



# FRIENDS OF MINERALOGY

## Pennsylvania Chapter

### NEWSLETTER

Spring, 1999

Vol. 27, No. 1

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#### PRESIDENT'S MESSAGE

Spring is here, and, while the big events of Tucson and Rochester are behind us, the local and regional scene is in full swing, with meetings and shows coming up. Good hunting, and save Nov. 5, 6, and 7 for the Symposium on "Zeolites."

Roland Bounds, President

#### CHAPTER BUSINESS

##### Officers of the Board of Directors

**President:** Roland Bounds, 315 Stamford Drive, Newark, DE 19711-2723 (302-731-8407 or e-mail, 25628@udel.edu)

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**Symposium Chairman:** George Rambo, Claymont, Del. (302-798-4163)

#### In Memoriam

The family of Herbert Corbett, of Baltimore, sent the editor a moving letter in memory of their father, a long-time member of F.M., and until recently, with his late wife Geneva, a regular at the Symposiums. Herb and Geneva, who will be remembered in the collecting community, for their expertise in micromounting, were featured in an article in *Smithsonian* magazine. A photo of Herb, then president of the "Micromounter's Hall of Fame," may be found in *Rocks and Minerals*, March/April, 1999.

Several members of the Chapter attended the funeral of Life Member Bill Yocom, of West Chester, on March 3. Bill's warmth, generosity, and interest in family and friends, as well as his hobbies of minerals, jewelry design, and stamps, carried him through the difficulties of a long illness with heart trouble. The fine mineral exhibit he curated at West Chester University remains as a memorial. Bill's widow, Betty, and her family appreciate very much the warm tribute to Bill, friend and fellow collector, by Jay Lininger in the latest issue of "Matrix."

#### Dues

Please send in 1999 dues (\$15.00 or \$10.00 for seniors and students) to Marge Matula, the membership chairman. Check your label for the editor's latest information on your dues.

### Coming Events

**May 21, 22, and 23:** Nittany Mineralogical Society 4th Annual "Penn State Mineral Symposium on "Mineralogy of Gems and Precious Metals"; for more information, contact Andrew Sicree at 814-865-6427.

**June 5:** Pennsylvania Earth Science Association Spring Mineralfest at Macungie Memorial Park & Route 100 at Poplar St. in Macungie, Pa.; the show runs from 9 a.m. to 3 p.m. 100 tables are available, and the park kitchen serves breakfast and lunch.

**August 6-8:** Eastern Federation of Mineral and Lapidary Societies 1999 Convention, and celebration of the 50th Anniversary of the Gem, Lapidary, and Mineral Society of Washington, D.C.; Ramada Inn, New Carrollton, Md. (excellent rates available).

**October 2:** P.E.S.A. Autumn Mineralfest; same time and location as the Spring Mineralfest.

**Nov. 5, 6, and 7:** Fall Symposium of the Pa. Chapter of the Friends of Mineralogy; on Zeolites: Del. Geological Survey, Newark, Del., for Friday night "What's New" get-together; Saturday lectures, luncheon, and auction at Claymont, Del.; Sunday field trip, to be announced.

### MORE ON "LEIDYITE"

The editor recently uncovered the August, 1998 (Vol. 24, No. 8) issue of *Mineral News*, and a short article following up several on "leidyite" from Pennsylvania (see the *F.M., Pa. Newsletter*, Winter, 1998). John White sent a message to *Mineral News* editor Lanny Ream that some of the descriptions in Josef Vajdak's article on new mineral descriptions (July, 1998) were somewhat misleading. White pointed out that, because one "leidyite" specimen from Delaware County, Pa. was identified as zoisite, not all "leidyite" should be so relabeled. Analysis information from Richard Bideaux to White places "leidyite" in the Smectite Group, "most likely saponite, but the chemical fit isn't perfect." White notes that "leidyite" is greenish and micaceous, so he suggests labelling such Delaware County specimens "probably smectite," and the pink mineral from Leidyville "probable zoisite."

