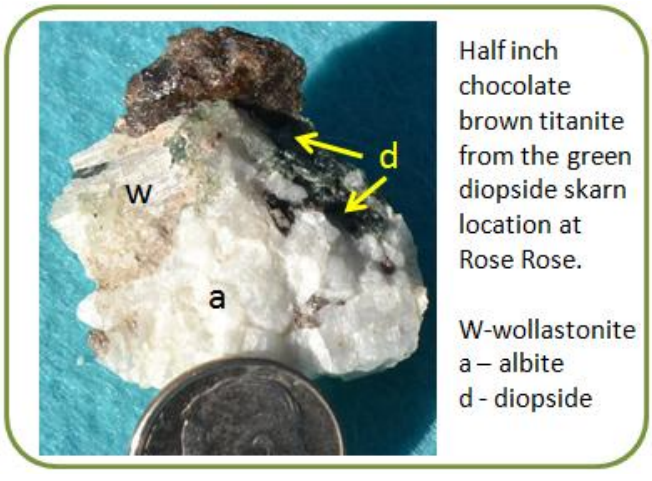
Who knows the most significant event of 1982? Could it be:

- The Epcot Center opens in Orlando, Florida
- Britian overcomes Argentina in the Falklands.
- Chariots of Fire wins Oscar for Best Picture.
- MRI (Magnetic Resonance Imagery) makes its medical debut.

Wrong, wrong, wrong and wrong. The most significant event in 1982 was when the International Commission on Mineral and Mineral Names (CNMMN) adopted the name titanite and discredited the mineral name sphene. Unlike those other events, the impact was immediate and worldwide. OK, maybe a few of you missed the event, but now you know.

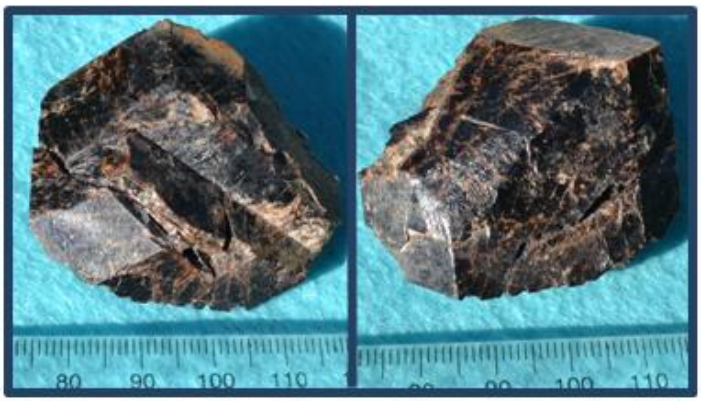
WCGMC flirted with titanite collecting all summer. Perhaps not as infamous as the cry "It must be an amphibole", but "ooh, it's another titanite" was commonly heard in the field this summer.

Our first encounter was at Rose Road in St. Lawrence County on our Memorial Day trip (see June/July newsletter). Titanite can be found as chocolate brown crystals up to about an inch, but often smaller, at both major collection sites at that Pitcairn, NY location. It may not be as colorful as the green or lavender diposide there, or as fluorescent as the scapolite and albite, or as common as the blue calcite boulders, but it is certainly a prize when occurring as a terminated crystal. Often the titanite occurs in albite, but sometimes the encasing mineral is calcite and the presentation can be improved with a little muriatic acid.



Titanite is a calcium titanium silicate ($CaTiSiO_5$) and occurs as a common accessory mineral in felsic igneous rocks. But more importantly for us Grenville hunters it also occurs in metamorphic rocks. Specifically, in calcite veins and in skarns, where the parent rocks were carbonates and invading fluids contained sufficient silica and titanium. The Rose Road locale is a skarn, but we have actually collected in multiple environments this summer.

The best titanites of the summer were collected at the Miller property in Eganville, Ontario. Some were found as floaters, presumably released from their original home in calcite veins by the near surface action of organic acid (Joyce, 2006). Most showed clear evidence of the penetration twinning common in the species. Digging in the dirt surrounding tree roots around calcite veins can be productive in locating floaters. But our best find came on our return trip to the site in September (see page 1 for more on this trip). While pecking away at a fairly thick calcite vein adjacent to a mafic gneiss host rock, a significant number of 1-2" titanites were exposed. The crystals seemed to be focused near the vein margin. A combination of sawing and chiseling, combined with a dose of patience and probably a bit of luck permitted recovery of several 1-2" shiny and twinned titanites



Opposing sides of a 1.5" twinned titanite collected at the Miller Property in Eganville, Ontario.
Fred Haynes collection

Remember the action picture of rock sawing at Eganville in the September newsletter? Well, the result of that work was a couple of very nice plates exposing the titanite, along with a dark green pyroxene floating in calcite.

