

“LOCATIONS, MUSEUMS, & MORE”

**FRIENDS OF MINERALOGY—PA CHAPTER, INC.
FALL SYMPOSIUM—1984
West Chester State University
West Chester, PA
November 9, 10, 11, 1984**

PROGRAM

Friday, November 9 — in Schmucker Hall, on Church Street

7:00 p.m. to 10:00 p.m. Social Hour (Refreshments, "Show and Tell," Freebies)

7:00 p.m. to 8:30 p.m. Workshops
"Researching Mineral Localities," with Jay Lininger
"Mineral Photography," with George Buchanan
"Methods of Mineral Identification," with Seymour Greenburg, Ph.D.

8:30 p.m. "What's New in Pennsylvania Minerals," with Martin Anne, Bryon Brookmyer, and Donald Schmerling

Saturday, November 10 — at New Main Hall, on High Street

8:00 a.m. to 8:45 a.m. Registration

9:00 a.m. "Stratigraphic Correlation of Mineral Occurrences in the Ridge and Valley Province," by John W. Way, Ph.D., Pennsylvania Geological Survey

10:30 a.m. "Delaware County's Obscure Localities," by Roger Mitchell

11:30 a.m. to 12:30 p.m. Lunch, on your own, at the College cafeteria, or at a local eatery

1:00 p.m. "Easton Serpentine Localities," by William Lorah

2:00 p.m. "Pennsylvania Slate—Alive and Well," by Sam Berkheiser, Economic Geologist

3:00 p.m. Chapter Meeting and Auction of Donated Specimens

6:00 p.m. Banquet and Speaker: John C. Greene, Ph.D., University of Connecticut, on "Researching Early Mineralogy"



Dr. John C. Greene is currently a professor in the Department of History, at the University of Connecticut which is located at Storrs, Connecticut. Dr. Greene's field of specialization is the History of Science. He is a recognized authority on the subject and has published an impressive array of books and articles. He is a member of five professional societies, serving in numerous leadership roles. His list of honors and distinctions is impressive. Of particular interest to members of our chapter, is a book co-authored with John G. Burke in 1978. The book which was published by The American Philosophical Society as part of their Transactions is entitled "The Science of Minerals in the Age of Jefferson."

Sunday, November 11 — Field Trip: to be announced.

For the fifth consecutive year, we are utilizing our program to republish vintage Pennsylvania mineralogical articles for their historic and informational value. As in the past three 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 first article was reprinted from Vol. II, No. 7, September 1895.

THE W. W. JEFFERIS COLLECTION

By Charles H. Pennypacker

Part VII

The infatuation of collecting is a common distemper. Some folks collect money and point to a mass of real estate or a bundle of stock certificates as proof that their lives have not been in vein, and by such results the world judges success. Mixed up with these evidences of economy, self-denial, sharp practice and the general forgetfulness of sundry precepts and commandments; you will find symptoms of physical and moral disease, until we are constrained to believe that wealth does not imply health and money does not imply morality. In most cases the mineralogist has invested his savings in his cabinet, and has no other "estate" (which Blackstone defines to be "the interest which a man hath in lands and tenements"). It will be noticed that a collection of minerals does not measure up to the dignity of "an estate," and such an investment is regarded as "unwise" especially by the opposite sex, who can see no evidence of wisdom, foresight or sense in buying and owning such useless objects, unto the deprivation of solid comfort at seaside or mountain or at social functions. These remarks arise from a discussion had one day at the building where this Jefferis collection is stored. The mistakes of educated men, as well as the ambitions of the wives of science, and the contentment of good minerals, and the doubts and fears of good wives were all considered. It is an old story—Virgil, Horace, Plato and Plautus have each touched upon some phase of it. On the other hand the ethics of mineral collecting are misunderstood because of the ignorance, a lack of education and breadth of thought or scientific knowledge of the collector. This low plane of culture begets suspicion, small ideas and narrowness of thought. More than twenty years have passed since Col. Joseph Wilcox, Isaac Lea and William W. Jefferis began the general and comprehensive collecting of mica. Charles D. Nims had found some fine crystals at Clark's Hill, which far surpassed those which Dr. Joseph Swift had sent out from Easton, Pennsylvania, a quarter of a century earlier. The crystals were sharp angled and of various colors, and the cleavages were as fine as any one might wish. Pennsbury, Chester County, Pa., had produced several bushels of good specimens, and when, in the early fifties, Professor George J. Brush visited Mr. Jefferis, he never tired of sorting out mica crystals in that High Street cellar which he commended as "an excellent locality."

