FRIENDS OF MINERALOGY
Pennsylvania Chapter
NEWSLETTER
Vol. 19, No. 4, Winter, 1991

PRESIDENT'S MESSAGE

1992 dues are due!! Take a hint, pay or else!! June is the deadline. We, of course, would be happy to take checks, money orders, cash, or whatever else you can convince your treasurer into accepting. (The dues are now $10.00/$8.00.)

Save postage and send your spring ballot form along with your dues check. I'll be happy to send dues along to the Matulas, in order to keep you on the membership rolls, and our outstanding *Newsletter* coming to you four times a year, in addition to announcements of our special events.

There are write-in spaces on the ballot so you cn nominate yourself or someone you feel would make a good Board member.

The Board meeting was held recently, and our year has been planned. The following items are on our calendar:

This spring, we will be meeting at the Sterling Hill Mine Ogdensburg, N.J., at 9:30 a.m. on Saturday, May 9th. The first tour will be at 10 a.m. For the F.M. group, preregistration is required, for I must inform them of the number to expect, in order to arrange additional tours. Bring your rock hammer: the dumps will be open for the F.M. group. Plan to make a day of it. Lunch is on your own. FILL IN THE REGISTRATION FORM AND MAIL IT BACK TO ME BY APRIL 13. The cost is $5.50 per person and is the group rate at the Mine.

The next get-together will be the Annual Social, Swap, and Sell at Coopersmith Park in West Chester, Pa. We, along with the Chester County Rockhounds Club, have again this year rented the Park facilities. So mark your monthly planner and set aside July 18, 1992, for this outstanding event. It's a day to swap and sell, trade, or whatever with your friends, enjoy the park with the kids, and share your picnic lunch (last year everyone brought extra goodies). All our collector friends from other groups are invited to share this fun day, rain or shine.

The last item on the calendar is the Fall Symposium, which will be held at West Chester State University on the last weekend in September (note the earlier than usual date). The Committee has met to plan arrangements, and has decided on the theme "Eastern Mineralogy, From Maine to Florida" (see the "Call for Papers" on page 3). Your participation will help make the Symposium a success.

Arnold R. Mogel
R.D.1, Box 151 M
Mohrsville, Pa. 19541
(215) 926-4713

MEMBERSHIP INFORMATION

Special Dues Notice: Dues for the Pa. Chapter, which include the National dues, are now $10.00, and $8.00 for seniors over 62 or for students. You will be dropped from the mailing list for the *Newsletter* and fliers if your 1992 dues are not paid by June, 1992.

If you have already paid your dues, your payment of the extra three dollars for 1992 would be very much appreciated, since the National dues, included in ours, have gone up. Send your dues to Marge and Vince Matula, Membership Chairmen, 10231 Honeysuckle Drive, Walnutport, PA 18088 (or include with your ballot and Sterling Hill trip registration, see back page, and send to the President at the address below).

Address Changes: Arnold Mogel, R.D. 1, Box 151 M, Mohrsville, PA 19541; David Toth, 502 Carlisle Ave., Phoenixville, PA 19460; Joanne Weber Stamm, 2516 S. Lumber St., Allentown, PA 18103.

New Member: Thomas Degenhart, 10265 Greystone Rd., Manassas, VA 22111.

Editor: Juliet C. Reed, 336 Rockland Rd., Wayne, PA. 19087 (215-688-6180).

F.M., PA. CHAPTER, BOOKS

An inventory is being made of Chapter publications. If you have sale copies of any of the following titles, please get in touch with book-sender Juliet C. Reed at 336 Rockland Rd., Wayne, PA 19087, or call her at 215-699-6180.

Mineralogy of Pennsylvania (1922) , by Samuel Gordon, hard-cover reprint (out-of-print, unless someone can turn up more copies).

Mineralogy of Chester County, With Localities Annexed (1854), by William. Jefferis, soft-cover facsimile.

Historical Sketches of Copper and Lead Mining, Montgomery County, Pennsylvania (1984), by F. Harold Evans, with "Preface" and "Appendix" by Allen V. Heyl, soft-cover.

Mineralogy of Pennsylvania, 1966-1975 (1978) , by Dr . Robert C. Smith, II, hard-cover.