Can you tell the titanites from the pyroxenes within the calcite? There are about an equal amount of each.

The top is fractured off, but this is the largest titanite we found. It is a good match in size to a can of Bill's favorite field beverage.

We also found titanite at a roadcut on Musclow-Greenview Road north of Bancroft (Bancroft CC, 2013, p. 46) on our first trip there in July. Stopping for red drusy quartz, a favorite of Sue Hoch, we realized that the host granite was a pretty combination of dark green augite, pink-orange feldspar and chocolate brown titanite. Crystals were rare, but the rock was interesting. Perhaps it will slab nicely, but my preferred pieces are destined to be preserved as interesting igneous rocks.

A Colorful Rock: This interesting igneous rock (likely of syenite composition) containing green augite, brown titanite and orange feldspar was collected from a roadcut on Musclow-Greenview Road in Monteagle Township.

References:

Bancroft CC, 2013, Bancroft and District Regional Mineral Collecting Guidebook, Bancroftt CC publication, 69 p.

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

A COUPLE GEM TITANITES WE DID NOT COLLECT

OK, our titanites were not gem quality like this green 2.8 carat gem from Madagascar or the 2.15 carat teardrop gem titanite from Afghanistan

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Limerick of the Month

There once was a club from Wayne County
Who always came home with a bounty
Always looking for places to dig,
for crystals quite small or real big,
And for fossils from lake or from sea

Fine Minerals or Minerals in Fine, NY?

By Fred Haynes

This will be a short report on a small occurrence. And, perhaps this will be even longer than it truly deserves. But we cannot expect gem tourmaline, perfect fluorites, or complete trilobites at all our favorite haunts.

Nestled in a depression just off the intersection of Rte. 3 and Rte 58 in Fine, NY is an interesting occurrence of very coarse grained pyroxene (presumably diposide, but possibly augite) and potassium feldspar. There is associated calcite suggesting that the mineralization may have a skarn origin, but the outcrop exposures don't appear to permit an unequivocal geologic explanation for the very coarse grained open space filling mineralization.

The specimens from this location have been referred to as "aesthetically challenged" (Steve Chamberlain), and I have heard the roadcut hole called a "garbage gully" (Dick Phillips). Of course that has not precluded Dick from moving massive amounts of the material to his garden in Buffalo. Personally, I prefer the phrase "mosquito haven", but regardless of what you call it the locale is a worth a one hour stop on the way into the Adirondacks to locations like Rose Road, Benson Mines, or points beyond. The site may have particular interest if you are in search of very large, strongly etched, dull crystalline material for your yard. It may be of less interest if you are looking for quality mineral specimens to show off under the bright lights of your living room mineral showcase.

Just park your car in the open lot on the northwest corner of the intersection of routes 3 and 58, walk to the left end of the tree line, take a deep breath of fresh air, and descend about 20' down into the gully. Unless a few thousand mineral collectors with large trucks and a propensity to collect large amounts of truly grungy material have preceded you, you should see plenty of dull green pyroxene and dirty orange potassium feldspar gleaming at you in the gully bottom. Well, it won't actually be gleaming, but you should be able to see it without a flashlight, even though the tree cover might turn noon to dusk and if your timing is wrong the mosquitoes may appear to descend in flocks.

Pyroxene (likely diopside?) with feldspar: Highly etched, but terminated large diopsides can be collected. The quarter is for scale, but it is also likely an accurate assessment of the value of the average specimen!

BONUS: Once tired of competing for grungy "crystals" with mosquitoes in the dark gully you may want to walk along the route 58 towards the bridge over the Oswegatchie River. The rocks in the roadcut on the way to the bridge are varied and interesting. At one point a felsic appearing gneiss can be collected that contains visible, although small, grains of deep green diopside, purple fluorite, titanite (yes, yet another 2014 siting), and biotite. I found no grain larger than a centimeter and all are part of the rock and not free standing. But, it is an interesting rock. I did find a small black tourmaline in loose rubble along the road, but could not locate the source in the roadcut. Be careful along the road; the flora includes poison ivy.

If you have Robert Beard's 2013 Falcon Guide entitled Rockhounding New York, this second site is #60, called Fine Roadcut, in his book.

