

FRIENDS OF MINERALOGY Pennsylvania Chapter NEWSLETTER

VOL. 46 No. 3

FALL 2018

Another Successful Pennsylvania Chapter Symposium

The Friends of Mineralogy – Pennsylvania Chapter held its 2018 Symposium and field trip on the first weekend in November. The Saturday symposium was held in the Hackman Physical Sciences Building at Franklin & Marshall College, Lancaster, PA; our Chapter is grateful to have access the facilities there.

The collectors attending heard several talks by experts on minerals, geology and mining in Pennsylvania and beyond. New members joined, the silent auction and dealer fees raised funds, and there was lots of time for visiting with other collectors at refreshment breaks and lunch.

Chapter President Joe Marchesani had led the Board of Directors' efforts to organize this symposium. He started the morning by welcoming the participants, and introduced the speakers.

Stan Mertzman, professor and our host at F&M, spoke on *What a Spring for Volcano Lovers: Fascinating Activity at Kilauea Volcano in Hawaii*. The presentation included discussion of Pennsylvania geology students visiting the island, and the sequence of fissures from which lava was extruded.

Ron Sloto presented *The Perkiomen-Ecton Lead-Copper Mines, Audubon, Montgomery County, Pennsylvania*. Mining there began early in the 1800s and produced a variety of specimens. Ron's book on Montgomery County is nearing completion.

Dr. Maria Luisa Crawford of Bryn Mawr College discussed George Vaux Jr and the Vaux Collection. Vaux sent a young Sam Gordon to Bolivia in 1921 to collect minerals, resulting in the identification of the

minerals vauxite and paravauxite. They were published and named by Gordon in 1923. Vaux lived near the Bryn Mawr campus and Bryn Mawr classes visited his home to see the collection, which later became property of the College. Dr. Crawford brought a selection of attractive specimens which the audience had an opportunity to examine.



Vauxite and paravauxite specimens displayed by Dr. Crawford.
D. Glick photo



Dr. Stan Mertzman (right) addresses the symposium in the auditorium at F&M.

D. Glick photo

James Van Fleet's presentation on Fluorescent Minerals of Pennsylvania showed a variety of species and fluorescent and phosphorescent responses. It included photographs fading from one wavelength of ultraviolet excitation to another. He also demonstrated the new Convoy longwave ultraviolet LED flashlight.

Bill Stephens related the story of his participation in the Hogg Mine 2018 Machine Dig in Georgia. The mine has produced large well-formed beryl crystals, gem grade aquamarine and rose quartz, kaolin, quartz and mica.

At the annual meeting of the membership in the morning, William Kochanov, Ron Sloto, Dianne Soccio, and Bill Stephens were re-elected to the Board of Directors. In the Board meeting following the symposium, the incumbent officers were re-elected to their positions by the Board (see page 8).

For the mineral collecting field trip on Sunday, the group met at H&K Group's Penn/MD Quarry, Peach Bottom, PA. Serpentine rock and related minerals were collected. Your editor uncovered a 10-foot long ridge, the top of a vein of nice, green material in the floor of the quarry. Its surface sloped down into the floor in two directions, and at each end it also sloped down into the floor. Extensive digging around the perimeter revealed no edge which could be pried on to extract a piece. Only a photograph was collected.



Dave's solid vein.

D. Glick photo



Sunday field trip at H&K Group's Penn/MD Quarry, Peach Bottom, PA.

D. Glick photo

Pennsylvania Geology Magazine

The third 2018 issue of Pennsylvania Geology magazine from the Bureau of Topographic and Geologic Survey is now available via the list of issues at http://docs.dcnr.pa.gov/cs/groups/public/documents/document/dcnr_20033210.pdf

The Fall 2018 issue (vol. 48 no. 3) includes an extensive article on "Evidence of Connectivity Between the Gilberton and Lawrence Mine Pools, Western Middle Anthracite Field, Pennsylvania," by Joseph M. Sassaman of PA DEP's Bureau of Abandoned Mine Land Reclamation. It includes a brief description of the geology and mining history, and focuses on the extensive pumping of water and its effects. A second article by Gary M. Fleeger addresses "Revisiting the Pymatuning Earthquake Groundwater Effects 20 Years Later."