"Chandler's Hollow," in New Castle County, Delaware, had furnished some of the beautiful "magnetited mica," which had excited interest everywhere, and western North Carolina had

yielded some large crystals; yet it was reserved for the ancient Nims to fire the hearts of these Pennsylvania pilgrims so that they resolved to have the mica craze; about eight hundred crystals are in the Jefferis cabinet. They occupy an entire case and they show the possibilities of the quest from Siberia to America. Through mica you can look in at the windows of crystallography and learn how garnets and tourmaline and magnetic iron can accommodate themselves to the environment.

The mica about Buckfield in Maine is a four-sided affair, and sharp as the nose of the oldest "sorrel-top" of that vicinity. There was no time for a respectable hexagonal prism. Pennsylvania micas are occasionally pentagonal, but such crystals are quite rare. Another Maine produce is a curved mica, and from Canada "a star mica" is shown—a thin sheet when revolved between the eye and the lamplight presents a stellate appearance resembling the rays on a star sapphire. At Swayne's quarry in Pennsbury, Chester County, Pa., Lewis White Williams found groups of crystals in quartz. He picked out the quartz and developed the terminated crystals (implanted on edge). One or two of the best groups are in this collection. They somewhat resemble those found by Professor Hidden in North Carolina. A suite of garnets in all the colors and forms delights the eye as we look through the cases along the east wall. Here are the best crystals from the Lamson Francis collection made more than fifty years ago when the old Elizabeth mine at Knauertown was in her glory. Alongside of them are the large black dodecahedrons from Bishop's Mill, Delaware County, Pa., with sharp angles and replaced planes, and the bright red garnets from the Delaware County quarries, and the rough brown crystals from North Carolina, and the later finds from Colorado. The pyropes from Concord, Delaware County, recall the great flood of 1843, which washed the sand out of Green's Creek, so that the chickens and the mineralogists "scratched gravel" the remainder of that year. The garnet is a respectable species. It is brilliant, showy and is crystalline, and has enough diversity of form and color to make it interesting. Collectors don't seem to realize the importance of plenty of garnets to strengthen a cabinet. A few years ago Mr. Bement was aroused to the proper appreciation of the garnet, and now has four or five drawers filled with some very choice examples. A few brown garnets from Franklin, N. J., adorn the Jefferis collection.

Reprinted from THE MINERAL COLLECTOR Vol. VIII, No. 2, April 1901

MINERAL SPECIMENS AS AN INVESTMENT

By Charles H. Pennypacker

The other day I lectured in Brooklyn on the subject of "Zinc". The night was cold and the river was full of ice, and the devotees of science were so thin and chilly and so much preferred to study carbon in front of a grate fire, that my audience was small. The Institute and all the "stone crackers" adjunctive thereto were curled up like cabbage leaves with the hopelessness of despair—because of the fortune of the American Museum in securing the Bement collection, not to mention the second edition of the Tiffany collection of gems which had to have the Parisian stamp upon it before it could bask in the fire light of the Central Park.

My memory spans the story of this mass meeting of mineral specimens. I saw it in its infancy and watched it grow apace—cared for from month to month with judicious doses of cash and chastened by the Darwinian theory of the survival of the fittest and the selection of the best. But the cash was the cogent factor, the ministering angel which drew from both sides of the Atlantic and from scores of old collections the best there was to be had. An account book was kept, each entry showed the date, amount and source of the purchase. It was systematic. It was positive proof to the doleful critic that the foolish investor would never get his money back.

In the early sixties this deadly distemper first made its appearance. Nurtured in the blood of the "old Granite State," strengthened by the skill of the mechanic arts, and fired by the existing cabinet of William I. Vaux, with which comparisons could always be made, the collector established a standard of excellence which time showed to be a wise one.

