Wayne County Gem and Mineral Club News

August, 2015 **Always Looking for Places to Dig!**

Hexagonite (Ken Rowe specimen) (see page 2)

Website
http://www.wcgmc.org/

Yes, that is native silver, and it is from the Nipissing Mine, in Cobalt, Ontario (see below and page 5)

Next Club Meeting is the Picnic! Saturday, August 15th, 10:00 AM-?

Weiler Home and Club Workshop, 6676 E. Port Bay Rd., Wolcott, NY

Club will provide meats and drinks.
Bring a dish to pass and a chair.
Come prepared to have a good time.
The club workshop will be open.
There will be rocks to cut and geodes to saw.
Did I mention barrel rides?

Upcoming WCGMC Field Trips

Sunday August 9 – A fossil trip: we will revisit Green's Landing along Lake Canandaigua. Meet at Deep Run beach parking lot at 9:00 AM. We will likely car pool from there to the site just 1 mile north. This is on private property that can only be visited with permission. *Leader – Stephen Mayer*

Sat. August 29th – Alden, NY for pyritized fossils in Ledyard shale. See June-July 2014 WCGMC News for more site info. Meet at Dollar General Store on Rte. 20 in Alden at 10 AM or go directly in if you know the path. *Leader – Bill Chapman*

==========

Canada 2015 (Part 1. Cobalt, Ontario)

By Fred Haynes

During the third week in July, seven WCGMC members spent 7 days and 6 nights collecting in Ontario. The first three days in Cobalt, Ontario are summarized here. Part 2, three days near Eganville, await the September newsletter.

From its discovery in 1903 until around 1920, Cobalt, Ontario was a hotbed of silver mining and the center of Ontario's economic mining industry as over 10,000 inhabitants opened more than 100 mines in search of silver. Over 100 years later, and for 2 days in July, 2015, seven eager rockhounds from WCGMC followed in the old timers footsteps.

(see Cobalt Silver District, page 5)

From left to right, the miners of Cobalt, Fred Haynes, Bill Chapman, Linda Schmidtgall, Gary Thomas, Eva Jane Weiler and Matt Weiler. Glenn Weiler took this photo at the Miner's Memorial in downtown Cobalt.

Mineral Musings
by Ken Rowe

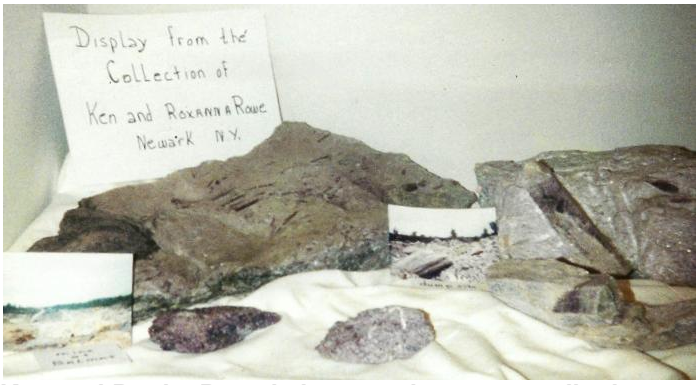
This month one of the club's long time members offers his memories of a favorite site and a favorite mineral. Ken, and his wife Rocky, have been club members for over 30 years.

Balmat Hexagonite

This is a brief reminiscence about my collecting at the Gouverneur Talc Mine and the Zinc Corporation of America Mine in Balmat, New York in the late 1980's. We began about 1980, when my wife and I were fairly new members of the WCGM Club. We were guided by Jim and Marion Wheaton, the founding members of WCGMC. At that time the Balmat site was an underground mine for zinc.

Just before our visit to the Gouverneur Talc Mine a cave-in had led to a partial collapse to highway 812 and repairs to the road required just about all the available tailings to fill in the damage to the road. Upon arrival at the mine we were very disappointed because we were expecting some good specimens of hexagonite. All we found were a few forgotten boulders around the perimeter of the site, so we (about 10-12 persons) made the best of it. Can you imagine all the hexagonite buried now beneath the road!

I had never been to a quarry before and knew very little about what to do. I found a small 4' long boulder and proceeded to beat on it (a la Bill Chapman) as I saw others doing. Carl Kisbaugh, seeing that I wasn't having much luck breaking it, offered to help. He was much younger, bigger and more experienced than I was and quickly broke it in half. Apparently it was worth picking up because Carl said "I'll take this 1/2 and you take the other. I later found out that Art Grant, a well known faceter gave Carl $400.00 (or was it $40.00?) for a nice gemmy crystal. Art was able to facet it nicely. The moral here is "break your own rocks". As the years went by our club returned to this dig site every year and my wife Rocky and I found some very nice material (*i.e. see photo on page 1*).