### DELAWARE COUNTY, PA., NEWS

The March/April issue of *Matrix* contains an article by Roger Mitchell (F.M./Pa.) on the "Battle to save Mineral Hill," an important geological and mineralogical site he describes near Media in Middletown Township, Delaware County. His involvement with the local planning commission, as a local citizen, collector, and curator at the Delaware Institute of Science, has resulted in the requirement of saving important sites within an area to be developed. This controversy was reported by the *Philadelphia Inquirer* (Sept. 7, 1998) in an article which quoted the support of Dr. Maria Luisa Crawford (also a Chapter member), chairman of the Department of Geology at Bryn Mawr College, for the preservation of outcrops important for the education of mineralogy students and collectors.

The Delaware County Institute of Science, at 11 Veteran's Square, Media, Pa. 19063 (610-566-5126) was founded in 1833. As well as other natural history collections, the Institute features a collection of minerals, recently curated by Roger Mitchell, from well-known Delaware County localities, including Mineral Hill. The original plate blocks used to print drawings for Samuel Gordon's 1922 *Mineralogy of Pennsylvania* are also on exhibit.



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CORUNDUM HILL REVISITED

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Mill dump debris at the onetime corundum mines of "Corundum Hill" in Newlin Township, Chester County, Pennsylvania, occasionally still yields tantalizing remnants from the corundum-bearing pegmatite that made this site legendary. Corundum, margarite, tourmaline, feldspar, diaspore, and possible hyalite opal, lead the list of interesting specimens culled from the leavings in the century-old rubbish heaps during several collecting trips last fall and winter.

Corundum found at the site consists of small slender crystals (the color of suet) penetrating black tourmaline in a granular matrix of whitish albite, which somewhat resembles marble. Other specimens of collected corundum show gray crystal sections with a bronze center, completely coated and partially replaced with platy margarite,

Margarite, which occurs here in abundance, appears as pearly white (rarely, faintly pinkish) foliated scales and sometimes as grayish-white masses with a waxy luster.

Tourmaline shows up in both the margarite and granular white albite feldspar as radiating aggregates of small, elongated crystals and compact masses in translucent shades of black, brownish-green, and grayish-green color.

Diaspore appears on one specimen as nearly colorless, thin-bladed crystals, partially coating a pair of yellowish, twinned feldspar crystals. In two other samples, it occurs as pearly bladed masses on corundum and margarite.

A colorless, globular substance, identified as hylaite opal by its bright green fluorescent response under short-wave UV, appears scattered on the surface of some pieces of the granular white albite.

Despite resorting to several descriptive mineralogies for material on this locality, the similar appearance and alteration of several of the species found here make visual identification difficult. The best guide to recognition came from comparing the material recently collected with older known examples in two authoritative collections of Pennsylvania specimens, the Jay L. Lininger Collection, at Dillsburg, Pennsylvania, and the Rand/College and Vaux Collections at Bryn Mawr College.

These collections contain material fully representative of the site at an earlier time corresponding to the information in the manuals. Examination of the diagnostic features in these comprehensive collections, with the generous assistance of both Jay and Juliet C. Reed, associate curator of Bryn Mawr's collections, provided a key to identifying much of the newly found material.

Chester County's Corundum Hill probably acquired its name from the famous Corundum Hill in Macon County, North Carolina, once the site of the world's largest corundum mine. The appellation of this ridge, lying about one and a half miles northeast of Unionville, as "Corundum Hill" evidently originated with Samuel G. Gordon (*The Mineralogy of Pennsylvania*, Academy of Natural Sciences of Philadelphia Special Publication No. 1, 1922, p. 173). In order to clear up the bewildering number of local names for sections of essentially the same locality, Gordon collected all the adjacent farms, prospects, excavations, and outcrops on the corundum deposit near Unionville under the name "Corundum Hill." Unfortunately, no one ever told the local inhabitants that mineral collectors had changed the name of the place, so even today,



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asking the directions thereabouts to "Corundum Hill" will generally elicit a puzzled look and shake of the head.

Adding to the confusion, the names of the two roads which bisect Corundum Hill were also changed. Mrs. Mary Wallace, who moved to the farm just below and on the west side of the corundum deposit in 1943, recalled that "Kelsall Road back in the Forties was then the Barrens Road, and before that, Barren Hill Road." She added, "The township supervisors, some years ago, did a lot of renaming, to simplify things for themselves, I guess. That's when Cannery Road, which when we came here was the Embreeville Road, got its new name, because one of the supervisors had a mushroom cannery on it."

