Wayne County Gem and Mineral Club News

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

WCGMC President Linda Schmidtgall works one of our new saws at the November workshop.

http://www.wcgmc.org

FACEBOOK link

November, 2018 WCGMC Workshop (more pictures on page 7)

WCGMC

Christmas-Holiday Rock Bash

Friday December 14th, 6:30 PM

Park Presbyterian Church, Maple Court, Newark, NY

(doors open at 6 PM, dinner @7:00 PM)

Party, Buffet, Gifts, Games, and More

Bring a dish to pass. Bring rocks to share.

Club provides ham, potatoes, and drinks.

If you have not yet informed us that you will attend, please send a note with headcount to Linda Schmidtgall (lees@tds.net, 315-365-2448)

HOLIDAY ROCK SHARE/SWAP

At this year's party on the 14th, we ask that you bring any extra rocks/minerals/fossils that you are willing to swap/share with other members. We'll set up a table in the back and everyone can go home with everyone else's extra rocks !!

WCGMC Workshop
Saturday December 15th

When: 10:00 AM til mid-afternoon
Where: The Weiler's Barn /Club Workshop
6676 E. Port Bay Rd, Wolcott, NY
Rules: Bring your own rocks
Training on equipment is available.
Eye protection is required.
$5/adult to offset maintenance costs.

Upcoming Meetings

For those who like to plan ahead, our January meeting will include a presentation on Eurypterids by Stephen Mayer (see page 3) and also a competition to see who had the best mineral and fossil finds in 2018. *(Details in next newsletter)*

In February, we will hold our annual auction, a very popular event in past years. Save those pennies, nickels, dimes and hundred dollar bills.

An Inconvenient Truth:
It is winter in western New York

Should weather decide to interfere with club activities in the coming months, an e-mail note will be distributed and we will post to Facebook and our webpage. You can also contact Linda Schmidtgall, Fred Haynes or Bill Lesniak for the latest update. Their contact information is on page 8.

President's Message

Linda Schmidtgall

Thanksgiving, and now Christmas, provide the time for all of us to reflect and be thankful. One way WCGMC does this is to close the year (or start a new one?) with a party, a big party full of fun, friends, food and, of course, minerals. We hope as many of you as possible can attend on December 14th in Newark. The details and logistics can be found elsewhere in this newsletter, but I want to emphasize that if you are attending we do need to hear from you. We'd like to know the names of each family member attending. This helps us plan for how many tables to set and how much ham and potatoes to prep. If you have not yet signed up at a previous meeting, please send me a note right now! I'm easy to reach (lees@tds.net or 315-365-2448).

On a more personal note, I am thankful for another year of good health, allowing me to participate in many trips and collect wonderful rocks while seeing some of the beautiful country that we live in. I was able to enjoy the company of our members who also have shown faith in me to be their new president. I will try and do my best for the next two years. I am also thankful for an understanding husband who has no desire to collect rocks but is supportive of my passion. I am celebrating 9 years of retirement but more important 9 wonderful years as a member of the Wayne County Gem and Mineral Club. Happy Holidays:

Your President, Linda

Keweenaw Peninsula: Thank you, Jim

WCGMC would like to take a moment to formally and publicly thank Jim Hird and his wife Bonnie for taking the time to visit us during their November trip to western New York. Jim's talk on the mines and minerals of the Keweenaw Peninsula of Upper Michigan at our Friday meeting on November 9th was entertaining and stimulating. The passion and love Jim has for the UP and the Copper District was obvious and contagious. We thank him for his energy; we thank him for the dozen or so fine pieces he gave to us to use as door prizes. It is good to know there are nice folks out there willing to go out of their way to share their knowledge and love of rocks and minerals.

On Thursday November 8th, Linda and Fred showed Jim (left) and Bonnie (center) our Great Lake, picking up a few garnet gneiss and some fossils, but no Yooperites. Yes it was cold!