Ken and Rocky Rowe's hexagonite were on display at the 2000 Wayne County Gem and Mineral Club show in Newark. Ken tells us that the piece in the upper right is now on display at the New York Museum of Natural History in Albany. Photo by Rocky Rowe

Another interesting visit to this area was during the summer of 1993. At that time, The Balmat Mine was operated by Zinc Corporation of America and they held an open house which was very well attended. We were served a nice lunch and given commemorative hats. Rocky and I still have ours. But the highlight was after lunch when we were taken down into the mine by elevator and enjoyed a guided tour underground. Many of us had never been into an operating mine and the experience was one we remember today.

The ZCA #4 shaft that Ken and Rocky must have used to enter the Balmat Zinc Mine. The current owners maintain the underground mine and equipment in hopes that the price of zinc will permit the mine to re-open. *Photo is from a summer of 2013 visit by Fred Haynes.*

Part of our visit involved going into the main buildings and listening to the geologist explain how they find and map out the veins of zinc ore. I was lucky enough to receive from the geologist a beautiful specimen of magnetite, which is one of my favorite crystals. I later gave it to the club for a raffle piece. I wonder who has it today?

For a time the Gouverneur Talc Mine owners decided to open the pit up and have operated that way until they closed. The current mine dumps are now spread over many acres and are about an estimated 75 feet high. When we first went there they were only about 4-5 feet high. I believe quarry work has ceased and think it is now filled with water.

We have a lot of fond memories of the region and of collecting with our rockhound friends in the WCGMC.

Ken Rowe continues to collect with the WCGMC. Here he is chiseling out a travertine piece on our June 26th trip to Ilion Gorge.

Editor's Note: Hexagonite is unique to New York. Found only in several locations in upstate New York the purple variety of tremolite is colored by a small amount of manganese (Mn) in the crystal structure. Interestingly, it was named hexagonite when originally thought to be a hexagonal form of tremolite. However, it is monoclinic. Technically, hexagonite is not recognized as a separate mineral species, but is just a varietal form of tremolite.

This 8" piece from Balmat displays several gemmy 1-2" long purple hexagonite crystals. Bill Chapman's specimen as it was displayed in the WCGMC Purple Mineral display at GemFest 2015 (see below for the full display)

The WCGMC exhibit at GemFest 2015 featured purple minerals from the collections of club members. Amethyst and fluorite were well represented, but minerals like covellite, bornite, charoite, and sugilite joined hexagonite in the exhibit. Hexagonite, of course, was front and center. In the background is a display of purple minerals on worldwide stamps.

Site of the Month

Selenite in Fayetteville

Silurian Selenite near Syracuse

In late June, seven WGCMC enthusiasts set out for a day of collecting near Syracuse. We concluded the trip with a successful stop in Fayetteville where we recovered selenite. The site is behind the town municipal building on Route 257. The small outcrop is not a stand alone destination, but it does makes a nice ancillary stop on a trip into the area. For us, that meant a 90 minute stop after spending several hours in Ilion Gorge (our second visit there in a month). The Fayetteville ledge is not as pretty as the Ilion location, but it was a productive stop.

Selenite is the crystalline form of gypsum ($CaSO_4 \cdot 2H_2O$). Crystals are monoclinic and generally colorless and transparent. They are tabular in nature and often interpenetrating. Clear selenite crystals and plates of crystals are intermixed with sanded and crusted massive gypsum and with clay. In the Fayetteville occurrence, the better crystals grew face down, adhering to a rigid limey lens in the host shale and growing into softer shale or clay below. The plates can be best extracted by removing the clay gently and then chiseling as large a piece as possible from the host rock. Gypsum is soft (2 on Mohs Hardness Scale) and can be scratched with a fingernail requiring that care be used during collecting and transport. Fingernails should be trimmed before collecting!

My six colleagues on the dig, from left to right Ivan, Karen, Bill, Linda, Ken, and Debbie dig in the seam.

The drab shale units hosting the selenite lenses are part of the Camillus Formation of the Upper Silurian Salina Group. Predominantly an argillaceous (clay-rich) shale, the Camillus Formation was deposited in a very shallow inland sea during arid conditions when western New York was near the equator about 420 million years ago. At times the sea dried up and evaporate minerals (gypsum in this case) were precipitated. The selenite is often encrusted with dried mud that can be removed and the selenite layers alternate with mottled shales and clay units. There are occasional limestone units when the water depth was deep enough for a sufficient amount of time for them to form.