Said Mrs. Wallace, "That place always referred to as the 'Abrasive Tract' was where the mine sat, at the crossroads on the summit of the ridge of Corundum Hill." Today, most of the residents call that site "The Triangle" from the triangular crossing of the roads, even though one of the three has long been abandoned.

Corundum occurs at several localities in Pennsylvania, but only three sites (Corundum Hill, Chester County; Black Horse, near Media, Delaware County, and Shimersville, Lehigh County) produced corundum in any commercial quantity (Stone, R.W., *Non-Metallic Minerals*, Pa Geological Survey Bulletin M18-C, 1939, p. 10-13).

At one time, an individual boulder of corundum from the Corundum Hill workings reportedly fetched \$50,000 for consumption in the manufacture of abrasives. Unlike its North Carolina namesake, the Unionville site only rarely yielded any gemmy sapphires. Nevertheless, it earned the reputation early on as a classic locality for extraordinary mineral specimens, including handsome crystals of corundum, diaspore, and margarite.

Overzealous mineralogists in the nineteenth century deemed the Unionville site as the type locality for five new mineral species, alas, all long since discredited: euphyllite, pattersonite, lesleyite, unionite, and corundellite (McKinstry, H.E., *The Unionville, Pennsylvania, Corundum Mines*, *American Mineralogist*, vol. 6, 1921, p. 135-137).

As a collecting site, Unionville's Corundum Hill perhaps preceded the one at North Carolina by nearly fifty years, according to communications from William W. Jefferis, of West Chester, to J.P. Lesley (*Geology of Chester County*, 2nd Pa. Geological Survey Report C4, 1883, p. 349): "John and Joel Bailey claim to have discovered corundum at that place some time between the years 1822 and 1825. The former person still preserves the original specimens. About that time, William Jackson also obtained specimens. Dr. Dennis Seal of Unionville, also a collector of minerals, obtained specimens of corundum there about the year 1832."

Lesley went on to report, "Mr. Jefferis states that his first visit to the locality was made in 1837 or 1838, and at that time large lumps of corundum could be seen in the fields and fence corners." Jefferis related further that in 1848, Mr. Lewis W. Williams sent to Liverpool a large lump of the mineral, "which weighed more than 5,200 pounds," and that in the spring of 1866, John Leslie (not the author, but a Newlin Township farmer), dug up about five tons of corundum, which he sold for \$60.00 per ton. Lesley himself also reported that after that time the mineral was in great demand for certain purposes, being much harder than emery, and the price advanced to 50 cents per pound.

Further work eventually revealed the source of these boulders and float corundum. Lesley reported: "In 1872, John Smedley, while engaged in exploring for corundum on the farm of Messrs. Pusey, Ball, and Chandler, discovered a large mass of it, which weighed about



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200 tons. It was found on the margin of the serpentine bed, against a wall of gneiss rock on the north side."

This may be the same mass also later described by W.W. Jefferis (*Proceedings of the Academy of Natural Sciences of Philadelphia*, 1892, p. 187). Quoting Jefferis, "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, 2 inches thick, well crystallized on the surface, some of the crystals being two inches long." Emerylite, by the way, is a synonym for margarite.

A number of mining ventures worked the corundum deposit for abrasives. The corundum occurs in connection with pegmatite dikes cutting an outcrop of serpentine rock about 800 feet wide and one mile long. According to a history of Chester County discovered by Mrs. Wallace in the Kennett Square Library, "The product was mined before 1903, but has been almost continually unworked since then." Synthetically produced abrasives, such as carborundum, have long since replaced these early commercial corundum abrasives.

Information found in old deeds belonging to Mrs. Wallace indicates that at one time (1887) the Chester County Corundum Company mined, or at least owned, a piece of the site. A copy of a deed, bearing that date, conveys from John Elliot to The Chester County Corundum Company: "two parcels of land, one of four acres, twenty perches; the other of one acre, twenty-four perches." For the two, John Eliot received \$150. According to Mary Wallace, "That was just a small additional piece, and was probably the excavation known as the Elliot mine." (A perch, by the way, is a surveying unit of 5 1/2 yards, or 16 1/2 feet.)

From her examination of an additional deed, Mrs. Wallace concluded, "The mining operation seems to have been started two years earlier (October 3, 1885) by the Jackson Mills Emery Company, was assigned in 1890 to Harland H. Page, and then to The Abrasive Materials Company (the name was later changed to The Abrasive Company).