Photo by Linda Schmidtgall

On Friday night, Jim unpacked some pieces he had brought from another of the Great Lakes. And yes, that is copper running throguh those two large slabs in front of Jim.

Photo by Fred Haynes

The Keweenaw Peninsula is 850 miles from Wayne County for those who have passports or enhanced licenses (longer for those who don't!) and yes, we are talking. There are organized collecting trips to join in both July and in August. Perhaps some of us will try to join one. Jim might be there in August. Who wants to go look for copper and datolite and agates and thomsonite? Stay tuned.

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On November 18th Reddy Fox paid a visit to our back patio. Perhaps he wanted to borrow Fleisher's Glossary of Minerals to identify something in the backyard? Or perhaps he was just admiring the Kentucky geode behind the book?

Just one day later, while half of the WCGMC members were out hunting for that special buck, this fellow and his mate visited my backyard in Rochester. I shot him with my Nikon D3100.

Photos by Fred Haynes

A Rare Eurypterid Find

BY STEPHEN MAYER

In the Summer of 2018, while digging for eurypterids in the Williamsville Formation at Ridgemount Quarries in Stevensville, Ontario, Canada a most unusual carapace was uncovered. This fossil was identified as *Buffalopterus pustulosus* (Subphylum: Chelicerata, Order: Eurypterida).

***Buffalopterus pustulosus* carapace from the Late Silurian, Stevensville, Ontario Canada**
collected and photographed by Stephen Mayer

James Hall in 1859 first reported the occurrence of *Eurypterus pustulosus* from a single fragmentary fossil, however, the most important characteristics were clearly defined, that is the form of head, the position of the lateral eyes, and the fantastic yet extraordinary pustules covering the carapace. Pustules are small raised protuberances or elevated overgrowths; it is not known what purpose these might have had on eurypterids.

Pohlman in the late 1800's inaccurately described a similar carapace believing it to be a different species. He then studied another fossil (photo to right) consisting of post-abdomen body segments (called tergites) concluding again that it was not *E. pustulosus* but instead belonged to the same species as his carapace. Pohlman assigned this genus to the pterygotids, a different family of extinct eurpyterids. In 1912 Clarke and Rudemann determined that indeed all the fossils were synonymous and that the species represented was *P. buffaloensis* = *Buffalopterus pustulosus*.

To this day, *Buffalopterus pustulosus* is known from only a few fragmentary fossils. It is unclear what the entire animal looked like as no complete specimens or identifiable appendages from this species have ever been found. The carapace discovered this summer is remarkable not only for its size but flawless preservation. The length of the head is 12 cm (4.75 in.) with a width of 19.0 cm (7.5 in.). The length of the entire animal is estimated to have been as much as 1 meter. Unfortunately, no other parts of the exoskeleton were found.

Incredibly, a second, smaller carapace was found by Rochester collector Tod Clements a few weeks later but again no other body parts were recovered. Parts of the specimens were donated to the Yale Peabody Museum. Moreover, Sam Ciurca believes the discoveries may represent the first known occurrence of the eurypterid in the Canadian Williamsville (pers. comm.)

Pohlman's *Pterygotus globicaudatus* as presented in Clarke and Rudemann's 1912 treatise on "The Eurypterida of New York".

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It is interesting to speculate on the morphology of *B. pustulosus* if a complete animal were ever found. Were the swimming legs equipped with paddles so typical of the eurypterids? What did the front appendages (called chelicerae) look like? Were they small and aligned with the mouth or did they become large formidable grasping organs similar to the pterygotid family of eurypterids? What was the shape of the abdomen? Was it covered by pustules like the head? Were the pustules simply ornamentation or did they serve another function? How about the tail (telson), was it thin and straight or was it curved? Paleontologists may never know the true answers to these questions of a most aberrant sea scorpion.

Perhaps one of us can find the definitive full *Buffalopterus pustulosus* specimen next collecting season!