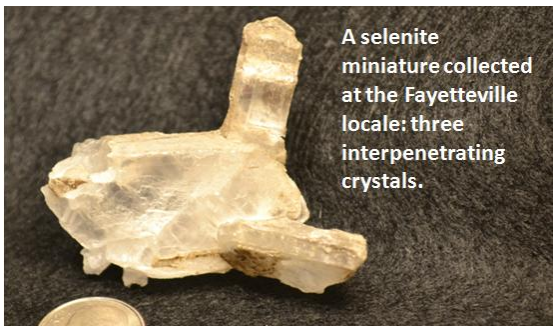
A large slab of cemented selenite crystals reflecting sunlight: a fine patio piece.

A modern analog for the Upper Silurian of western New York is an arid region of Northern Egypt where gypsum is being deposited in coastal lagoonal setting adjacent to the Nile River. It is interesting to note that similar environment conditions in Upper Silurian time led to the precipitation of the thicker salt (halite) units exploited for rock salt across western New York. The American Rock Salt Mine in Mt. Morris, NY was the WCGMC News Site of the Month in January (Jan2015 WCGMC News).

References:

Haynes, S.J., and Hughes-Pearl, J., 1991, Depositional Setting of Gypsum Deposits, SW Ontario, in Carbonates and Evaporites, v.6, #2, p. 193-216.

Stone, B. W., et.al., 1920, Gypsum Deposits of the United States, USGS Bulleting 697.



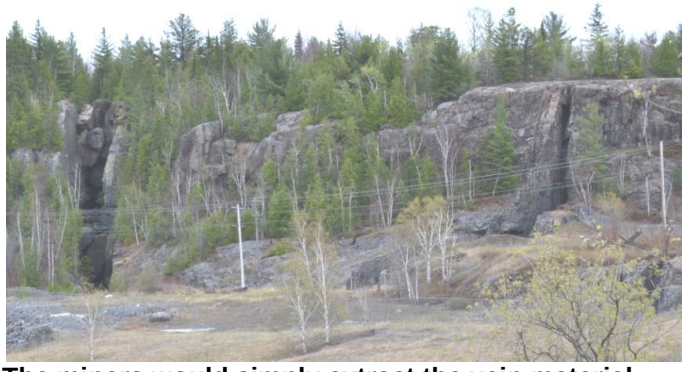
A selenite miniature collected at the Fayetteville locale: three interpenetrating crystals.

Cobalt Silver District (cont. from page 1))

The miners of the early 20th century faced brutal winters, devastating fires, contaminated water, and, in 1909, a typhoid epidemic that hospitalized 10% of the mining district's inhabitants killing over 100 people. By comparison, one hundred years later, the seven savvy rockhounds who visited mine dumps and mill sites from perhaps 8 of the old mines had to endure mosquitoes, black flies, sunburn, and restaurants that did not serve lemonade or Mountain Dew.

Despite these subtle environmental differences, the objective of the groups was the same: find silver. History tells us that the former group was more successful. In 1908, 10% of the world's yearly silver production was from Cobalt, and all told over 450 million ounces of silver has been recovered for the district. This places the district as the 4th largest silver producing district in the world. By comparison, the seven intrepid modern mining warriors found a bit of silver running through thin veins of diabase host rock in two boulders in two separate locations.

BUT, we did find plenty of "cobalt bloom", the pink cobalt arsenate mineral erythrite ($Co_3(AsO_4)_2 \cdot 8H_2O$) that prospectors used to hone in on silver-bearing veins. This surface alteration product signaled riches below. The theory goes that migrating hydrothermal solutions rich in the elements cobalt, nickel, arsenic and silver found the chemical conditions afforded by cracks and fissures in the large diabase dikes and sills of the Cobalt region to be just right to precipitate their unusual contents. Often accompanied by calcite, these veins could carry upwards of 10-20% silver with equal amounts of cobalt and less amounts of nickel. The lucky miner found one thick enough to mine. The unlucky rockhound, well he had to buy his.



The miners would simply extract the vein material only, leaving the barren hard host diabase on either side. Note the two vein cuts in the steep cliff walls on either side of this picture taken facing east for town.