More than forty years ago there was a mineral store on Chestnut Street above 8th Street in Philadelphia. In the show window was a group of octahedral green fluorite crystals from Cornwall, England. It was as fine an example as America had seen. Mr. Mason had purchased it from a returning tourist, and at that early date had the nerve to ask \$20 for it. He got it.

Near Norristown, in Montgomery County, Pa., there was a gentleman farmer of the "ten acre enough" brand. He had conducted a mining venture in Buckingham County, Virginia, and had toyed with nature long enough to know that if he stuck close to old mother earth his days would be long in the land. As a side line of luxury he made a small collection of minerals. He saw this green fluorite and fell a victim to its magic spell. An ancient twenty dollar gold piece was found somewhere in his "jeans" and Samuel Tyson went up the Schuylkill Valley the proud owner of one of the best examples of God's touch upon the powers which form the crystal as the best evidence of what the forces of earth building can do.

The years went by as they generally do, and the time passed rapidly for those unfortunates who had notes in bank. Friend Tyson saw the three-score years go by and wished to know where some of his treasures would go. He saw his Philadelphia friend and the aforesaid fluorite with sundry other satisfactory and valuable things passed into the aggregation. The twenty dollars had been compounded at six per cent.

One day James Matters, at the French Creek mines, was vastly interested in a young man of eighty years who stepped lively over the dump, chewed a little tobacco, and had few questions to ask or remarks to make. He took this youth of four score to his house, and in consideration of a \$5.00 National Bank Note gave the said rock jumper a crystal of iron pyrites. It was elongated more than an inch. It had every plane known to Dana or anybody else. It was sharp, clear, clean, bright, and would puzzle a first honor man in trigonometry. That crystal went to the Montgomery County farm, and the farmer had a greater treasure than his green fluorite had been.

After a while the Philadelphia absorber heard of this wonderful crystal. He had some, but they were not in that class. Again negotiations were opened and the result was as usual, and the five dollars was compounded at two hundred per cent interest.

In 1857 Thompson Harris was foreman of Wood's Chrome Mine in the lower end of Lancaster County, Pa., (by the way, Lancaster is the only county in Pennsylvania which has a "lower end,") and he was collecting lancasterite, emerald nickel, pennite, ripidolite, brucite, Balmorite, in a way which Lewis White Williams designated as both "numerous and scandalous". At his death his cabinet was for sale, and after months of correspondence Rev. J. Grier Ralston, of Norristown, Pa., bought it for four hundred dollars. It had many fine things, and when this Presbyterian got tired of looking at them, the grand consolidator in Philadelphia was ready with the "methods which produce results." The parson got all his money back at six per cent compounded, and had the joy of possession all these years beside.

My good friend Wheatley always believed that the fickle goddess of fortune would at last be found by him, and that this or that mining venture would turn out successful. Along this route of hope deferred, wages had to be paid, and many demands had to be met as regularly as each sun rose to light the day. The cogent factor of cash was in Philadelphia and the man who wanted the cash was in Phoenixville. The exchange of good mineral specimens for the one thing needful was made and hope sprang more eternal in two breasts.

In 1876 there came to Philadelphia from the great somewhere known as "out west" Doctor A. E. Foote. He had two or three freight cars loaded with Western minerals, but "the chiefest among ten thousand" was his assortment of feldspars from Colorado. He had a dwelling not far

from the exposition grounds in West Philadelphia, and in the yard adjacent thereto had all sorts of vats and tanks and boilers for the cleansing of his stock. In the back of his parlor there was a stuffed cinnamon bear which looked as if the mange and the frost had both done their work while the subject thereof was in the pursuit of life and happiness. The Doctor looked then as if he was indebted to "rye and rock" for his daily breath, and was thin, cadaverous, and about as energetic as all the mineralogists in the United States combined. It was not long before he became the efficient adjutant of Mr. Bement. No land remained unvisited and no locality escaped him. Where others went with sack or trunk, he went with freight cars. Science was reduced to an actual business. His display of specimens was not sudden but was gradual.

One day an ancient friend of mine was driving with me past Goshen Friends' grave yard. At his instance we stopped and went into "God's acre" to look at the three grass covered mounds, side by side, which marked the resting place of his three wives. Long and earnestly he gazed upon the graves and then exclaimed: "Charlie! them was three fine wimmen but the second was the best!"

