Friends of Mineralogy
Pennsylvania Chapter, Inc.

Summer Edition - 1977

The annual Spring conference at State College was well attended by members of F/M and guests. The majority of those in attendance came from the west central and western parts of the State. However, we did have F/M members who traveled from the Philadelphia area and Delaware.

The program presented by State College faculty members was exceptional and well received by everyone. Margaret Kendall and Edward Carper, co-chairman are to be commended, they did an excellent job in preparing and coordinating the programs. Snacks, coffee and tea were always ready and waiting during the social breaks.

The Friday night arrivals were greeted by Margaret Kendall, Deane Smith and David Snell. The museum mineral halls were open for viewing, while a small snack bar was set up along with tea and coffee. Later in the evening the group retired to the Dyke building to exchange and discuss minerals.

Saturday the registration of new arrivals took place in the Materials Research Building.

The program got underway promptly at 9:50 a.m. with a welcome by Dr. Robert Newnham. Dr. Newnham presented the first topic of the morning, controlled twinning of quartz crystals. The research on quartz twinning when completed will probably have its greatest impact in the communication field.

Dr. William White presented the group with his work on the fluorescence of materials.

Dr. Gregg McCarthy presented his work and approach to the disposal and containment of spent nuclear wastes. His approach to solving the problem is to place the spent fuel into an environment similar to the enviroment that contains uranium in nature.

The group was given a tour through the research labs to see the twinning of quartz, the equipment being used in the study of fluorescents, and how the research is being conducted to establish the proper type of environment to contain spent nuclear fuel.

After lunch the meeting was shifted to the Mineral Science Building. Dr. Robert Smith introduced the first speaker of the afternoon, Dr. Charles Thornton. Dr. Thornton presented a very interesting program on the volcanics of Pennsylvania.

The final speaker of the day, Dr. David Gold, presented his topic on kimberlite occurrences in Africa, Canada and Pennsylvania. The known exposures of kimberlites in Pennsylvania are few, but the potential of these exposures are of great interest to mineral collectors.

A short business meeting was held to inform members on what was happening in the Pennsylvania Chapter.

Treasurer:

Thomas O'Neil gave a report on expenditures and the financial status of the Chapter. Tom has been working hard to establish our tax exempt status, but to date has not received a confirmation.

Friends of Mineralogy
Pennsylvania Chapter, Inc.

Summer Edition - 1977

Dr. John Way and Martin Anne' reports that work on the annual Fall symposium has begun and will be held at West Chester State College, Nov. 4, 5, and 6.

Membership chairman, Vince Matula, was unable to attend the meeting due to a prior commitment. Vince indicated by letter that membership dues are being received and that notices would be sent to all members who have not paid 1977 Chapter dues.

Dr. Robert Smith reported that the new publication, Mineralogy of Pennsylvania, 1965-1975, was progressing well. Due to an increase in the number of photographs and additional information the book will be larger than originally planned, this has caused some delay in publication. The new projected publication date will be sometime in the fall of 1977.

Locality Registration - Ed. Carper, Chairman

Ed reports that he needs more cooperation from the F/M membership and Pennsylvania Mineral Clubs if he is to be successful in this endeavor. Contact Ed. Carper, 400 Maple St., Roaring Spring, PA 16673 for locality registration forms.

The mineral auction followed the business meeting. Mineral donations and the last of the Montgomery collection was put up for bids. The bidding was steady and a number of good quality mineral specimens were purchased at bargain prices. The proceeds of the auction increased the Chapter treasury by approximately $375.00. The proceeds from the mineral auction will be placed in the special publication fund.

Fall Symposium:

Plan to attend our annual Fall Symposium. Mark your calendar or remember these dates, Nov. 4, 5, and 6., West Chester State Teachers College, West Chester, Pa. More details on the Symposium will be released in the fall issue of our newsletter.

Membership Dues - 1977

This will be the last call in the newsletter regarding unpaid membership dues. All members in arrears for 1977 dues will be dropped from the membership roster.

Chapter Logo:

The logo required some minor art work. Because of the alterations we are unable to include the logo in this newsletter as planned.

New Members:

Welcome to Friends of Mineralogy, Pennsylvania Chapter, Inc.

Dorothy Oswald
9396 Doral Circle
Pittsburgh, PA 15237

Stuart Bickerman
1025 Wilkins Heights Rd.
Pittsburgh, PA 15217

Martin E. Yohe
120 Locust Lane
Freedom, PA 15042

CHANGE OF ADDRESS
George W. Buchanan
80 Beltz Road
Telford, PA 18969

Friends of Mineralogy
Pennsylvania Chapter, Inc.

"Public Relations" Brochure

The P. R. brochure is undergoing some slight revisions delaying publication. It is important that this brochure presents a fitting and proper image conforming with the goals of Friends of Mineralogy and the accomplishments of the Pennsylvania Chapter. Plans call for distribution at the Fall Symposium.