Lead and Zinc Ores Near Phoenixville, Chester County, Pennsylvania (1923) , by B. L L. Miller (Reprint)

SPRING, 1992, *NEWSLETTER*

Vol. 20, No. 1, of the F.M., Pa. Chapter, *Newsletter*, will feature an article on wurtzite in western Pennsylvania by John Jaszak, of the University of Ohio.

1991 SYMPOSIUM: WHAT'S NEW?

Apologies are due to Bill Yocom and George Buchanan, whose interesting contribution to the "What"s New?" program on Friday night at the Symposium was included in the program, but not in the Fall *Newsletter* report.

George Buchanan, using extension tubes on his camera rather than a microscope, took photographs of the much-enlarged inclusions in a one-inch-long amethyst crystal, found by Bill Yocom at Pocopson, Chester County. With the naked eye, the crystal is a pretty lavender and purple, with tiny inclusions. Seen under a binocular microscope, or blown up on the College screen as they were that Friday night, needle-like crystals (rutile?) appear, floating in a lavender "sea." Attached to the needles are six-sided, tabular, crystals (a mica, or hematite?), which grew either parallel to the c (vertical) axes of the needles, or at right angles to them.. The first arrangement looks rather like a lollypop, with the needle, as the stem, piercing the later tabular crystal, and the second resembles a parasol, with the needle as the handle. These slides presented not only a visual feast, but a mineralogical puzzle.

F.M., PA. CHAPTER, FALL SYMPOSIUM CALL FOR PAPERS:

"Eastern Mineralogy, Maine To Florida"

The Committee has set the dates for the Fall Symposium, which will be held at West Chester State University, on the 25th, 26th, and 27th of September, 1992.

Papers on this year's Symposium theme should reflect current mineralogy of the Eastern U.S. geographic region. Any aspect of the subject may be submitted. Both collector and professional papers are solicited.

Abstracts should be submitted no later than July 15th, 1992 to the Symposium Chairman, Arnold R. Mogel, R.D.1, Box 151 M, Mohrsville, Pa 19541 (215-9264713). Papers submitted will be reviewed by a committee and published in the Symposium Proceedings. Speakers should plan their presentation to last not more than 25 minutes, with a 5-minute "question and answer" session to follow.

SMITHSONIAN MAGAZINE FEATURES THE CORBETTS

In a September, 1991, colorfully-illustrated article in the *Smithsonian* magazine, Michael Kernan describes, with the amazement of a newcomer, the number of fields of interest within the mineral collecting hobby. He first visits the exhibits and dealers at the vast and impressive Tucson Show, then goes on to find examples of opportunities to collect, by pick and silver pick, around the country. Mr. Kernan also writes about his first field trip, and seemingly very impressed by its extent, discusses the hobby with collectors, dealers, geologist, curators, and mineralogists

In the section on clubs, Geneva and Herb Corbett, members of the Baltimore Mineralogical Society and F.M., Pa. Chapter, are featured in an interview They discussed with Mr. Kernan their enjoyment of the micro-mounting aspect of mineral collecting and the trips to find material. One of the color illustrations for the article shows the Corbetts in their mineral room, seated at their side-by-side microscopes, checking out a couple of their 7000 or more specimens.

COMING EVENTS

March 7 and 8: Gem & Mineral Show of the Delaware Mineralogical Society, Inc., Saturday, 10 a.m. to 7 p.m. and Sunday, 11 a.m. to 5 p.m., at the Brandywine Terrace, 3416 Philadelphia Pike, Claymont, Delaware. The colorful show will feature "Yellow," including an exhibit of the world's largest (over 12 lbs.) facetted topaz, from the Smithsonian, and other exhibits. Call Donna L. Brown (215-255-5365) for discount tickets, which show the location and describe the Show..

March 24: Annual Micromount "Swap, Sell, and Learn," of the Rock and Mineral Club of Lower Bucks County, from 10 a.m. to 4 p.m. at the Northminster Presbyterian Church, 140 Trenton Rd., Fairless Hills, Pa. A table space is $3.00 (Reservations are optional). Call Ralph Thomas, 11 Riverdale Rd., Yardley, PA 19067 for further information, at (215) 295-9730.

April 9-12: Rochester Mineralogical Symposium, Radisson Inn, 175 Jefferson Rd., Rochester, NY. For a program and Symposium registration form (reserve a room at the Inn or a nearby motel), write to Dr. Helen Chamberlain, P.O. Box 85, Manlius, NY 13104. Short papers on almost any mineralogical topic are welcome, subject to review (ask for the "Call for Papers").