The second exhibit of Doctor Foote's discoveries was always the best.

At last the time for New York concentration came, and the great Bement collection passed to its long home at Central Park. I do not know the price paid, but depend upon it no principal and no interest were lost in the transaction. The labors of thirty-five years have yielded their reward, and the investment will compare favorably with any bonds or stocks which contain no water. Hydraulic pressures is the basis of much of the alleged prosperity now rampant in America.

But what of Brooklyn? No time, no money for the arts and sciences; too much occupied in providing for the contingency of hell fire. There is no reason under the sun why the museum of Brooklyn shall not equal that of New York if not surpass it. The cogent factor is cash. It pays directly and indirectly to collect minerals. There is a wholesomeness about nature study that begets sound, healthy lives, and good morals and right living; and driving away all anxiety about salvation by machinery.

Each costly spire in "the City of Churches" is monumental evidence of the fear of the wrath to come. Does the investment pay? Why not divert a few hundred thousand dollars to the collection of God's handiwork—as object lessons of his abounding skill, of his great universal plan of life, and the growth thereof. The simplicity of truth is worth ten times as much as the expensiveness of membership in a fashionable church. It pays to get close to a crystal, be that crystal in any kingdom. There are Professor Hooper and his worthy co-workers struggling to give Brooklyn some sound and everlasting knowledge. Are their works appreciated? Four score years hence some Brooklyn boy will be munching apples and wondering what keeps him so young at ninety, forgetful of his walks to Paterson, to Franklin, to Rossie—when he was hunting minerals as an investment.

Reprinted from THE MINERAL COLLECTOR Vol. IX, No. 3, May 1902

MINERALS OF SOUTHERN BUCKS COUNTY, PA.

By John F. Vanartsdalen

[Read before the Philadelphia Mineralogical Club.]

Garnets may be found in abundance at Parkland. Some of them are quite clear and of good color, but the majority are dark and nearly opaque; they are found in mica schist associated with black tourmaline. Following the schists eastward we find them larger but much weathered at Middletown Cross Roads; they also occur at Fallsington and Oxford Valley. Two forms of garnets may be found at Newportville in the mica schists, the color being very dark, but the

crystal form fairly good. At Rockville, in Finney's quarry, large rough garnets occur associated with pink and white feldspar, massive chalcopyrite, bornite, chalcocite and dendrites. Small greenish garnets are quite plentiful; the color is probably due to inclusions of chlorite, as this mineral is occasionally met with in fair specimens. Good symmetrical garnets of a brilliant red color are sometimes found, but they are not very plentiful. The rock formation is gneiss.

Graphite was mined near Trevoise from the early part of the last century until the beginning of the Civil War. Since being abandoned the shafts have filled with water and are slowly being closed by the encroachment of the surrounding soil. Specimens may be obtained from the dumps, but they are so badly weathered as to be practically worthless.

Ilmenite and black tourmaline may be found in the quartz veins that intersect the Edge Hill rock at Neshaminy Falls. Tourmaline also occurs at Glen Lake in the same formation. In the feldspar veins of the syenite rock south of Hulmerville fair sized crystals of black tourmaline are quite abundant. Orthoclase cleavages, black tourmaline and anthophyllite are found near Newportville. Good anthophyllite is found at Flushing, occasionally in cavities lined with drusy quartz. A few green druses may be obtained, also large sheets of muscovite from the mica schist.

Limonite in considerable quantity in the clay near the railroad cut near Trevoise. Quartz was quarried to 1880 at Woodbourne; it was shipped to the potteries at Trenton, N. J. It was found that the quartz was impregnated with copper, which made it unfit for glazing, hence mining operations were suspended. The quartz is not in place, occurring in large boulders in the clay formation; they were probably carried down by the ice during the glacial epoch.

South of Newportville bog iron ore is found containing fragments of wood, part of which is replaced with iron. The deposit is not large and is confined to the clay formation. The iron is probably derived from the adjoining syenitic rocks, which are highly charged with iron. North of the town is an old abandoned iron mine. There is no ore on the dumps and the mine had fallen shut. No one seems to know when it was worked. About a quarter of a mile east, ilmenite is abundant in a clayish gravel. Some of the pieces are quite large. Near Churchville, on the Ironwork Creek, a vein of iron ochre occurs in the new red sandstone formation.

