# PROCEEDINGS OF SOCIETIES

## NEW YORK MINERALOGICAL CLUB

### *Minutes of the November Meeting*

A regular meeting of The New York Mineralogical Club was held at The American Museum of Natural History on the evening of November 16th, 1932, with an attendance of 35, due to the inclement weather. President Hawkins was in the chair.

Mr. J. W. Baker of Wrentham, Mass., Mr. Lucian M. Zell of New York City, and Mr. Raymond S. Howell of White Plains, N. Y., were elected to membership.

Mr. Morton reported on the Club's excursion to the Paterson Quarries on Election Day, November 8th: a splendid day, about sixty attended, and none were disappointed. At the West Paterson, N. J., quarry, sixteen minerals were found; at the Prospect Park quarry, nineteen minerals were found.

Dr. O. Ivan Lee volunteered to lead an excursion to the oldest copper mine in America—Schuyler copper mine near Arlington, N. J. His offer was accepted, for December 4th. Mr. Hoadley of the Excursion Committee having moved to Montreal, Quebec, Canada, Mr. H. R. Lee was appointed to fill his place by President Hawkins.

The question of age limits for membership was discussed and tabled.

The Secretary called attention to the original specimen of kunzite, used by Professor Charles Baskerville, who named this gem variety of spodumene after the founder of our Club.

The meeting was then turned over to the members for reporting on their "Summer Collecting Experiences." President Hawkins exhibited calcite from Penfield quarry, Rochester, N. Y., and from the vicinity of Roanoke, Va., washed gold from Rocky Mt., Va., wolframite and calcite in serpentine, glauberite and gypsum from West Paterson, N. J., millerite radiations, and an antimony lead compound called bindheimite. Mr. Morton described his visits to tourmaline localities in Maine. Mr. Radu exhibited tourmaline from Maine, also rose quartz, clear beryl, very black biotite, and blue apatite. Dr. O. Ivan Lee described the pegmatite dike at the Wyerman quarry near Newtown, Conn., where he collected black tourmaline, garnet, beryl, and rose quartz. Mr. Manchester reported molybdenite and albite from Bedford, N. Y., and aquamarine from Bayliss quarry. Miss Richardson and Mr. Ernest Weidhaas reported on their collections in Maine.

DANIEL T. O'CONNELL, *Secretary*

### *Minutes of the December Meeting*

A regular meeting of the New York Mineralogical Club was held at The American Museum of Natural History on the evening of December 21st, 1932, with an attendance of 55. President Hawkins was in the chair.

Mr. John Rosch of White Plains, N. Y., Mr. Jack Downes of Jersey City, N. J., Mr. Oscar Thielman of Prospect Park, N. J., Mr. Frank B. Smithe of New York City, and Mr. Henry Ames Richards, Jr., of Stamford, Conn., were elected to membership.

A communication from the Philadelphia Mineralogical Club relative to their

experiments with junior membership was read. The matter of junior members was tabled.

Mr. H. R. Lee of the Excursion Committee reported on the Schuyler Copper Mine excursion held on December 4th. About 50 members and friends of the Club guided by Dr. O. Ivan Lee entered the old mine. Mr. H. R. Lee furnished a summary of the copper and other minerals found, and also gave some interesting assays of copper ores of New Jersey.

President Hawkins referred to the finding of microscopic helical crystals of millerite (NiS) in the Mills Coal Vein, Wilkesbarre, Pa.

Motion pictures of the Paterson excursions of the Club on Election Days held in 1931 and 1932 were shown by the secretary.

The speaker of the evening was Dr. Benjamin L. Miller, Professor of Geology at Lehigh University, Bethlehem, Pa. His subject was "Minerals in the Vicinity of Bethlehem, Pa."

Professor Miller traced the geology of the region from the early pre-Cambrian gneisses through the various Paleozoic formations and then pointed out the varied mineral resources associated with these rocks. He exhibited a geologic map of the area taken from his bulletin on the district, published as a joint bulletin of the U. S. G. S. and the Pennsylvania Geological Survey.

President Hawkins extended the thanks of the Club for the excellent address.

Mr. James A. Taylor followed with a humorous and entertaining as well as instructive account of his auto excursion to California. He visited such famous localities as Placerville, Nevada City, Palo, Death Valley, Mesa Grande, etc., and exhibited a number of excellent specimens which he obtained.

DANIEL T. O'CONNELL, *Secretary*

### *Minutes of the January Meeting*

A regular meeting of the New York Mineralogical Club was held at the American Museum of Natural History on the evening of January 18th, 1933, with an attendance of 75. President Hawkins presided.

The Membership Committee reported favorably on the following, who were then regularly elected active members of the Club:

Mr. Charles W. Ballard of New York City.
Miss Helen Lawlor of New York City.
Dr. Charles D. Pearce of Scarsdale, N. Y.
Mr. Leo Neal Yedlin of New York City.
Mr. Louis Perloff of New York City.
Mr. Paul H. Bilhuber of Douglaston, L. I.

On a motion by Mr. Stanton, the Treasurer, President Hawkins appointed Mr. Stanton, Mr. Ashby, and Mr. Manchester, to investigate an opportunity to acquire some very desirable specimens for the Club Collection.

The speaker of the evening was the noted authority on colloidal chemistry, Mr Jerome Alexander, M. Sc., who spoke on "Colloidal Aspects of Mineralogy." He proceeded in a delightfully entertaining and instructive manner to explain many mysteries as the manifestations of colloidal phenomena, including "Jack Frost" patterns on the window and the exotic coloring of minerals such as rose quartz. He considered colloids to be in large part composed of ultra-microscopically small

particles and that all colloidal minerals will develop into crystalline substances after a lapse of time. Many minerals now crystalline may have passed through the colloidal state. President Hawkins thanked Mr. Alexander on behalf of the Club for his splendid talk.