Bulletin of FM

The Bulletin of Friends of Mineralogy, FM's national newsletter, can be found at <http://www.friendsofmineralogy.org/newsletters/>

The fourth issue of 2018 is expected to be available soon.

Mineralogical Record Online Reports

In addition to their free online *Axis: An Eclectic Journal of Mineralogy* site, the Mineralogical Record web site includes a series by Thomas P. Moore on *What's New in the Mineral World* <<https://mineralogicalrecord.com/whatsnew.asp>>.

The latest installment (number 51) was posted December 5th and includes discussion of new and interesting specimens available from dealers at shows and online, with lots of good color photos. There's nothing from Pennsylvania in this installment, but there is on page 8 a photo of hemimorphite from the Sterling Hill mine, New Jersey, which nicely illustrates why the old miners called it "maggot ore." From the Millington Quarry, New Jersey, there's a photo of a "rosette-shaped aggregate of apophyllite" and one of pectolite offered by John Betts Fine Minerals. At the end, there's a preview guide to the various parts of the 2019 Tucson Show, January 31 - February 17, more or less.

110 Years Ago in The Mineral Collector

In the July through December, 1908, issues of the Mineral Collector, Charles H. Pennypacker wrote a series of articles on calcite (and his stories on the people who collect it), saying, "Calcite is one of the most beautiful, variable and interesting minerals known to science." The July installment began:

"The first specimen of calcite that I ever saw was produced in the dump heap at the Wheatley Lead Mine, near Phoenixville, Chester Co., Pa. The largest specimen from this locality remained in the office of the mining company at the Wheatley mine for a great many years. It was a slab about four feet high, about three feet wide, and about four inches in thickness. Mr. Wheatley, while superintending the mine, was told by some of his workmen of the incident of this remarkable exposure of calcite, and it was carefully detached from the adjoining rock and brought to the surface. After passing through the hands of several of his friends it was finally found a home in the collection of the Smithsonian Institute at Washington."

From the Editor

David Glick

THANK YOU to everyone who has been providing material for the Newsletter! Everyone else - join the fun! Feel free to contact me at xidg@verizon.net, or 814-237-1094 days and evenings. Mail can be sent to 209 Spring Lea Dr., State College PA 16801.

Materials related to Pennsylvania mineralogy, collecting or collectors are invited for this newsletter: articles, long or short; announcements from FM-PA committees; photographs of specimens, field localities, collections, etc.; reports on publications about PA minerals or by PA authors, or actual book reviews; or other items within the mineralogy and mineral collecting areas of interest. Photographs should be of good resolution (at least 1000 pixels across) without much JPEG compression, so that they will look good in print. Please provide captions including photographers' names.

We are producing four issues each year; your material is needed! If you know people who have interesting material, please encourage them to submit it.

Chalcanthite from the Ecton Mine 80-Foot Stope, Audubon, Montgomery County, Pennsylvania

Ronald A. Sloto, P.G.
West Chester University

INTRODUCTION

The Ecton mine is located on the Mill Grove estate in Audubon, Montgomery County. The entrance to the Ecton mine 80-foot stope (fig. 1) is east of Mine Run at 40° 07' 40" latitude and 75° 26' 35" longitude. The entrance is caved, and the 80-foot stope is no longer accessible. The 80-foot stope may not have been connected to the main Ecton mine shaft, as all walls are reported to be solid and do not reveal any passages to the shaft. The 80-foot stope was reopened, or rediscovered, by Arthur J. Boucot about 1949 (Boucot, 1949). The adit penetrates the hill for over 300 feet to a right-angle drift. The drift extends about 200 feet. In the 1950s and 1960s, brave mineral collectors entered the flooded adit and waded through cold water to collect minerals in the 80-foot stope.

In the 1960s, William Shinn collected a number of specimens from inside the 80-foot stope. They were acquired from Shinn by the author for study and analysis. One specimen had minute, white crystals on part of the matrix (fig. 2). When the crystals were examined under the microscope, they appeared to be curving, acicular crystals (fig. 3). Analysis by energy dispersive X-ray spectrometer (EDS) showed the mineral to be a copper sulfate mineral with an average of 1.4 weight percent zinc. Based on the analysis and scanning electron microscope (SEM) images, the mineral is a slightly dehydrated chalcanthite. Images acquired with the SEM showed long, thin, curving crystals (fig. 4) that were often entwined (fig. 5).