In addition to native silver, the primary minerals in the veins are cobalt and nickel arsenides, minerals such as cobaltite (CoAsS), skudderudite ($CoAS_3$), safflorite ($CoAs_2$), and nickeline (NiAs). We found all of these, but often the shiny metallic cobalt minerals are massive and intergrown such that identification is difficult. The term smaltite has been historically applied to intergrown cobalt arsenides.

On our day in Cobalt we visited mines with names like Nipissing, Silver Miller, Hargreaves, Beaver, Timiskaming, and Cobalt Lode. But our biggest break came when a young local rockhound (well, younger than most of us and certainly more local) happened to stop to see how we were doing when were collecting at the Cobalt Lake Mine quite close to town. Turns out he was a diamond driller on night shift at a gold exploration region towards Timmins to the north. We told him we were doing fine, and then he showed us the back of his pick-up and we realized we were not exactly doing fine. But he fixed that selling up many specimens at very fair prices. I cannot tell a lie, the piece pictured on page 1 is one of my purchases when he revisited us later the following evening in our motel with more samples.

Most silver seekers on the Cobalt dumps, roads, and mill sites claim that a metal detector is the tool of choice. We had one and used it, but all we could find with our tool was metal nails, pipe pieces, and an occasional drill bit. Naturally we took those too!

Some of my "prize" finds. The longest Archean greenstone core with calcite veins at the top is 26" long and 2" in diameter. The rusted drill bits in the front are, well, rusted drill bits.

The 3rd and 4th cores from the top are interesting rocks. They are from the Gowganda tillite, a conglomerate that was formed by glaciation during the middle Precambrian, more than 2,300 million years ago, or 2.3 billion years if you prefer. The pink and rounded granite cobbles appear to be floating in a varved lithified clay matrix, the result of rocks dropped into mud during the retreat and melting of continental glaciations. Unlike the modern glacial

tills we are familiar with these sediments were then buried deeply and lithified into conglomerate-like rocks. The Nipissing diabase dikes (vertical) and sills (horizontal) which host both the Cobalt and Gowganda silver, cut through both Archean greenstone rocks and the tillite approximately 2,200 million years ago. The fifth horizontal core from the top and the smaller diameter cores to the left are diabase, a subvolcanic igneous rock comprised mostly of plagioclase and pyroxene and the host for most of the silver-bearing veins.

We took a break from collecting in the afternoon to visit the Cobalt Mining Museum to drool on the silver specimens and learn a bit about the history of a fascinating mining district from an interesting 30 minute movie and six rooms of exhibits.

Our president had to try out the drill core xylophone in the museum. Recalling what happened after Glenn saw a sphere machine in March (he went home and made 2), we all wondered how long it would be before the club had its first musical instrument. Judging by the amount of drill core everyone took from the many mine sites where it was encountered, he may not be the only club member interested. Or perhaps drill core wind chimes?

On our second day in Cobalt, we ventured about 100 klicks east (klicks are kilometers in Canada speak) to the mining district of Gowganda. Similar in mineralogy to Cobalt, but working under the assumption of wandering the path less followed, yours truly considered it might be a good idea to venture from the main district in the hunt for riches. We did find one fine grained boulder with splotches of silver at the Miller Lake O'Brien Mine. The boulder broke to expose more so each of us could claim a piece, but overall the dumps at Cobalt were larger and pinker (i.e. more erythrite to excite our senses). We did find more core, a little copper mineralization (chalcopyrite and even a little covellite) that we did not see at Cobalt. And lots and lots and lots of drill core of all sizes.

Yes, that is all drill core. And no we did not take it all!
Photo by Eva Jane Weiler

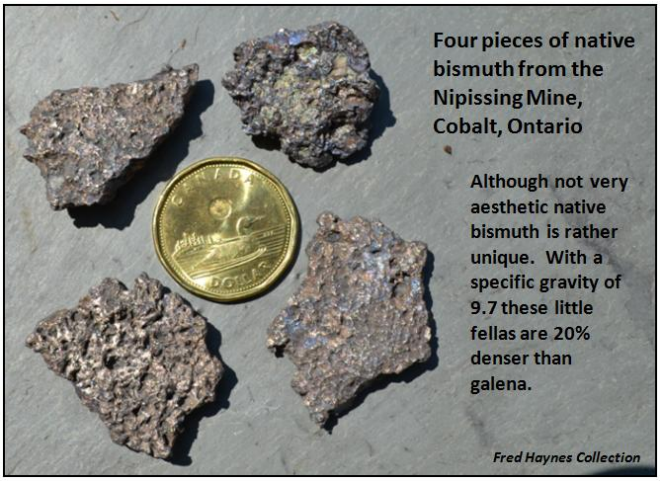
After two full days of collecting and 3 nights in Cobalt, we loaded up our rocks and pointed our caravan towards Eganville. Next month you can learn what we found there.

