

that kindly face, and could who appreciate that humorous twinkle in his eyes, know how great that loss really is.

MEMORIAL OF FREDERICK ALEXANDER CANFIELD*

CHARLES PALACHE, *Harvard University.*

The death of Mr. Canfield leaves an irreparable gap in the ranks of American mineralogists. Although not a large contributor to the literature of the science, he was one of the most active and discriminating collectors of his period. To quote his own words, the collector "takes a scientific or an aesthetic pleasure in accumulating new, strange and interesting objects, which may be studied with profit or arranged to please the eye." In both respects he satisfied his definition. He was himself a keen student of the characters of minerals and his interest in their correct and scientific determination led him to take counsel with many of the active workers in the science and thereby repeatedly brought to light new and important mineralogical facts. Those whose privilege it was to see him in his home and with his minerals cannot easily forget the keenness of his delight in his treasures. And his accurate observations made in many lands, together with his remarkable memory for events and specimens, made his conversation replete with interest to the mineral lover.



FREDERICK A. CANFIELD,
1849—1926

Mr. Canfield lived all his life in an environment favorable to the growth of a love of minerals. He was born on April 7, 1849, in the Canfield Homestead at Ferromonte near Dover, New Jersey, where he lived all his life. He died at Morristown, New Jersey, on July 3, 1926. At Ferromonte his father, Frederick Canfield, had gathered together a choice collection of the minerals of the Franklin zinc mines and the son preserved these always in the

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cases in which they were originally arranged in 1856. Both father and son were mining men and their home was in the midst of iron mines, important in their day but now only picturesque ruins. Canfield was graduated from Rutgers College in 1870 and in 1873 received the degree of Mining Engineer from the Columbia School of Mines. In 1914, Rutgers conferred upon him the honorary degree of Doctor of Science. His continuing interest in his college was shown by numerous gifts during his lifetime and by several bequests including his collections other than minerals, his home and the sum of fifty thousand dollars to be used for the museum of natural history.

Canfield was a member of the American Institute of Mining Engineers from 1874 until his death but took no active part in its affairs. His mining practice was largely in the New Jersey iron region and later in the mines of Virginia and North Carolina. During two years, from 1885 to 1887, he was engaged in engineering work in South America at the silver mines of Bolivia. There he made important collections for mineralogical science. He brought back abundant specimens of the rare germanium mineral argyrodite and discovered the related tin mineral named canfieldite in his honor by Professor Penfield. He also discovered fossil plants which established the geological age (tertiary) of the rocks containing the famous silver mines of Cerro de Potosi. In 1890 he again went to South America and visited the iron mines of Brazil.

Mr. Canfield began his own collection of minerals shortly after his father's death in 1865 and continued to add to it up to the last year of his life. He early specialized in the minerals of New Jersey, particularly those of that most prolific of American localities, Franklin, and the zeolites of Bergen Hill and Paterson. In 1889 he prepared for the Final Report of the State Geologist of New Jersey a catalogue of minerals found in the state, giving exhaustive details of localities for each which proved his careful study of this subject. His interest in the mines and geology of the state led to his appointment as a member of the Board of Managers of the Geological Survey of New Jersey, a position which he held from 1898 to 1915 when the survey was reorganized.

His mineral collection, besides containing rich and unique series of local minerals, became a general one and ultimately grew to number eight or nine thousand specimens. These were chosen with the greatest care and were catalogued and labeled with scrupulous accuracy. Canfield's later years were wholly devoted

to its care and improvement. He spent days over his binocular microscope developing partly hidden crystals on his favorite specimens. To insure completeness in his collection, he prepared a most ingenious check-list comprising the names and characters of all known minerals, kept up to date as new species were described. This check-list might well be published; none so complete and so compact is in existence.

As a collector he was interested in the fate of other mineral collections and kept notes on them for many years which he printed privately in 1923. In this pamphlet he records the names of some 170 collectors, briefly describes their collections, and tells of the ultimate disposition of each. The record is unique and of much historical interest.

Canfield bequeathed his mineral collection to the Smithsonian Institution together with an endowment of fifty thousand dollars to insure its care and continued growth. It must be a great satisfaction to all mineralogists and particularly to all of his friends that his splendid collection is thus to remain intact, a permanent memorial to its maker. Few private collections in any land have exceeded it in completeness or in the fine quality of its individual specimens. As regards the minerals of his native state it was quite incomparable.

Mr. Canfield was a charter fellow of the Mineralogical Society of America and its vice-president during the year 1922-23. He was also long a member of the New Jersey Historical Society and was deeply versed in genealogy and in the early history of his state. His collections of coins of New Jersey and other objects of historical interest were bequeathed to this society. His Genealogy of the Canfield Family is said to be a model of what such a work should be. He never married and for many years lived almost alone, his minerals the main object of his care.

The writer of this memoir cannot bring it to a close without recording his personal indebtedness to Mr. Canfield, accumulated through the thirty years of our acquaintance. From his personal knowledge of the Franklin mines and his abundant collections of their minerals, I have drawn a large share of the facts relating to the early history of this mine and its products for a study of that deposit which had its inception with my first visit to his house. Such data as well as material for investigation and a splendid series of photographs of his choicest Franklin crystals were placed freely

at my disposal. His modest and retiring disposition was a dominant trait of his character which hid from all but intimate friends the rich stores of his mind.

MINERALOGICAL PAPERS OF F. A. CANFIELD

1. Catalogue of Minerals Found in New Jersey. *N. J. G. S.*, Final Rp. 2, 1-42b (1889).
2. Mineralogical Notes (Willemite, N. J., Argyrodite and Canfieldite, Bolivia). *Am. J. Sc.*, (4) 23, 20-22 (1907).
3. Mosesite, a New Mercury Mineral from Terlingua, Texas. (With Hillebrand, W. F., and Schaller, W. T.) *Am. J. Sc.* (4) 30, 202-208 (1910); *Zeit. Kryst.*, 49, 1-8 (1911).
4. Thomsonite in New Jersey. *Sch. Mines Q.*, 32, 215-216 (1911).
5. Mosesite. *Sch. Mines Q.*, 34, No. 3 (1913).
6. Twinning in the New Jersey "pseudomorphs." *Am. Mineral.*, 2, 48 (1917).
7. Crystals of Water. *Am. Mineral.*, 2, 90 (1917).
8. The Final Disposition of Some American Collections of Minerals. Dover, N. J. 1923.

MEMORIAL OF JOSEPH PARKER WINTRINGHAM*

THOMAS I. MILLER, *Newark, N. J.*

It is with regret that we record the death of Joseph P. Wintringham at Oakland, New Jersey, on July 17, 1926. He was born at 153 Henry Street, Brooklyn, New York on May 2, 1852. He attended the Juvenile High School and Polytechnic Institute in Brooklyn, also boarding schools at Bloomfield, New Jersey and New Milford, Connecticut. When sixteen years of age he was ready to enter the School of Mines, Columbia University, but was denied admittance until he should reach the age of eighteen years. He first entered the cutlery business in New York in December, 1869, but subsequently became a broker in stocks, bonds and insurance. He retired from active business in 1909.



JOSEPH P. WINTRINGHAM,
1852-1926

Mr. Wintringham was a charter

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