References

Clarke, J.M. and Rudemann, R. 1912. The Eurypterida of New York. New York State Museum Memoir 14, vol 1-2.

Hall, J., 1859, Natural History of New York, Geological Survey of the State of New York

EDITOR'S NOTE: *Stephen will be speaking about his 2018 eurpyterid find and also the eurypterid-bearing strata in Phelps, NY at our January meeting. Don't miss a chance to see this rare find and learn more about the New York State fossil.*

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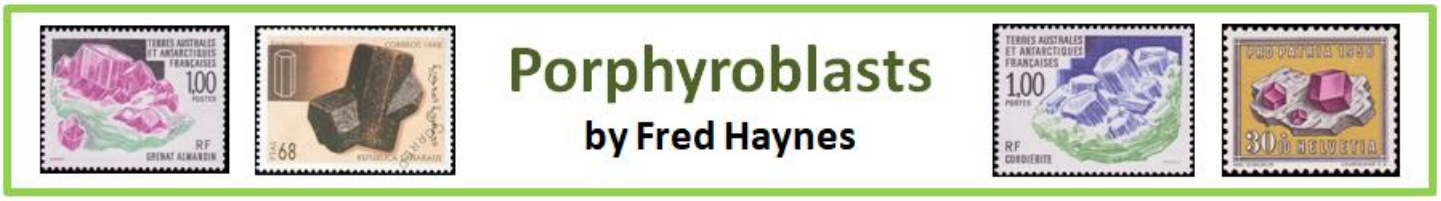

Porphyroblast: I've always thought that was such a neat word, maybe even interesting enough for a story. Say it out loud three times ("pore-fur-o-blast, pore-fur-o-blast, pore-fur-o-blast"). Now don't you want to learn more, perhaps even own a few?

Porphyroblasts are those large recrystallized minerals that grow in the groundmass of a metamorphic rock, most typically in schists and gneisses. In New York State, we immediately think of the bright red almandine-pyrope garnets in the gneissic rocks in the Gore Mountain area, but the truth is the metamorphic schists and gneisses throughout New York and New England often contain garnet porphyroblasts. Unfortunately a lot of New York's garnets are hosted in high-grade metamorphic gneiss and they don't display crystal faces when the rocks are broken. Nevertheless they are large, colorful and fun to collect.

When garnets grow in mica-rich schists, they are more likely to expose the familiar parallelogram faces characteristic of dodecadehedral crystals. Or if the faces are hidden, muscovite or biotite can be removed to expose them. In recent years, WCGMC has visited a site in River Valley, Ontario to bring home almandine garnets hosted by a biotite schist that is pretty itself. The surfaces of those garnets are somewhat "keyed" as they grew into the host

Dime-sized almandine garnet porhpyroblasts in a high grade Adirondack gneiss from the Hooper Mine in North River, NY. Specimen is 3" across. The garnets are broken, but isn't that a neat rock?

biotite, but they are highly reflective. In November of 2017, WCGMC members visited the Little Pine Garnet Mine in North Carolina where perfectly formed almandines are set in a chlorite-chloritoid schist. The green chloritoid crystals are actually porphyroblasts too.