Chalcanthite is a water-soluble copper sulfate. It commonly is found in late-stage oxidation zones of copper deposits as a secondary mineral and often is formed as a post-mining mineral. It is likely that the chalcanthite from the 80-foot stope was formed as a post-mining mineral. It may have even formed in William Shinn's basement! The author has examined many specimens from the 80-foot stope, including many collected by Harold Evans in the 1950s and 1960s, and this is the only chalcanthite observed.

Analysis and imaging was done on an FEI Quanta 400 environmental scanning electron microscope integrated with an Oxford AZTEC X-ray energy dispersive spectrometer at the West Chester University Center for Microanalysis and Imaging, Research and Training.

REFERENCE

Boucot, A.J., 1949, Notes on the Ecton Mine, Montgomery County, Pennsylvania: *Rocks and Minerals*, v. 24, no. 9-10, p. 492-495.

All photographs by Ronald A. Sloto.



Figure 1. Entrance to the Ecton mine 80-foot stope, April 11, 2018.



Figure 2. Chalcantite from the Ecton mine 80-foot stope, 4 cm.

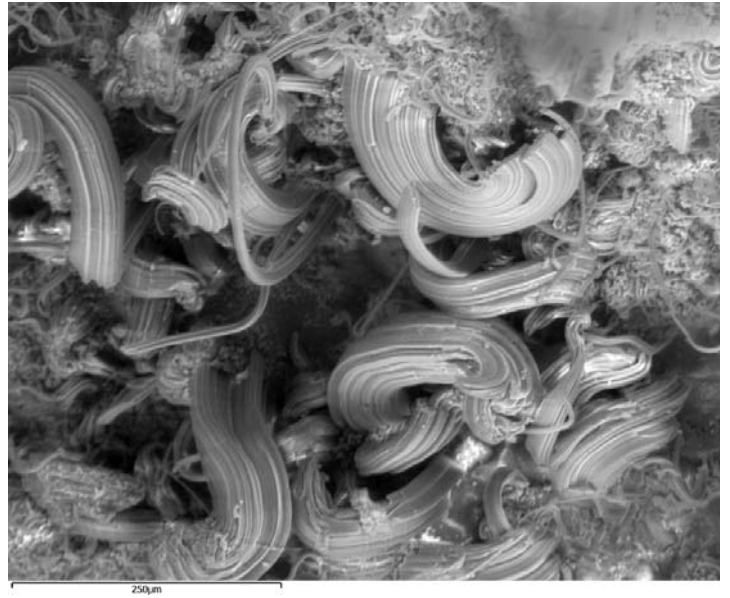


Figure 4. Scanning electron microscope image of chalcantite from the Ecton mine 80-foot stope, magnification approximately 400X. Scale bar at bottom left is 250 μm .

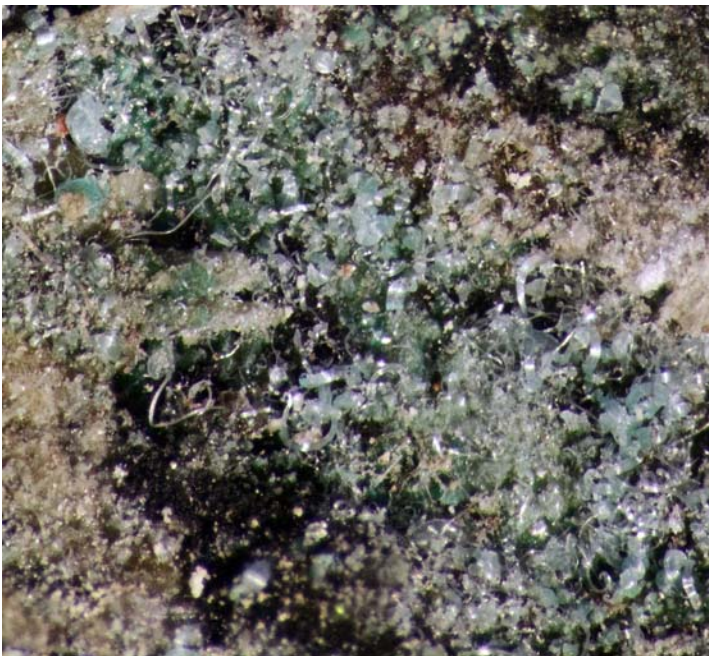


Figure 3. Photograph of chalcantite from the Ecton mine 80-foot stope taken through the microscope.