Ontario Collecting (cont. from pg. 1)

quarry and piled it outside the quarry. This made for easy pickings for beryl, quartz, tourmaline (var. schorl), cleavlandite, albite, perthite, fluorite, and euxenite. We later learned that we may have taken more than our limit on that last one. Keep reading to learn why!

On day two we headed to Eganville and brought out the rock saw and went to work on the calcite veins in the main trench area. You can see a slabbed titanite piece on page 3 and a floating crystal that fell free of the calcite on page 2. We loaded up on pink calcite, with and without apatite such as those shown to the right, and trekked into the woods for large biotite books with red apatite matrix and for amazonite. The microcline crystals are not particularly flashy, but they are also very collectible, either in float or when they can be removed from the hard vein walls.

As all who collect in Canada know, the US customs folks frown on bringing dirt back into the US. Sometimes rocks are dirty, or can appear so to a cursory viewing at the border. So we take care to wash our treasures whenever we can.

Bill Chapman cleans apatite and calcite before it is packed away for safe transport south. We are not sure if Linda is impersonating Michael Jordan or Miley Cyrus as she assists Bill.

With our field vehicle loaded, we decided to try out two of the lesser known sites in the Bancroft area to complete the trip. None of us had been to either the Burgess Mine in Cardiff Township or the Saranac Mine in Monmouth Township.

Apatite in calcite – A typical matrix piece from Eganville. The longer apatite is about two inches long. Note the cast where a third crystal once lay.

The former consists of a syenite gneiss cut by a leuco syenite pegmatite. The syenite is highly silica deficient permitting corundum (Al_2O_3) to occur as a primary rock forming mineral. The coarse corundum crystals are gray with nice luster, but are not of gem quality. Too bad, gem corundum is ruby! The Burgess Corundum Mine operated from 1902-1917. We did not find too many free standing corundum crystals, but each of us did leave with several terminated crystals.

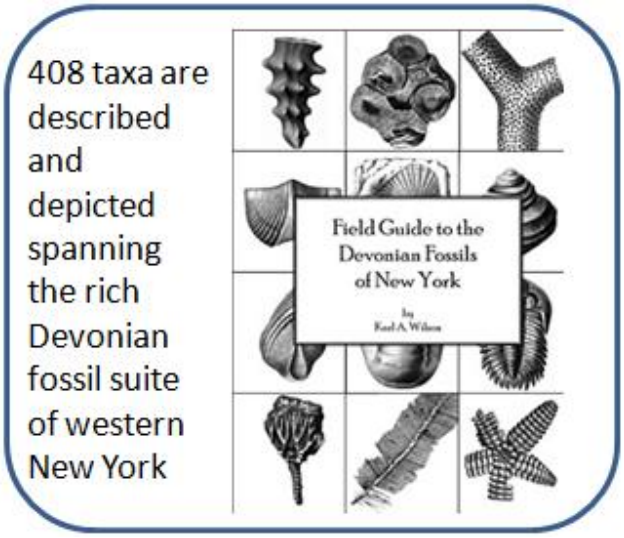
Our final stop was a dump, literally. We circumvented the Monmouth dump on foot, dodging bear scat and garbage that bears had dragged into the woods, to find the Saranac Mine. Zircons and other radioactive minerals occur within a thin granite pegmatite intruding marble. So do mosquitoes! The zircons are said to reach 2 cm in length. They have either shrunk since the Bancroft CC report of 2013 or we were not looking in the proper dump! We found lots of zircons, both as well formed crystals standing off the rock and loose in the fine gravel on the dump, but most were 1 cm or smaller. Or about the same size as the mosquitoes that helped us collect.

The final step of the trip was to successfully pass through customs with our carefully cleaned and organized treasures. Unfortunately, the lights all turned red as we passed into the Thousand Islands customs booth and two officials descended on our vehicle. We learned that we had tripped their radioactive detection equipment. It could have been just about anything we collected, but it is my bet that the 1"-2" euxenites from the Beryl Pit were the culprit. They had us pull to the side. Twenty minutes later after they had checked out our vehicle we were allowed to return, and keep our treasures as well.

Euxenites from the Beryl Pit: They may not look like much, but these terminated and twinned rare-earth oxides likely delayed crossing the border back into the US. Euxenite is orthorhombic and has the formula $(Y,Ca,Ce,\mathbf{U,Th})(Nb,Ta,Ti)_2O_6$. The top three are fully terminated, the lower right sample displays the waxy, glassy luster of broken surfaces.