References:

Adamowicz, M., 2014, Exploring Cobalt: The Historic Silver Capital of Canada, http://www.mindat.org/article.php/1398/Exploring+Cobalt+The+Historic+Silver+Capital+of+Canada

Cobalt Mining Legacy, various pages from the website http://www.cobaltmininglegacy.ca/index.php

Sabina, A.P., 2000, Rocks and Minerals for the Collector: Cobalt-Belleterre-Timmins, Ontario-Quebec, Geol. Survey of Canada Misc. Rept. #57.



WCGMC 2015 Field Trip Schedule

last update (7/28/2015)

It is late July. We are back from Canada and planning for August and September. The big event in August is the picnic, but we have two fossil trips planned also. As usual, you should always watch the website for adds and changes, or contact the listed trip leader or Bill Chapman, if you are uncertain whether you have the latest information. This month's activities are in red.

Remember to attend a WCGMC field trip you must be a club member, or a member of an affiliated club if you do not live in our region.

Sunday August 9 – A fossil trip to the popular Green's Landing site along Lake Canandaigua. Meet at the Deep Run beach parking lot at 9:00 AM. We will likely car pool from there to the site just 1 mile north. This is on private property that can only be visited with permission. *Leader – Stephen Mayer*

Sat.-Sun. August 22-23 – *New York tourmalines* - Powers Farm on Saturday, Bush Farm on Sunday. Both trips run by St. Lawrence club and both originate at 9 AM from the show site in Madrid, NY (visit website listed below for show and trip information)

Saturday August 29 – Alden, NY for pyritized fossils in Ledyard shale. See June-July 2014 WCGMC News for site details. Meet at Dollar General Store, Rte. 20 in Alden at 10 AM. *Leader-Bill Chapman*

Sept. 19-20 (Sat.-Sun.): *Finally, St. Lawrence County in 2015. We will join SUNY-Plattsburgh Geology Club at Benson Mines Sat. AM and Rose Road Sun. PM. Trip will continue on Sunday and perhaps longer with sites TBA. Leader – Fred Haynes*

October 11-12 (Sat.-Sun.) - 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*

SHOWS and OTHER EVENTS TO KEEP ON YOUR RADAR in the next 2 months

August 1-2 – Paleontological Research Institute 10th Annual Summer Symposium --- for more visit - http://www.priweb.org/events.php?page=atthemuseum/548301

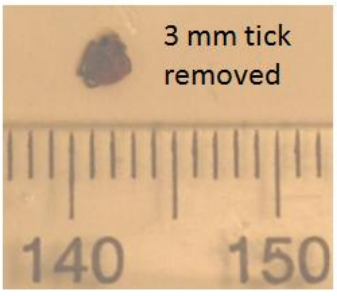
August 15 - Mark your calendar for the WCGMC Picnic in Wolcott at the Weiler's. The workshop will be open.

August 21-23 – The St. Lawrence Gem and Mineral Club show, Madrid, NY. Field trips planned to Powers Farm on Saturday and Bush Farm on Sunday. http://www.stlawrencecountymineralclub.org/show_1.html

September 12-13: NYSGA Annual Field Meeting, Plattsburg, NY For info on symposium and field trips see: http://www.nysga-online.net/meetings/meeting-information

In late June, WCGMC postponed it's Alden trip due to flood warnings. It did rain a whole lot that day, but member Michael Watkins went collecting anyway. He came up with this partically pyritized trllobite. Is that enough to encourage you to come join us August 29th?

A Safety Note: Check for ticks after field trips !



Two days after returning from Ilion WCGMC trip in June, your editor spotted a tick on his waistline. I could not get him all out, so I went to the doctor and had him remove the head. I had kept the body, but lab testing apparently could not confirm what type of tick he was or whether he was carrying Lyme disease. I was prescribed a precautionary antiobiotic for 10 days.

Wayne County Gem & Mineral Contacts

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@localnet.com 315-331-1438
Susie Hoch smhrockfinder@rocketmail.com
585-794-7287
Linda Schmidtgall lees@tds.net 315-365-2448
Laurie Frey Lmcfaul328@aol.com 315-483-9894

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

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

First Class: Dated Meetings & Time Valued
The Public is always welcome!
Wayne County Gem and Mineral Club
P.O. Box 4
Newark, New York 14513