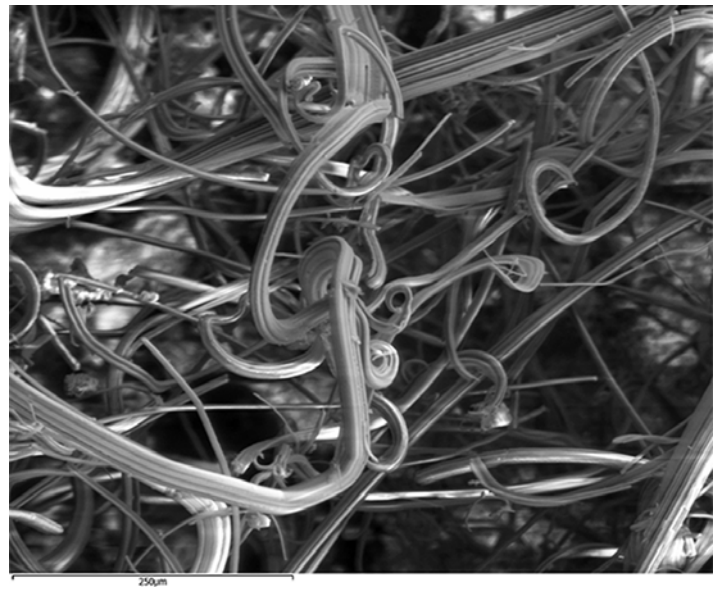


Figure 5. Scanning electron microscope image of chalcantite from the Ecton mine 80-foot stope, magnification approximately 360X. Scale bar at bottom left is 250 μm .

43rd Annual



MICROMOUNT SYMPOSIUM



****NEW LOCATION****

Advent Lutheran Church

45 Worthington Mill Rd

Richboro, Pa. 18954



>>>>Two Days<<<<<<

Friday March 8th, 2019 - noon to 6pm

& Saturday March 9th, 2019 — 9am to 6pm

(Lunch provided on Saturday)

SPONSORED BY: *Leidy Microscopical Society*

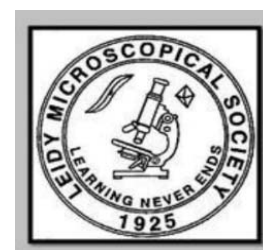


TABLE SPACE \$20.00

RAFFLE DOOR PRIZES

CLUB SALES TABLE—MINERALS AND SUPPLIES

**Reservations/ Admission: Send Check for \$20.00 , make checks payable to;
Don McAlarnen, 916 Senator Rd, East Norriton, PA 19403 (610) 584-1364
Email: donmcalarnen@outlook.com**

Directions:

From I-295 (old I-95): I-95 North turns into I-295 after Pa. Turnpike. Continue on I-295 7.3 miles to RT 332, (Yardley, Newtown Rd) exit. Turn LEFT onto RT 332 west (Yardley Newtown Rd) for 8 miles to RT 232 (2nd St. Pike), Turn RIGHT into RT 232 (2nd St. Pike). Go 0.8 miles to Worthington Mill Rd (forks off to the right), continue 500 feet, church is on the left.

From PA Turnpike: Exit RT 1, go south on RT 1 400 feet to Street Rd WEST (RT 132). Continue on Street Rd (RT 132) 4.9 miles to 2nd St Pike (RT 232), turn right into 2nd St Pike (RT 232), continue 4.3 miles to Worthington Mill Rd (forks off to the right), continue 500 feet, church is on the left.