Coming Events ;;

Erie, Pa. Aug. 20 - 21 Gem City Rock & Mineral Soc.

Apollo, Pa. Sept. 10 - 11 Kiski Area Gem & Lapidary Club

Princeton, N.Jersey Sept. 24 Down to Earth Lap. & Mineral Club

Johnstown, Pa. Sept. 24 - 25 Greater Johnstown Rock & Min. Club

Media, Pa. Sept. 24 -25 Tuscarora Lapidary Soc.

Chester Co,,Pa. Chromite localities;

Bailey's mine ; Chester Co.
Location; 1½ to 2 miles northeast of Unionville
History; Chromite was mined in this vicinity before 1840 .
Production; 30 to 50 tons recorded .
Host rock; Serpentinite
Structure; Unknown .
Character of mineralized rock; Chromite in a serpentinite body about a mile long and ½ mile wide. Both lode and placer chromite were produced.
References; Pearre and Heyl, 1960 , P.788

Webb farm ; Chester Co.
Location ; ½ mile southwest of Unionville .
History; Chromite produced before 1840
Production; Several tons of Chromite.
Host rock; Serpentinite .
Structure; Unknown .
C aracter of mineralized rock; A small body of Chromite ore in a small serpentinite body.
References; Pearra and Heyl, 1960, p. 788

White Barrens area, Chester Co.
(includes Pugh and Sidwell mines and Collum property)
Location; 3 to 4 miles SSE of Oxford
History; Leased by Isaac Tyson for chrome mining in 1835-38. The deposits were mined sometime between 1835 and 1875.
Production; 170 tons of lode chromite ore plus 3,000 tons of placer chromite. Host rock; serpentinite body about 1½ miles in diameter. Structure; No information. Character of Mineralized Rock; Chromite in lode and placer form.
References; Pearre and Heyl, 1960, p. 781-782.
Bulletin M50 Part 3 by Arthur W. Rose.

Friends of Mineralogy
Pennsylvania Chapter, Inc.

Summer Edition - 1977

Mineral Notes and News:

THE UNIONVILLE, PENNSYLVANIA, CORUNDUM MINES

Hugh E. McKinstry
Cambbridge, Mass.

Conspicuous among the minerals of the larger collections of the eastern United States are the brilliant "fawn-colored" crystals of diaspore from Unionville, Chester Co., Pa. The locality is, furthermore, a classic one for corundum, which has been mined in considerable quantities; and due to the zeal of the early Chester County mineralogists, it was the type locality for some five mineral species (all since reduced to the status of varieties): Euphyllite, pattersonite, lesleyite, unionite and corundellite.

The mines have been abandoned since the end of the last century, but the dumps, residual ledges, and boulders still yield a number of interesting corundum-associates and serpentine minerals.

Corundum is still to be found, chiefly in weathered boulders which appear innocent enough on the outer surface, but on investigation show cleavable crystals imbedded among scales of margarite. A few years ago the writer found a boulder of black tourmaline which was penetrated by long grayish-white corundum crystals, associated with pearly euphyllite. On the same visit, William Ball, owner of the property on which the mines are located, pointed out in the corner of a stone wall a boulder of corundum some 6 decimeters in diameter.

The "Barrens" of Newlin Township are locally conspicuous because of their rugged topography, the steep bare hillsides presenting a striking contrast to the fertile farmland of the surrounding districts. Numerous scrub cedars, greenbrier, and the vernal glow of mountain pink are striking features of the flora that characterizes the serpentine areas of the Pennsylvania Piedmont.

Geology.--The corundum is associated with an area of serpentine about 2 kilometers long and one km. wide, one of many in the vicinity, representing the metamorphosed phase of original peridotite and pyroxenite intrusions associated with gabbro and norite in the gneissic rocks of the region. Both the serpentine and the surrounding mica gneiss are cut by pegmatite dikes, in which quarries for feldspar at nearby localities have yielded fine crystals of beryl and tourmaline. Intimate association of tourmaline with the corundum suggests pneumatolytic action and implies a genetic connection of the corundum with the pegmatite, which occurs very close to the shaft from which most of the corundum was taken. Unfortunately structural relations cannot now be observed and the older literature is not very clear on the matter, altho it is repeatedly stated that the corundum was found "in granular albite." The Conshohocken diabase dike (Triassic) passes close to the mines.

History.--Corundum is said to have been discovered at this locality by John and Joel Bailey, in 1822[1] at which time local farmers were greatly inconvenienced by great lumps of rock too hard to drill for blasting. These were finally disposed of by digging holes near the boulders and burying them at a sufficient depth to avoid their interfering with the plow. "In 1848, Mr. Lewis W.

