

“LOCATIONS, MUSEUMS, & MORE”

**FRIENDS OF MINERALOGY—PA CHAPTER, INC.
SYMPOSIUM—1983
West Chester University
West Chester, PA
November 4, 5, 6**

PROGRAM

Friday, November 4

- 7:00 p.m. Swap, give-away table, refreshments
- 8:30 p.m. What's New in Pennsylvania Minerals
Bryon Brookmyer—FM PA Past President—mineral collector
Donald Schmerling—FM PA President—mineral collector

Saturday, November 5

- 8:00 a.m. Registration
- 8:45 a.m. Welcome to West Chester
Seymour S. Greenburg, Ph.D., Professor, Department of Earth Science, West Chester University
- 9:00 a.m. Jay Lininger—mineral collector—"Obscure PA Mineral Locations Part IV"
- 10:00 a.m. Break, refreshments
- 10:00 a.m. Ronald Mowery—Harrisburg Area Community College, "Crystallography"
- 11:30 a.m. Lunch (in college cafeteria or on your own)
- 1:00 p.m. Juliet Reed—Newsletter editor, mineral collector—Presentation of "Recent Research on the Minerals of the General Trimble Mine" co-authored by Allen Heyl, Ph.D., Eugene Foord, Ph.D., and Joseph Taggart, Jr., Ph.D., geologists with U.S.G.S. and mineral collectors
- 2:00 p.m. Break, refreshments
- 2:30 p.m. Robert C. Smith, II—PA Topographic and Geologic Survey—Geologist and mineral collector—"Current Projects of the Pennsylvania Geological Survey"
- 3:30 p.m. FM Chapter Meeting
- 4:00 p.m. Mineral Auction
- 7:00 p.m. Banquet (on campus)
Speaker: Peter Leavens, Ph.D., Geologist and Curator, University of Delaware—"A New Pegmatite and Others of the Amelia, VA District"

Sunday, November 6

Glen Mills Quarry—Roger Mitchell (field trip leader), George Buchanan, Program Chairman

For the fourth consecutive year, we are utilizing our program to republish vintage Pennsylvania mineralogical articles for their historic and informational value. As in the past two years we have drawn heavily from the unique writing style of West Chester's own Charles Pennypacker, who was lawyer, author and mineralogist. Pennypacker was both friend and collecting companion of William Jefferis, also a West Chester native. The Jefferis collection of minerals was legendary for its great size, perfection and variety of species, and Pennypacker saw fit to write a series of articles describing it. The series was published in THE MINERAL COLLECTOR during the years 1895-96, and described some of the more memorable specimens and the story of their acquisition. Some of the articles were of particular interest because of the historical "tidbits" scattered throughout. The articles presented here feature amethyst and corundum, two minerals for which Chester and Delaware Counties were well known.

The first article was reprinted from Vol. II, No. 2, April 1895.

THE W. W. JEFFERIS COLLECTION

BY CHARLES H. PENNYPACKER

PART II

An amethyst is one of the ancient gems of the world. Chemistry has shown its color to be due to the presence of manganese, but has not defined the distinctions in color and appearance of crystals or groups of crystals. Within eight or nine miles of West Chester, Pennsylvania, during the past seventy years there have been found loose in the soil, crystals of this gem. They present a peculiar appearance in form and color, and have a brilliancy, richness, and finish about them which have been characteristic. This Jefferis collection has three or four such examples, notably one from the Gibbons farm, and one from the John Entriakin farm. The Entriakin amethyst was purchased from its finder by Doctor William D. Hartman, and turned over to "Billy" at its original purchase money. Along in "the forties" Henry McClellan kept a school at West Chester, and for educational purposes had a few local crystals. They were few in number but extraordinarily fine in quality. He saw the enthusiasm and devotion of this young bank clerk, and in due course his crystals were placed where they did a vast amount of good. Amongst them was an amethyst crystal from "Old Sadsbury Meeting House," plain and sombre in outward appearance, like the garb of those who worshipped in that locality, a ray of sunlight or lamplight athwart the specimen brought out its beauties. Down along the Brandywine are the Painter and the Darlington plantations, and their ploughed fields occasionally turned-up amethysts, and every such crystal contains rutile. A few years ago the late Professor Humphreys of North Carolina thought he had made a new and remarkable discovery when he found a few small amethysts containing rutile, and at present some considerable remark has been made about a similar find in Delaware County, Pennsylvania. Rutile-bearing amethysts have been found in Chester County for the last fifty years, and several such are to be seen in this collection. More than thirty years ago Senator Clingman found several groups of amethyst in Buncombe County, North Carolina, and one of them was then obtained for this cabinet. It is a large and showy specimen and modern collectors don't seem to have rediscovered the old locality. Upon the Abby Worrall farm in Middletown township, Delaware County, an occasional crystal was