May 2 and 3: The Franklin-Ogdensburg Mineralogical Society is holding its Outdoor Spring, Sell, and Swap at the Sterling Hill Mine in Ogdensburg, New Jersey. Mine and Mining Museum Tours (at the regular fee) will be available at the Sterling Hill Mine, and the Franklin Mineral Museum nearby will be open (also for its usual fee). Collecting will be available at the Buckwheat Dump in Franklin and the Sterling Hill Mine Dump, both for the usual fee. The fee for a 10-foot-wide parking space is $20 for one day, and $35 for two days. C. Lemanski, Jr. will provide further information on the Sell/Swap (309 Massachusetts Rd., Browns Mills, NJ 08015 , 210-209-7212).

May 9: F.M., Pa. Chapter-sponsored trip to the Sterling Hill Mine. Provide your own transportation, and gather at the Mine at 9:30 a.m. for the first tour, especially arranged with the interests of our members and friends in mind. Preregister ($5.50 fee) before April 13 (additional tours can be arranged). Don't forget your portable ultra-violet lamp. For additional information write or call: Arnold Mogel, R.D.1 Box 151 M, Mohrsville, PA 19541 (215-926-4713).

June 20 and 21: The Berks Mineralogical Society will hold its two-day "Swap and Sell" at the Appalachian Campsites, north of Shartlesville, Pa. Information and registration forms may be obtained from Sue Gehret, 3417 River Rd., Reading, PA or phone 215-929-9332.

July 18: All collectors, their friends, and families are invited to a Summer Social, Swap, and Sell, sponsored by the Chester County Rockhounds and the Friends of Mineralogy, Pa. Chapter, rain or shine, at Coopersmith Park, on Spring Lane, off Rt. 3, just east of Rt. 202, West Chester, from 9 a.m. to 4 p.m. Free admission and limited table space (tail-gating allowed). For information, call Bill Yocom (215) 696-2575.

Sept. 25-27: Fall Symposium, "Eastern Mineralogy, from Maine to Florida," sponsored by the F.M., Pa. Chapter, West Chester University. Banquet, Auction, and Field Trip, in addition to talks on mineralogy and localities.

October 19 and 20: "Treasures of the Earth," the Mineralogical Society of Pennsylvania Show at the South Lancaster County Fairgrounds, Quarryville, will be open on Saturday from 10 a.m. to 6 p.m. and on Sunday from noon to 5 p.m.

Editor's Note: Larry Eisenberger sent the editor this article, based on a study of minerals collected in 1989, which was originally published in the Central Pennsylvania Rock and Mineral Club *Newsletter*. The locality was the subject of a talk by Lance Kearns, of James Madison University, at the Fall Symposium, 1991.

SUGAR GROVE, WEST VIRGINIA: A PYRITE LOCALITY

Larry Eisenberger
25 Filbert Street, Hanover, PA 17331

The site , in a roadcut along Route 23, about five miles south of Sugar Grove, is literally in the middle of nowhere, and collectors travel many miles to collect there. The collecting area is in a small dike. The rock is olivine-free basalt, which has intruded the Braillier Shale over an area of several square miles. Many similar occurrences are to be found in the area (Garner, 1956). I have been told that this site has the best collecting. The vugs in the rock vary in size from pinhead to over two inches. Most are on the small side. In addition to pyrite, collectors can find about a dozen other species; some of these quite interesting, too.

Analcime: Simple trapezohedrons, sometimes modified by the cube face (see Fig 1). Very clear and transparent. Generally found on nontronite, sometimes found directly on the rock.

Aragonite: Very small needle-like crystals growing on nontronite. White dendritic material was also found. Both types of material reacted with HCl acid, and, presumably, are aragonite.

Barite: Very tiny, colorless, tabular crystal aggregates. Found on nontronite, or any of the zeolites.

Calcite: The last mineral to form. Always found on nontronite or the zeolites. Usually crystal aggregates, sometimes single rhombic crystals. Some of the calcite fluoresces a dull red.

Chabazite: Chabazite (and calcite), the largest crystals found there, are Transparent, colorless to pale orange, occasionally yellow The color in the chanazite is probably caused by iron.. Single crystals are rare. Multiple twinnings make up nearly all the crystals found (see Figure 2). They are known by the varietal name "phacolite." Simple twins are as rare as the single crystals. The "phacolites" are always found attached to the vugs by their edges.