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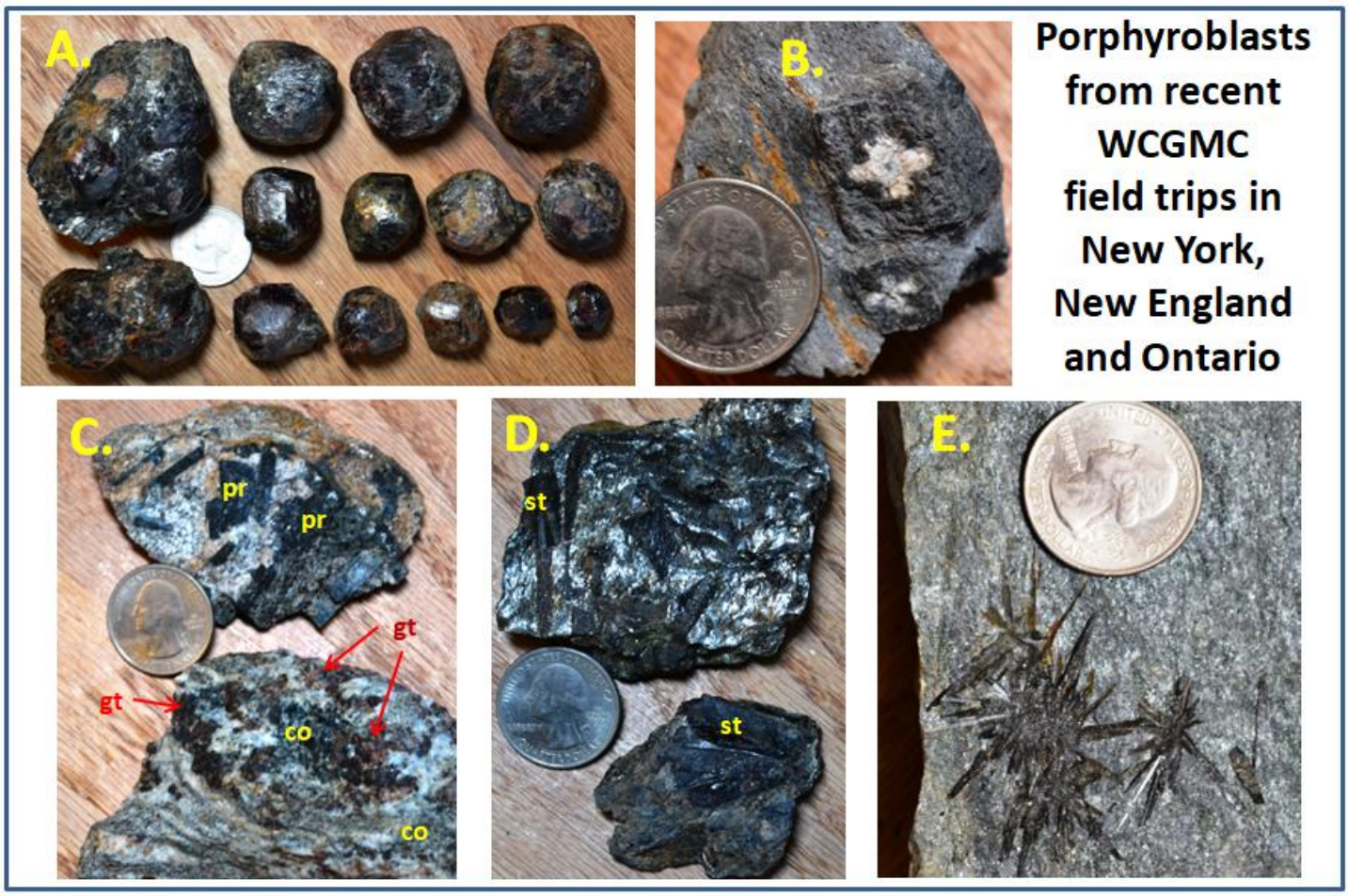
Probably the second most common and popular porphyroblast among collectors is staurolite. There are numerous sites to collect staurolite in New England and WCGMC has been to a couple of them in Middlesex County, Connecticut. Staurolite has a propensity to grow in very attractive twinned crystals, which are commonly referred to as “Fairy Stones”. There is even a state park in extreme western Virginia know as Fairy Stone State Park where twinned staurolites weather from the host rock and surface collecting of these crystals is permitted.

Other minerals that grow as porphyroblasts include tourmaline, hornblende, kyanite, andalusite, and cordierite. I mention tourmaline because WCGMC collected a really neat occurrence of metamorphic tourmaline in Chester, MA last summer, slender black dravite growing in a fine groundmass of corundum and magnetite (which is emery).