Hotels

(at I-295 & RT 332 exit approx. 8.5, miles from show):

Hampton Inn, 1000 Stoney Hill Rd, Yardley, Pa. 19067 (215) 860-1700

(in Newtown, approx. 5.5 miles from show):

Brick Hotel, 1 Washington Av., Newtown, Pa. 18940 (267) 685-6443

Temperance House, 5 S State St, Newtown, Pa. 18940 (215) 944-8050

(in Warminster, approx. 6.5 miles from show):

Motel 6, 265 E. Street Rd., Warminster, Pa 18974 (215) 674-2200

Holiday Inn Express, 240 Veterans Way, Warminster, Pa. 18974 (215) 443-4300

(in Feasterville/Treose, approx. 8.5 miles from show):

Wyndham, 4700 E. Street Rd, Feasterville, Pa. 19053 (215) 364-2000



Our New Location



Curb-side drop-off with ramp from parking lot to show room entrance – NO STEPS!!

UPCOMING EVENTS

See www.mineralevents.com for more

March 2-3, 2019: Earth Science, Gem and Mineral Show, by Delaware Mineralogical Society. New Location: DoubleTree by Hilton, 4727 Concord Pike (Rt 202), Wilmington DE 19803. Sat. 10-5, Sun. 11-5. Information and coupons at <http://www.delminsociety.net>

March 8-9, 2019: Micromount Symposium by Leidy Microscopical Society, Richboro, PA. See pages 6-7.

March 23-24, 2019: 50th Annual Gem and Mineral Show sponsored by the Che-Hanna Rock & Mineral Club. Wysox Vol. Fire Co Social Hall, 111 Lake Rd; Wysox, PA 18854. Sat. 9-5, Sun. 10-4 <http://chehannarocks.com/show.html>

March 30-31, 2019: Philadelphia Mineral Treasures and Fossil Fair, by Philadelphia Mineralogical Society and Delaware Valley Paleontological Society. Lulu Temple, 5140 Butler Pike, Plymouth Meeting PA 19462. Sat. 10-5, Sun. 10-4. <http://www.phillyrocks.org/mineral-show/>

March 30-31, 2019: North Jersey Gem, Mineral & Fossil Show, by North Jersey Mineralogical Society. Midland Park High School, 250 Prospect St., Midland Park NJ. Sat. 10-5, Sun. 10-4. <http://www.nojms.webs.com>

May 18, 2019: Earth Science Show & Sale, by The Rock & Mineral Club of Lower Bucks County, PA. Christ United Methodist Church, 501 Wistar Rd., Fairless Hills PA. Sat. only, 9-3.

DONATIONS WELCOMED

The FM-PA Chapter is a 501(c)(3) nonprofit organization; donations are gratefully accepted and should qualify for deduction from your federal income tax. Donations of any size help to offset the general operating costs of the Society, helping to keep dues low.

Lapidary Equipment For Sale

13" vibrating lap; MASTER faceting arm (needs motor); grinding/buffing arbor; buffing wheels; carbide grinding wheels; several pounds of 500 carbide grit; slabbing material (various agates and unidentified material); plate-glass shelving (8" x 39"); rock collecting hammers and chisels; grey metal storage cabinet (18"d x 36"w x 78"h); four wooden specimen storage cabinets (27.5"d x 24"w x 36"h), and more. I have posted images of most everything on a website: sites.google.com/a/case.edu/sajas_stuff/rocks Contact me, David Saja, at dsajas1984@gmail.com I have it in storage in Downingtown PA 19335.

Visit the FM-PA Facebook page

<https://www.facebook.com/pages/Friends-of-Mineralogy-Pennsylvania-Chapter/1174230635931641>

Members and friends are invited to *Like* the page, post, and generally provide a good level of activity.

FM on the WWW

Please explore the FM-PA web site at www.rasloto.com/FM/ and facebook: Friends of Mineralogy Pennsylvania Chapter

National News

The Bulletin of Friends of Mineralogy, links to other chapters, and much more can be found on their web site: www.friendsofmineralogy.org

Friends of Mineralogy Pennsylvania Chapter Directory of Officers

OFFICERS and BOARD OF DIRECTORS members

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	Bill Stephens	bstephens@stephensenv.com	(302) 286-0406

COMMITTEE CHAIRS

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Friends of Mineralogy Pennsylvania Chapter Web Site: <http://www.rasloto.com/FM>