Gypsum: The variety selenite has been reported by another collector.

Harmotome: A rare member of the zeolite group, usually pale whitish, rarely nearly colorless, moderately abundant. The crystals are always twinned. These complex crystals are eightlings (see Fig. 3,); each crystal is comprised of eight individuals. The form on the right comprises 99.9% of the specimens so far.Only a few doubly-terminated crystals were found to show the crystals to be eightlings.

SUGAR GROVE, WEST VIRGINIA: A PYRITE LOCALITY (cont'd)

Mesolite: Rare at this locality. Found as white hair-like needles and as clear, colorless, terminated crystals.

Natrolite (?): Reported by another collector.

Nontronite: For a long time, the group name smectite was the only name given to some of the material found here. Analysis (p.c., L. Kearns, 1991) has proven the species to be nontronite. The material is fine-grained, and waxy in texture. A dark olive color on broken surfaces, but various shades of blue, gray-green, and even black on the other surfaces. The luster is earthy. Some of the nontronite has a stalactitic habit. About 55% of these stalactites have grown over acicular pyrite.

Nontronite ps. Thomsonite: A very small amount of transparent nontronite shows a bladed habit. This may have been thomsonite in the past.

Opal: A few "beads" of vitreous, transparent material were found in direct association with zeolites.

Pyrite. A common mineral, It can be collected nearly everywhere. Beginning collectore like it for its bright color and metallic luster. Seasoned collectors like it for its many crystal forms. Some localities have pyrite worthy of extended study, and Sugar Grove, West Virginia, is such a place.

The most common form of pyrite is the cube. You can find it at Sugar Grove in its simple form, and also with a number of modifications. Cubes modified by the octahedron, pyritohedron, and trapezohedron have been found, along with simple pyritohedrons. One of the rarest and prettiest is a combination of cube and trapezohedron (see Fig. 4).

Filiform pyrite, the reason for this site's fame, is scarce. The long, thin crystals are sought by collectors for study and trade. Nearly all are thinner than a hair, and have a length-to-width ratio of up to a hundred-to-one. Many are clean and bright, some have aggregates of nontronite growing on them, and others are completely enclosed by nontronite. Filiform pyrite has its own varieties. You can find scepter, reverse scepter, bladed, right-angle turns, and, rarest of all, bent filiform. The bent crystals are attached to two points in the vug, and the spiral growth on one face of the cube. This is called a screw dislocation (see Fig. 5). Back to those right-angle turns. If this screw dislocation were to "die" through migration to a crystal edge, and another screw dislocation were to be "born" with its axis parallel to the second or third cubic axis, continued growth of the crystal would form a right-angle bend Sinkankas, 1964; Henderson and Francis 1989)..

Saponite (?): White, earthy aggregates.

Thomsonite: Colorless, bladed aggregates.

SUGAR GROVE, WEST VIRGINIA: A PYRITE LOCALITY (cont'd)

Note: minerals contained in the rock matrix are too finely divided for study by binocular microscope.

Thanks to Dave Phillips and Fred Schaefermeyer for their time and knowledge.

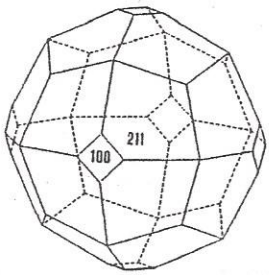

Fig. 1: Analcime (Galli and Gottardi, p. 79)

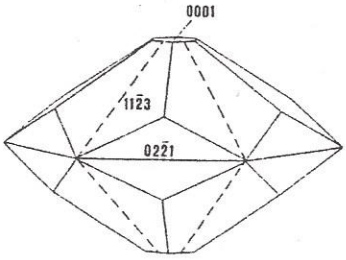

Fig. 2: Chabazite (Galli and Gottard, p. 179)

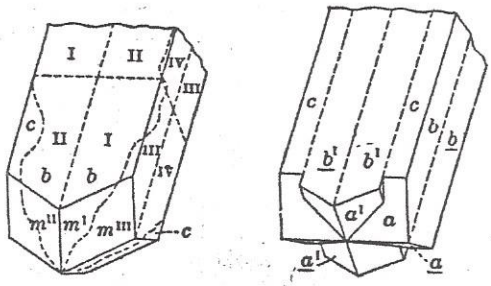

Fig. 3: Harmotome (Dana and Ford, 1922, p. 646)