Another interesting metamorphic occurrence the club has visited occurs along the Moose River in the southern Adirondacks. Blue-grey cordierite occurs with the garnet there. Gem quality cordierite is called iolite; unfortunately no gem quality material in the Adirondacks! But, that same gneiss does contain a relatively rare porphyroblast. Prismatine is a complex magnesium-aluminum orthorhombic silicate that occurs as long black bladed crystals that resemble tourmaline, but are not!

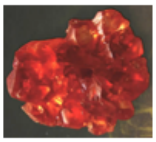
Geologists can study the assemblage (or group) of metamorphic minerals present and use this to predict the temperature and pressure of the metamorphic process, perhaps the burial depth and therefore the amount of erosion that has occurred to bring them to the surface for us to collect. The chemical composition of porphyroblasts and the other minerals in the matrix provide evidence of the type of rock that was metamorphosed.

What is your favorite porphyroblast? Some of my favorites are pictured below. Maybe next summer WCGMC can plan some trips to collect porphyroblasts in New York, New England, and Ontario.

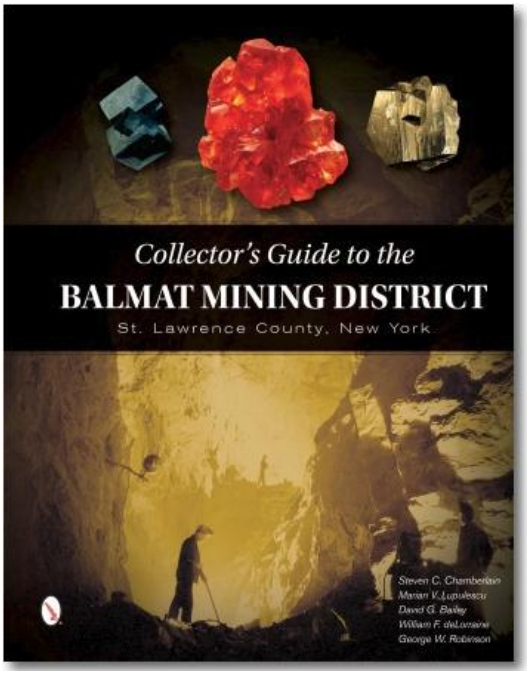


A. Garnets (almandine) in biotite schist from River Valley, Ontario **B.** Andalusite (variety chiastolite) in schist from Blood Town Forest, Lancaster, MA **C.** Black Prismatine (pr), blue-gray cordierite (co) and red garnet (gt) from high-grade gneiss along the Moose River in southern Adirondacks **D.** Untwinned staurolite (st) in micaceous schist from Middlesex County, CT, and **E.** Tourmaline (dravite) spray in emery from Chester, MA,

BALMAT MINING DISTRICT
A BOOK REVIEW: BY FRED HAYNES



Do you need an idea for a gift for that favorite mineral collector on your Christmas list? Or perhaps you are like me, and you are looking to buy your own Christmas present? In either case, I may have the perfect book idea for you. How about:



Collector's Guide to the Balmat Mining District, St, Lawrence County, New York: by Steven Chamberlain, Marian Lupulescu, David Bailey, William deLorraine, and George Robinson, a 2018 Schiffer Earth Science Monograph

The five authors are a virtual who's who of New York minerals. From authors to district geologists to professors to museum curators they all have decades of local experience and knowledge to share. They state that the "central purpose of this book is to present detailed information about these important mineral occurrences and celebrate the specimens they have produced." The book does this and a whole lot more.

The Balmat mining district is important historically in terms of the production of zinc and talc and mineralogically for the variety and quality of fine mineral specimens it has produced. From the initial discovery of zinc in 1836 and talc in 1867 the region has a rich history of mining that continues today. The first chapter of this book details the mines and the people that make that history. This simply sets the stage and whets the appetite for what follows.