observed, and in the cabinet of the late J. Hunter Worrall—purchased at public sale by the writer—was the largest and best crystal ever found there, and this was passed over to the Jefferis collection to maintain and strengthen its local flavor. There is a full series of the crystals from Dutton's Mill in Delaware County, Pennsylvania, and a few long (finger-shaped) crystals from John Patrick's farm in Charlestown, Chester County, Pennsylvania, and a clear, clean-cut and glistening Georgia example which was found in Rabun County and obtained by the writer from the finder. The Mexican variety is well represented, although the dampness and the sunlight seem to weaken and modify their color more than those from other localities. The Schemnitz groups are well represented although not quite so rich in color as the specimens to be seen in the cabinet of George Vaux of Philadelphia. The best Mexican example is a group of five or six crystals, each crystal about five inches long and tapering in diameter from three-quarters of an inch to a half an inch and exquisitely shaded in color from base to point, and terminations perfect. Dr. A. E. Foote supplied this specimen. About four hundred various examples comprise the Amethyst series. The wild and wayward vagaries of Manganese at its best and at its worst are on exhibition. It is sometimes difficult to tell where the amethystine coloring begins and ends, as it lapses into the smoky tint. The zeolite impinges on the quartz in the Nova Scotia specimen, and the student of inter-crystallization wonders how much depositions of formation were made. There might have been "steam heat" as well as "water-gas" in those days. And how was the Geode manufactory conducted? By what process did the silica and the manganese reach conclusions in this instance? Is the earth an ice-capped geode? Have we "an inward monitor" beneath us? These are some of the queries which present themselves to our minds in looking at an amethyst geode from the Lake Superior region.

(To be continued)

The articles which follow describe the search for corundum, which appears to have been sparse even in the nineteenth century. The Jefferis article was published in Vol. II, No. 6, August 1895, and the corundum article was published in Vol. IV, No. 8, October 1897.

THE W. W. JEFFERIS COLLECTION

By CHARLES H. PENNYPACKER

PART VI

The first mining of corundum in Pennsylvania occurred about the year 1839. Lewis White Williams in connection with a New York gentleman named Platt secured a lease upon some lands near Unionville in Chester County and procured about a ton of material in boulders of various sizes. These boulders were masses of crystals, and they were shipped intact to Liverpool. At that time an ancient log house stood on the lot, where most of the corundum was found, and the pleasing legend of a large vein at the bottom of a well in front of the aforesaid log shanty added zest to the zeal of discovery and gave point to dreams of wealth. That well was speedily pumped out and diligent search was made for the festive alumina which masqueraded as the ruby and the sapphire and was at all times and seasons abrasive upon the cash reserves of these speculators in futures. The well was dry, the miners were dryer, and the ox-teams which had hauled the boulders to the railroad went out of commission and the log house sagged at the