Blue quartz is found at many places in the syenite and gneiss west of Langhorne, but good specimens of dark color, firm enough to polish, are rare. The color is probably due to carbon; small scales of graphite are found in the quartz, while in the vein the color is very changeable from almost white to dark blue.

Several years ago an attempt was made to mine coal at Dark Hollow, in Warwick Township, but had to be abandoned as the coal did not exceed two or three inches in thickness. It is located in the Gwynned shales of the new red. Scanty traces of coal have been observed in a sandstone quarry near Yardleyville; this is in the lower Norristown beds of the new red.

A deposit of umber was worked on the south side of Buckingham mountain as early as 1850, and again in 1885. The umber is said to be purer and darker near the bottom of the mine; its position geologically is just within the paleozoic formation. Quartz crystals occur on the Chike's sandstone of Little Buckingham mountain.

Copper was mined near Neely's Mill on Pidcock's Creek previous to the American Revolution; the drift is said to extend a considerable distance in the side of the hill. The nature of the ore I am unable to mention, as none occur on the surface of the drift.

Chalcopyrite and barite may be found at Inghams Spring, the barite in considerable quantity.

The following minerals have been found in the drift and clay deposits; bassanite, jasper, flint, agate, chalcedony, blue quartz, milky quartz, smoky and drusy quartz, red opal in red jasper from Woodbourne, transparent quartz pebbles in Bristol, Middletown, Pensalem and Lower Wakefield townships. Quartz crystals and blue quartz in feldspar are occasionally met with in the gravel beds. Silicified wood is found in several places, occurring loose in the soil within the limits of the Norristown beds.

A TRIBUTE TO HUGH EXTON McKINSTRY

By Jay L. Lininger

One of the mineral exhibits displayed at this year's symposium represents a small portion of the mineral collection of the late Dr. Hugh McKinstry. The exhibit was provided by the Earth Science Department of West Chester University, through the efforts of Bill Yocum, curator. Hugh McKinstry, a West Chester native, earned prominence in the field of geology during his lifetime. The biographical material for this tribute was graciously supplied by Sy Greenburg, Ph.D., Department of Earth Science, West Chester University.

The first reference to Hugh McKinstry known to this collector, was given by Samuel G. Gordon in the acknowledgments section of his classic "Mineralogy of Pennsylvania." McKinstry was named with other mineral luminaries of the period, as contributing information to the publication. The Gordon contemporaries were a young and enthusiastic group of collectors, and several including Hugh McKinstry were to later distinguish themselves in the sciences.

Born in West Chester in 1897, Hugh McKinstry was supported and encouraged in his love of nature by his parents Edwin and Lorraine McKinstry who long served as editor and reporter for the Daily Local News. He began his formal education at Haverford College, where as a junior he wrote his first mineralogical paper entitled "The Minerals of Brinton's Quarry, Chester County, Pa." This paper, considered as source material on minerals of serpentine, was published by the fledgling AMERICAN MINERALOGIST in 1916. Later articles in the AMERICAN MINERALOGIST included "Amethyst Quartz in Serpentine" (1920), "The Poorhouse Quarry, Chester County, Pa." (1920), and "The Unionville, Pennsylvania Corundum Mines" (1921). McKinstry became a graduate of Haverford, and earned his Ph.D. from Harvard University in 1926. Starting his career as a staff geologist with the Corro de Pasco Copper Company in Peru, his experience over the next 17 years in the field of mining geology, led him to all corners of the globe with numerous companies. He became an eminent field geologist and a recognized authority on gold.

His duties as an exploration geologist took him through most mining states of the West and into Canada, Mexico, South Africa and Australia. This work included experience with prospects, operating mines, and with all phases of geological work from planning exploratory campaigns and recommending development work to preparing valuations of mining companies for investment purposes.

During World War II, Dr. McKinstry served on the Board of Economic Warfare and later with the Foreign Economic Administration as Chief of the Minerals Division. After the war he was appointed as a professor of geology at Harvard University. In 1948 he published a major text entitled "Mining Geology," which subsequently became the authoritative work on the subject. He served with distinction at Harvard until his death in 1961.