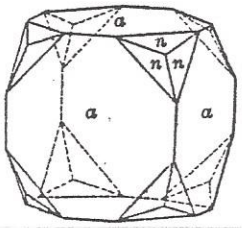

Fig 4: Pyrite (Dana and Ford, 1922, p. 75)

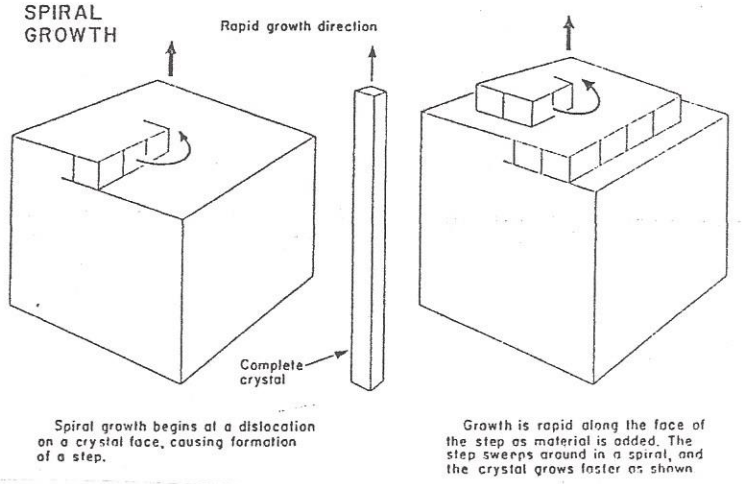

Fig. 5: Spiral Growth (Sinkankas, 1964, p. 62)

References

Dana, E.S. and Ford, W.E., 1922, *A Textbook of Mineralogy*; 4th ed., 851 p., John Wiley and Sons, New York, N.Y.

Galli, E., and Gottardi, G., 1985, *Natural Zeolites*, 380 p., *Minerals and Rocks* Series, Vol. 18, Springer-Verlag, New York, N.Y.

Gamer, T.R., Jr., 1950, The Igneous Rocks of Pendleton County, West Virginia, West Virginia Geological and Economic Survey, *Report of Investigations*, R1-12, 31 p.

Henderson, W.A. and Francis, C.A., 1989, The Origin of Right Angle Bends in Filiform Pyrite, *Mineralogical Record*, Vol.20, , No 6, p. 452-464.

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SUGAR GROVE, WEST VIRGINIA, A PYRITE LOCALITY (cont'd)

Editor's Note: Larry Eisenberger recently sent in these notes, along with some sketches, on minerals collected at Sugar Grove in 1990, to accompany his paper from the Central Pennsylvania Club *Newsletter* on the 1989 specimens. He also took the time to make several updates and revisions, as well as substituting several more satisfactory figures for originals in the article. The editor appreciates the opportunity to publish the article and the updates, which will introduce an interesting locality to many and supplement Lance Kearns talk at the 1991 Fall Symposium (see the abstract in the Symposium *Proceedings*).

Appendix

Notes on 1990 Finds at Sugar Grove, West Virginia

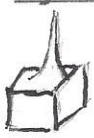
Analcime: Odd stalactitic growths were found.

Chabazite: The variety "phacolite" is nearly always found there. Sometimes these phacolites are found in oriented growths of two or three crystals. This may be an extension of the twinning

Goethite: Found on a weathered calcite crystal.

Hematite (?): Scaly, red masses in chabazite.

Pyrite: A very few 45º bends of filiform pyrite were found. The rest are always 90º.



Some filiforms are "drawn" from a cube. The filiform crystal changes to a rounded cone where it attaches to the larger cubic crystal.

Some pyrite crystals are bladed or ribbon-like (not having a perfectly square cross-section).

Found one example of botryoidal pyrite near the end of a filiform crystal.

An example was found of three axes of growth emanating from one point, like one corner with the three edges of a cube (looking like the skeleton of a cube's corner).

Tarnish was hardly ever found. One cluster of cubes with a complete rainbow of color was found, with a rainbow of color on every crystal face.

Riebeckite (?): Pale blue fibrous material in the rock matrix.

Matrix: Several minerals were distinguished, including partial crystals of augite, cleavages of biotite, and magnetite as shiny black masses