corner and the brick chimney tumbled down as the mineralogists delved at the foundations for crystals. Williams was out of breath and money. Platt said he had enough of experience, and this mining venture gave up the ghost. The albite was there, and it contained crystals of corundum. The surrounding soil was a disintegrator of the albite. And specimens which were unyielding either to acid or alkali when buried in this soil for a few years would crumble at the touch and the perfect and sharp crystals be found unbroken. Each year the wayfaring mineralogist scratched about this old house on the hill in Newlin and found albite and corundum. Amid the rubbish in the cellar Mr. Jefferis found the largest and finest crystal, three inches in length, an inch in diameter, with one perfect termination and bluish-green in color. After he looked at it for more than twenty years his friend William S. Vaux, of Philadelphia, brought before his eyes some Siberian corundums and beryls and induced him to part with it. In the meantime John H. Smedley of Delaware County, and several other collectors had found larger and more interesting crystals—which had reached the Jefferis collection—and the crystal in question became superfluous. I could not understand that logic. It was and remains the best crystal of its particular kind ever found there. This locality is in Newlin township, Chester County, one-half mile north of the State Road leading from West Chester to Unionville, about eight miles west of West Chester, and one mile east of Unionville. It is the summit of the serpentine ridge, is five hundred feet above the Brandywine which flows southward two miles east. From this summit there is a delightful view of a farming region replete with dwellings and well tilled fields and the spires of West Chester and the Brandywine Valley for several miles are plainly seen. About five hundred yards down the northern slope of the hill the diaspor was found. It was a nugget or pocket in a fissure between serpentine and the albite—corundum. No diaspor anywhere found in the world approaches these specimens in quality. Mr. Jefferis has about five or six of them which are grand. They show the crystals as large as one's finger, and are penetrated by acicular crystals of green tourmaline, "as fine as needles and as thick as hops." There was "an honest miner" named Isaac Allison who retained a fine specimen several years after all working had ceased, and repeated cash offers had failed to dislodge it. One winter's day some gold coin and eloquence wrought the result, and it reposes in this collection, unto the destruction of at least two of the largest gold coins issued by our mint. There are several very fine Ceylon corundums in this collection, two of which were obtained by the writer direct from Colombo. A fine blue Ceylon crystal was purchased by Mr. Jefferis in London, and his best example from Lehigh County, Pennsylvania, came from the late Doctor Leidy. I can see something interesting in a drawer of corundum crystals—showing all the forms and varieties and alterations and enclosures. Its shades of green and blue and red and purple suggest all the problems of the chemistry of colors. Its location is a geological enigma. Its occurrence is world wide and the appearance of the product from each locality is different. Its abrasive powers have been known for two thousand years. And yet the average collector takes one specimen of corundum where he grasps ten crystals of quartz. The changing stages of corundum to spinel are shown by the specimens found in Northern Hindoostan and in Coosa County, Alabama. A few well defined crystals from Piedmont and the striated black crystals from Burmah arrest the eye. Alumina is more entertaining than silica. Like carbon it presents the paradoxes of hardness. Soft coal and the brilliant diamond stand for the extremes, as the brick-clay and the sapphire do in this instance. As you collect minerals collect thoughts. Make a thorough assortment of Alumina and consider the divergences of form, color and appearance, when you remember the identity of composition. Get out of the "bric-a-brac" class, which gathers alone for the eye, and whose ideas like its specimens are mostly polished. All these suggestions and many more occur when contrasting Mr. Jefferis superb collection of the world's corundum crystals with the one or two "bits" in well known public and private cabinets. The thoroughness and completeness of the specimens reflect the mental equipment of the man who gathered them.

CORUNDUM

BY CHARLES H. PENNYPACKER

A few days ago a prominent American mineral collector said to me: "In taking my choice of specimens I consider the locality and the source of supply. If it is a railroad cut or a quarry it is best to make your selections as fast as the opportunities occur. If it is a mine, the quality of the supply as well as the quantity may increase as the mine deepens. If it is a plowed field or a roadside gutter, it is just as likely to yield the best crystal fifty years later. If it is a stone wall collected from the adjacent fields, the first finds are often the best."

As he thus epitomized the experiences of more than a quarter of a century, I could not think of any other mineral besides the subject of this article.

We have a few titles in mineralogy which have an antiquity which reaches into Asiatic jungles, such as spinel, zircon, sphene, rutile, tourmaline, garnet, quartz, and corundum. They have followed "the star of empire." They do not occur in strata. They do not stand as the gangue of metallic lodes. They are the attendant divinities of that enigma of the rocks, serpentine. The supply of American Corundum is the product of the serpentine spurs of the Appalachian Range. There is no rule for its occurrence. Its detached crystals and masses of crystals and boulders are sometimes associated with albite and sometimes with chlorite and tourmaline. It is alumina, pure and simple, and precisely similar in composition to the millions of tons of clay which have made bricks since the erection of the tower of Babel.