"This main part was twenty acres," Mrs. Wallace said, "known at the time as the Barren Tract." She further stated that The Abrasive Materials Company acquired rights to "search for, dig, excavate, mine, and carry away therefrom the corundum and other minerals found in, upon, or under said described land."

After Stone visited these old mine workings and prospects, in August of 1934, he wrote (1929, p.12), "The pits, trenches, and waste dumps are overgrown...and there is little or no mineral to be collected."

For several years thereafter, one of the excavations on Corundum Hill, a shallow stripping, served as the Newlin Township refuse dump. Mrs. Wallace recalled that a bull dozer covering trash in the stripping, about forty years ago, dropped 20 feet into a hole, when an old mine tunnel under the dump suddenly collapsed.

In recent years, William S. Mullen, president of Stockton Fence & Lumber, filled in the stripping, then a dump, and constructed a small industrial park on the site. Mullen said that he found an "emerald" crystal, in all likelihood the more common green beryl found at Corundum Hill, during the excavation for the development.

Traces of pits and trenches connected to the corundum mining still appear in the barrens on Glen Brook Farms, across the road to the north from Mullen's development. Caved in, and heavily overgrown, these excavations offer only a few exposures of serpentine bedrock and little in the way of collecting.



## CORUNDUM HILL REVISITED

"The Triangle" directly across the road and to the west of the development offers the best collecting opportunity. It contains vestiges of some excavations and the concrete floor of, reportedly, the former grinding mill. Joyce Lash, of West Chester, currently owns this property. Get permission before entering onto any of the properties comprising Corundum Hill. Property owners have posted the land, and Newlin Township police routinely patrol this area. One further warning: take the utmost precautions against the deer ticks which infest this area, particularly "The Triangle." Extremely pathogenic consequences can result from a bite.

## MINERALS NEW TO PA. FROM THE NEW 'DANA' VOLUME

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I've found many Pennsylvania minerals and localities in the 1997 *Dana's New Mineralogy* (Gaines, R.V., Skinner, H.C.W., Foord, E.E., Mason, B., and Rosensweig, A., with sections by King, V., 8th Edition, 1819 p., John Wiley and Sons, New York). There must be many more, and I'll add some more later. The late Gene Foord and Vandall King worked on many of these minerals. First, here are some minerals which appear to be new to the Pennsylvania list.

**Nepouite** ("originally called genthite," Eugene Foord and Vandall King): Wood's Chrome Mine and elsewhere, Lancaster Co. (Heyl: "part of the old mineral "genthite.")

**Hydrobiotite** = "jefferisite," in the Vermiculite Group (Vandall King and Eugene Foord, p. 1471): Brinton's Quarry, near West Chester, Chester Co.

**Pecoraite** (Vandall King and Eugene Foord, p. 1406); Wood's Chrome Mine and elsewhere in Lancaster County.

**Pimelite**: Wood's Chrome Mine, Lancaster Co.

**Dozyite**: Wood's Chrome Mine, Lancaster Co. (Heyl: "second locality in the world; described as pale purple or mauve fibers, similar to chrome antigorite; *Mineralogical Record*, 1996, vol. 27, p. 301-302).

**Stevensite** (Eugene Foord and Vandall King): Cedar Hill Quarry, Lancaster Co.

Some of the interesting minerals, localities, and recent work on Pennsylvania minerals listed in the new Dana volume, will be included in the next *Newsletter*, as well as remarks on the occurrence of platinum and palladium in Pennsylvania, and any further data which can be obtained on the above minerals new to the state list.

## New Glossary of Mineral Species Available

*Fleischer's Glossary of Mineral Species* (1999), by Joseph Mandarino, is now available from the *Mineralogical Record* (U.S.A.: \$20.00 ppd., P.O. Box 35565, Tucson, AZ 85740). This *Glossary*, the 8th edition, originated by the late Michael Fleische in 1971, contains basic data on 3,741 minerals: species name (many synonym and variety names are included), formula, system, group or series, comparisons, and references. In case the reader's chemistry is a little rusty, there is a page listing the elements and their abbreviations. A very useful section is the one on "Mineral Groups," defining the groups by formula and structure, and listing the minerals for each, with individual formulas.