Anyone interested in understanding the geology of the locations where fine minerals are found will love the second chapter. Too often this section of mineral books is either missing or disappointing. Not so in this book. The Precambian rocks of the Adirondack Lowlands are certainly not simple to understand. However the author's discussion of the regional metamorphic events acting on a highly variable, but reasonably orderly, sequence of very old sedimentary rocks is succinct and sufficient. The processes by which zinc, talc, and all those lovely minerals formed can be understood by all.

But with that backdrop, almost three quarters of the book is dedicated to a systematic review of those minerals, complemented by fully credited photographs of some of the best specimens known. Presented separately for the talc mines and then the zinc mines, the minerals are reviewed in alphabetic order. You can read about the famous ones, purple hexagonite from Talcville and perfect tetrahexahedral magnetite from Balmat. There are several minerals for which Balmat is the type locality. Minerals such as donpeacorite, named after a University of Michigan mineralogy professor, was discovered on the 2500' Level of the Balmat #4 Mine. There is probably no other location where this type of information is so publically available.

Most of the better mineral specimens throughout the Balmat district were collected underground and the few surface collecting opportunities that existed in the past are virtually gone. You can find an occasional piece to purchase at a show, or you can visit the New York State Museum in Albany to see some of the best ever collected. Or, you can purchase this book and view hundreds of them in the comfort of your home. This 128 page hardbound edition contains a whopping 249 figures, a majority of which are exquisite color photographs of some of the best Balmat Mining District mineral specimens ever extracted from the depths of these famous New York mines.

This 9" by 11" hard cover book is brilliant enough to adorn anyone's coffee table. However, for a New York mineral collecting it is also a must for the library and anyone who reads the professionally written text will come away knowing so much more New York State geology and mining history. I know I did.

Wayne County Gem and Mineral Club 2018 Schedule *last update Nov. 30*

Next up is our annual Holiday Rock Bash and then it will be time to start thinking about places to go in 2019. We have some ideas and will get busy planning, but we'd also like to hear from you. If any of you want to help us plan a day trip, a weekend trip, or even a longer journey (Mars is apparently a popular destination these days), just let us know. We'd love some help while the snow is still flying during the first quarter of 2019 planning for all those spring and summer months that are (trust me) just around the corner.

December 14th – Friday: Our annual Christmas and Holiday Rock Bash: (6:30 PM, doors open at 6:00 PM)
We plan to serve dinner promptly at 7:00 PM to formally kick off the evening of fun.
This is our big winter event. All you need to do is sign up (names and number attending) and arrive with a dish to pass (a salad, a vegetable dish, a dessert, anything works).
Club will provide ham, potatoes and drinks Oh, and bring rocks to share:
We are adding a table in the back this year for all to bring those extra rocks collected this year to share with others. (a chance to clean out the garage while helping others fill theirs!)

December 15th Saturday workshop

January 9th – Friday meeting, PROGRAM: **Stephen Mayer** will present eurypterid research he has conducted in 2018 (see page 3). We also plan to hold contests ***for Best Collecting Finds of 2018*** with a number of categories. Details of this will be available in the January newsletter.

January, February and March workshop dates have not yet been set.

February 14th Friday meeting, PROGRAM: Our annual club auction, another popular event and a great way to spend Valentine's Evening with friends!

March 8th Friday meeting, PROGRAM: **Jim Rienhardt** will bring his sand collection and describe the hobby of collecting sand (see November 2018 newsletter article)

April 1 - Yup, you guessed it … Opening Day at Ace of Diamonds and we will be there .
unless of course that is when we decide to go to Mars or Missouri or North Carolina or **…**

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Wayne County Gem & Mineral Contacts

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Past President - Glenn Weiler gwexterior@gmail.com

Visit us on Facebook:
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Bill Lesniak – Website Coordinator
Glenn Weiler – Workshop Coordinator
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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:
WCGMC, P.O. Box 4, Newark, NY

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

WAYNE COUNTY GEM & MINERAL CLUB
"ROCKS - OUR WORLD"

Wayne County Gem and Mineral Club
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