1 Lesley, J.P. Second Geological Survey of Penna., Rept. C4, 349.

Williams sent to Liverpool a large lump of the mineral which weighed more than 5,200 pounds." In 1872, a large mass was discovered weighing about 200 tons. This, according to Willcox, occurred on the margin of the serpentine bed against a wall of gneiss rock on the north side. The corundum was worked at various times during the last century. Jefferis says:[2] "A number of excavations were made on the north side of the ridge. In one of them was found a vein 14 feet long, 7 feet wide, and 54 feet deep, a solid mass of corundum and emerylite; on one side of it was a coating of diaspore, 3 x 2 feet and 2 inches thick, well crystallized on the surface, some of the crystals being two inches long."

In 1892 the deposit was being worked by a Philadelphia company.

Location.--The workings are situated in Newlin Township, Chester county, Penna., 2 1/2 km. northeast of Unionville, on the road to Northbrook. (On the coordinate system of Kemp, the location is West Chester Quadrangle, 1879 and 4218.) Here three roads form a small triangle on the high ridge of serpentine, affording a fine view of the Brandywine valley. Within this triangle are the ruins of the mine buildings, and across the road in the woods to the south are the old shafts and prospecting ditches. Across the small valley to the north are other prospects.

The best locality for beryl at present is near John Updegrove's house (West Chester Quadrangle 1879) on "Beryl Hill," just west of the road running southward along the ridge from Glen Hall Station. Here lumps of beryl can be found in the lane and in the pegmatite of the small quarry west of the house.

List of Minerals.--A complete list of the minerals of this locality, with critical notes and references, is to be included in the forthcoming "Mineralogy of Pennsylvania," in preparation by Samuel G. Gordon. An alphabetical list is all that will be given here: Albite, allanite?, amphibole (vars. mountain cork and actinolite), anorthite (var. "indianite") apatite, beryl, beryl (yellow), brucite, chalcedony (var. carnelian, and jasper), chlorite, chloritoid, chromite, clinochlore, corundum, culsageeite (related to jefferisite), damourite, deweylite, diaspore, euphyllite (a hydrous soda-potash mica for which Unionville is the type locality), garnet, gibbsite (hydrargillite), halloysite (kerolite), hematite, ilmenite, jefferisite, "lesleyite," limonite, magnetite, malachite, margarite ("corundellite"), muscovite, oligoclase, orthoclase (adularia), pattersonite (a hydrous magnesia-iron mica), pyrite, pyroxene (var. diallage), quartz (drusy and green), rutile, serpentine (var. retinalite, antigorite, picrolite and precious serpentine), spinel, talc, tourmaline and zoisite, including var. "unionite."

2 Jefferis, W.W. Proc. Acad.Nat.Sci.Phila.,1892, 187.

The article was taken from the American Mineralogist Journal of the Mineralogical Society of America, September, 1921, Vol. 6, No. 9.

Friends of Mineralogy
Pennsylvania Chapter, Inc.

Summer Edition - 1977

A NEW PHOSPHATE FOR PENNA., THE UNITED STATES AND THE WORLD!!!

MATULAITE

$$CA(Alg(H_20)_2(OH)_{10}(PO_4)6)_2 \cdot 24H_20$$

About 1½ years ago our avid collector, Marge Matula, sent samples of an unknown white scaly mineral from the Bachman Iron Mine, Hellertown, Pennsylvania to Dr. Paul Moore, at the University of Chicago.

The mineral occurs as thin coatings and spherulitic aggregates on fractured chert and siliceous limonitic rocks, associated with goethite and hematite iron ores. It is the latest mineral in a paragenesis, which includes, beraunite, rockbridgeite, dufrenite, ferric phosphate gel, cacoxenite, strengite and wavellite. The aluminum phosphates postdate the ferric phosphates. The type material is from the Hellertown locality.

Physical Properties

As small rosettes (up to 1 mm) of thin glistening scaly crystals, botryoidal aggregates, thin curved plates. Single crystals are uncommon, invariably warped and range from 0.01 to 0.30 mm in greatest dimension. Extremely soft, cleavage perfect and micaceous, easily bent and inelastic. Difficulty soluable in HCL solutions, easily soluble in hot H_2SO_4. Colorless to white, luster pearly.

This material shall be named after Mrs. Marge Matula of Allentown, Pennsylvania, who is a dedicated amateur mineralogist, who provided the samples for the complete study.

Type material shall be preserved in the U.S. National Museum, Smithsonian Institute.

Discussion

The soft nature of the mineral distinguishes it from coeruleolactite (turquoise group), wavellite, harbortite, henwoodite, zepharovichite, minyulite, montgomeryite, overite. It is structurally unrelated to englishite.

Preliminary single crystal study indicates a structural relationship to basaluminite.

Matulaite appears to be an octahedral sheet structure, with sheets alternating with water layers in a space conserving arrangement.

Congratulations Marge - and thank you for giving me the privilege of writing this article on a new mineral for the world.

By Marge Farkas

Via - Dr. Paul Moore's Analysis

Via - P.E.S.A. ROCKNEWS - JUNE 1977

Congratulations Marge - from F/M Pennsylvania Chapter, Inc.