Book of the Month

Field Guide to the Devonian Fossils of New York by Karl A. Wilson (Paleontological Research Institute, 2014): This compact (6" by 9") spiral bound fieldbook is a update to the1994 PRI publication by David Linsley. After introductory sections on general Devonian stratigraphy and geology and a section of fossil collecting methods, the book systematically introduces Devonian fossils. Sections on sponges, corals, bryozoa, brachiopods, mollusks, anthropods, trilobites, echinoderms, and more follow with diagrammatic plates offset by descriptive pages detailing the fossils. By limiting the species to those found in New York, you are much more likely to identify your finds with this book than with a more inclusive book. The PRI price is $18 and the book can be obtained online with a modest additional shipping charge. Mine arrived in 3 days !



Can you identify the coral in the upper middle of the cover? It is Heliophyllum halli confluens, and it is almost identical to the one found by Bill Chapman at Deep Rock on our visit there on July 19th. See last month's newsletter for a picture of Bill's find.

Left: Bill Chapman encountered this 8" long, 2" diameter red apatite in calcite in Eganville in July. He carefully removed it. **Right**: Two months later the end result was part of the September WCGMC meeting when members shared their summer collecting stories.

Wayne County Gem and Mineral Club 2014 Field Trip Schedule

last update (9/30)

This list is tentative and subject to change. As we move into fall we will be updating our plans at each month's meeting (second Friday of the month). You will be the first to know of any changes if you attend our meetings, but it is also a good idea to check the website or contact our field trip leader, Bill Chapman, if you are uncertain whether you have the latest information.

NOTE: For insurance reasons club membership is required to attend a WCGMC field trip. You can join at any of the trips, at a meeting, or by sending a form with dues to our PO box (see final page).

October activities are in red. Don't forget the Friday meeting on October 10th

October 11-12 (Saturday-Sunday) - Walworth Open House (Sat 7:00AM-2:00PM, Sunday 7:00AM-noon). Arrive early for safety talk. Wear long pants and boots. Bring safety glasses and hard hats. *Leader – Bill Chapman*

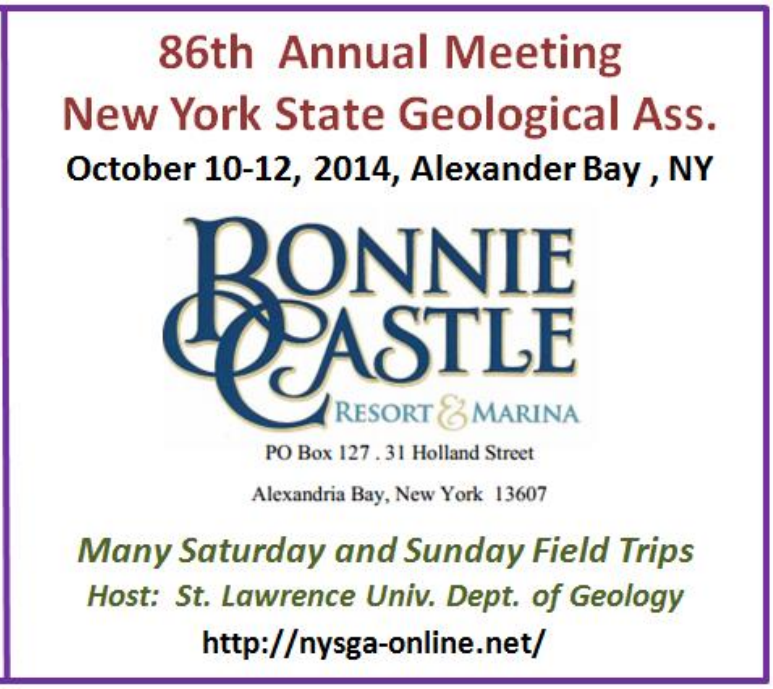
We will likely schedule a couple more trips in late October and November before the snow flies.

SHOWS and OTHER EVENTS TO KEEP ON YOUR RADAR

Oct. 10-12 NYSGA Field Trip Symposium in Alexander Bay, NY
(http://nysga-online.net/)

Oct. 25-26 Rochester Gem, Mineral, Jewelry and Fossil Show and Sale
(http://www.rochesterlapidary.org/show/)

Bill, Fred, and Linda went mineral collecting in Canada for four days and came back with just 6 titanite crystals. Linda, always thinking of the finances, says "The way I figure, those crystals cost us $200 each."
Fred says, "Well at that price it is a good thing we did not find any more of them than we did."
Bill says, "But they are twinned, that makes 12 crystals. Boy, we are really broke."



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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