The alumina of the sapphire stands at one extreme of hardness (as the carbon of the diamond), while the clay of our fields represents the other. Ever since 1857 I have been a close observer of the vagaries of corundum and all its forms and appearances, and its supply is so very limited that in twenty years it may be totally exhausted, unless new localities are discovered.

In the United States it was found about Dover, New Jersey, by the father of F. A. Canfield, and some fine specimens yet survive in Mr. Canfield's collection. In Pennsylvania it has been found near Shimerville in Lehigh County. This was a mere nest or pocket from which about fifty or sixty specimens were obtained, and the yield ceased. In Chester County it was found in the vicinity of Unionville as early as 1839. Charles Platt of New York and Lewis White Williams of Westtown, Pennsylvania, were partners in the venture. They had tons of experience and pennyweights of corundum, and the whole concern lapsed into "innocuous desuetude."

In 1880 the writer dug and explored long enough to be embalmed in the census of that year as a "miner of corundum." Six months work and six or seven crystals stood for the results. Shafts have been sunk by Ball, Chandler & Pusey, and sundry other enthusiasts, until it has been demonstrated that the article is not there in any quantity.

In Delaware County, about Middletown Township, John H. Smedley and his son have been tickling the rock-ribbed hills with the shovel and the hoe, and have found an occasional specimen. The best Delaware County corundum crystal was found in a roadside gutter by a gentleman named Gault, and from him was purchased by Wm. W. Jefferis who renews his youth by touching it as he looks over his cabinet.

The best Chester County corundum crystal was found by Wm. W. Jefferis at the Unionville locality more than forty years ago, and in a confiding moment, not having the fear of the future before his eyes, he traded that same crystal to the late William S. Vaux of Philadelphia, which aforesaid crystal is yet an ornament of the Vaux family. It was a Siberian crystal which did the sad business. The best crystal from the Lehigh County pocket is in the Academy of Natural Sciences in Philadelphia.

Doctor Lucas was the discoverer of many of the North Carolina localities—and the best examples are in the collection of Clarence S. Bement of Philadelphia. I furnished him with one brown crystal, just the color of a Canadian zircon.

About fifteen or twenty years ago Isaac Lea of Philadelphia came to West Chester, Pennsylvania, to board during the summer. He was then beyond four score. All his days he had been in close touch with Nature and natural science, and two minerals in Chester County delighted his old age, one was mica and the other was corundum.

John Lesley owned the farm near Unionville where some corundum was found, and Isaac Lea and his travelling companions, Jefferis, Hartman, Sharpless and Pennypacker were frequent visitors. Occasionally Joe Wilcox and Theo. Rand and John Smedley prowled around those Newlin hills in the interests of virtue, science and specimens to come.

A great many crystals presented evidence of alteration from a hard core to a softer exterior, and this new mineral—this altered corundum—was described by Mr. Lea and called "Lesleyite." The same alteration and semi-alteration is observed in several North Carolina localities.

In South Carolina, Georgia and Alabama, corundum occurs under the same surroundings and conditions heretofore mentioned. It shows the colors blue, bronze brown, red, green, gray, yellow, white. Its crystals are sharp angled and sometimes look as if they were fused or water worn.

A few years ago a Brooklyn collector was at my house to purchase specimens and I showed him a series of North Carolina corundums. I said to him: "Here are a lot of crystals which will increase in value at the rate equal to six per cent compounded. They are types of the most interesting mineral in all the world. The Ceylon end of this family outshines the diamond and the American end is a *hard lot* generally. If you care to consider the freaks and the antiques of science get a drawer full of corundum specimens." He took the outfit. He was wise in his generation. I have a black crystal from Burmah and a brownish-red crystal from the Tyrol, each locality has some distinctive feature about its product. The crystals from Lehigh County present a pitted appearance, as if they had effected a recovery from the small-pox. The Unionville crystals are embedded in albite. In a few years the soil of the locality will decompose the albite and the crystals of corundum will drop out. No acid or alkali will affect this albite, but the adjacent soil will. Who will explain this problem of this earthy laboratory.

The latest locality is at Pine Mountain, Georgia, but I have no particulars concerning it. I received a few specimens of which H. G. Disbrow obtained the best.

A few years ago a small lot of the Pine Mountain, Ga., corundum was sent North and I exhibited some of the best "chunks" at a mineralogical symposium in Brooklyn, where Mr. D. obtained his specimen. Some of the scientific "feather dusters" informed him that two dollars was a mighty price, but he was satisfied, and as the years go by he will never see its superior or its duplicate. These pigmy prowlers of pelf are mere "hunks" of alumina in its clay state. When I was working the Unionville locality in 1879 my servitor was a reliable contraband, who was always ready to rest his body while his tongue wagged on. One day Dr. Hartman visited the place and inquired if he had found anything. "Oh! yes! boss—jest a few Corundidleums."

Bryce Wright sold me in 1868 a fine corundum crystal from "the carnatic." A would-be scientist who was "shy" on geography, as he looked at the specimen and its label, exclaimed: "the carnatic! the carnatic!! that's somewhere in the Rockies! Oh, yes! I was there once. Great country for "bar"!"

Another wonderful wiseacre was looking at some crystals and said: "Corundum! Corundum! exactly! It is shaped like the core of an apple, and that is how the name originated. Wonderful! isn't it?"

About the year 1858 Thompson Hains found corundum somewhere on "the Barrens," in

West Nottingham, Chester County. The secret of the locality died with him. There were never but three small specimens in evidence. I have one of them. It was dark blue in color, and occurred in albite.

Some additional notes on Pennsylvania corundum which were extracted from MINERALS OF PENNSYLVANIA by Amos P. Brown and Frederick Ehrenfeld (1913).

Corundum has probably been found more abundantly near Unionville, in Newlin Township, Chester County than elsewhere. It is found here in a mass of serpentine rock, with an average width of about 800 feet and a length of 1 mile. A number of tons of corundum have been obtained from this mine, but during the last ten years little or no work has been carried on. The gem varieties, ruby and sapphire, are not found in good quality in this State though interesting specimens are sometimes discovered.

According to Mr. W. W. Jeffries, as quoted by Mr. Joseph Willcox, Messrs. John and Joel Bailey claim to have discovered corundum in the serpentine region of Chester County, Pa., about 1822 to 1825. Dr. Thomas Seal collected specimens at Unionville about 1832; Mr. Jeffries himself saw large lumps in the fields there in 1837 or 1838; and a ton of surface fragments and boulders was collected about 1839 and shipped to Liverpool. But the search for the source of this material was unsuccessful till 1875, when a large lenticular mass was found in place. This consisted chiefly of corundum and margarite and carried some fine specimens of diaspor.

The chief localities are as follows:

Unionville—In a large mass of serpentine rocks, one mile northeast of this village, corundum has been found. It occurs here also in albite feldspar.

Villagegreen—Large crystals of corundum of a brownish color are found near this village, in Aston township, Delaware County.

West Chester—Corundum has been found in a serpentine of this township.

Blackhorse—Slender grayish crystals of corundum have been found at this place, which is near Media, Delaware County. This has been found inclosed by feldspar. The crystals may be found loose in the soil.

Fremont—Near this place, in West Nottingham township, Chester County, corundum crystals have been found, surrounded by feldspar.

Mineral Hill—Corundum crystals have been found at this place, which is near Media, in Middletown township, Delaware County. They were surrounded by feldspar similar to that at Blackhorse.

Newlin—See under Unionville.

Shimerville—At this place, in Lehigh County, corundum crystals up to 8 inches in length and 4½ inches in diameter have been found loose in the soil. The Shimerville locality was originally discovered by Dr. Edgar F. Smith, of the University of Pennsylvania, Philadelphia. Several tons of corundum crystals were taken out from this locality. The locality is reported as being reopened. The corundum is in a feldspar.

In the collections of the Academy of Natural Sciences, Philadelphia; the University of Pennsylvania, which has now the well known Cardeza collection, and in the Jeffries collection now at the Carnegie Museum, Pittsburgh, are many specimens of Pennsylvania corundums.