There followed a discussion of the properties of bentonite and the phenomenon known as frazil ice, considered a colloidal form of ice. Mr. H. R. Lee vividly described his experiences with this form of ice, and ascribed anchor ice as due to the frazil coming in contact with rocks colder than the water.

DANIEL T. O'CONNELL, *Secretary*

## PHILADELPHIA MINERALOGICAL SOCIETY

*Academy of Natural Sciences of Philadelphia,*
*February 2, 1933*

President Trudell presided at a stated meeting of the society. Forty-four members and twenty-four visitors were present. Dr. Joseph L. Gillson was proposed for membership.

Dr. Alfred C. Hawkins of Rutgers College spoke on "New Jersey minerals." Reminiscences of experiences in the field were illustrated with lantern slides picturing many fine specimens from localities such as Mullica Hill, Bergen Hill, West Paterson, North Plainfield, Scotch Plains, Chimney Rock, the Arlington mine, and Moore Station. He exhibited a geode with barite and calcite crystals from New Brunswick; garnet and hexoctahedral magnetite from Franklin; and glauberite crystals from West Paterson—a recent and remarkable find. He ascribed the latter to a recent origin, stating that the mineral was not the glauberite which originally filled the well known cavities in the trap rock.

Minerals exhibited by members included prehnite and natrolite, recently obtained by Mr. Moyd at Goat Hill, N. J., and stilbite from Moore Station collected by Mr. Morgan. Dr. Newcomet exhibited an ultraviolet ray bulb for fluorescence work.

W. H. FLACK, *Secretary*

## MINERALOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

MINERALOGICAL SOCIETY, January 26th, SIR JOHN S. FLETT, President, in the chair.

DR. L. J. SPENCER: *Meteoric irons and silica-glass from the meteorite craters of Henbury (Central Australia) and Wabar (Arabia).* The materials from these two recently discovered occurrences throw much light on the formation of meteorite craters. Such craters are not merely dents made on the earth's surface by the percussion of large meteorites; they are explosion craters due to the sudden vaporization of part of the material, both of the meteorite and of the earth, in the intense heat developed by the impact.

The meteoric iron from these two localities is of exactly the same type, namely a medium octahedrite containing 7.3% of nickel. At Wabar a 25 lb. mass and a few small fragments of iron were collected; but at Henbury thousands of masses of iron are scattered around the craters. In the smallest (10-yard) crater a group of four masses (440 lb.) was excavated at a depth of 7 feet. Many of the smaller pieces

scattered around the craters are curiously twisted and bent, suggesting that they were torn in a plastic condition from the main masses by the force of the explosions. Further they show a partial obliteration of the lamellar structure with granulation of the kamacite, indicating that they reached a temperature of 850°C. The pieces of iron show different types of pitting resulting from subaerial and underground weathering, and they are all weathered remnants of larger masses, each consisting of a single crystal.

Silica-glass, which is of rare occurrence in nature, shows a remarkable development at Wabar. A snow-white, highly vesicular glass was formed by the fusion of the clean desert sand; and bombs of this material shot out from the craters were coated with a thin skin of black glass free from bubbles and containing iron and nickel in the same ratio as in the meteoric iron. This must have condensed on the surface from the vapours of silica, iron, and nickel, indicating temperatures up to 3,300°C. The silica-glass at Henbury is much less abundant, and being formed from a ferruginous sandstone it is less pure. These bombs of silica-glass present many points of resemblance to tektites.

Dr. A. Brammall and Mr. S. Bracewell: *Garnet in the Dartmoor granite: its petrogenetic significance.* Seventeen occurrences prove to be manganiferous almandines containing 3% to 22% of MnO. Two or more varieties may occur in a single hand-specimen of the granite. The more manganiferous varieties (7% MnO) are restricted to the tor-horizons; the less manganiferous varieties occur (a) below these horizons, (b) in shale-contaminated facies of the granite, and (c) in xenolithic hornfelsed shale. Basic igneous inclusions are barren of garnet, and grossularite, *not* almandine, occurs in contact-altered spilites. The mineral is attributed to contamination of the granite by country-rock—probably deep-seated shales. Ten Lake District occurrences show a similar variation (1.3%–7.3% MnO).

Mr. F. A. Bannister: *The identity of mottramite and psittacinite with cuproferous descloizite (cuprodescloizite).* (With chemical analyses by Mr. M. H. Hey). Oscillations, Laue and rotation photographs show that descloizite has an orthorhombic unit-cell with edges $a=6.05$, $b=9.39$, $c=7.56$Å, and space-group $Q_h^{16}$. The unit cell contains 4 $PbZn(VO_4)(OH)$. Powder photographs of descloizite, cuprodescloizite, mottramite, and psittacinite from the type localities are identical with each other. New chemical analyses and determinations of the water content at various temperatures together with the $x$-ray work show that all these minerals may be represented by the general formula $Pb(Cu, Zn)(VO_4)(OH)$. The water of constitution is not evolved until a dull red-heat. Thin incrustations of minute black crystals on sandstone from Harmer Hill, Clive near Shrewsbury, collected by Mr. Arthur Russell, are shown to be identical with mottramite from Mottram, St. Andrew's, Cheshire (H. E. Roscoe, 1876), i.e. cuprodescloizite carrying little or no zinc.

## NEW MINERAL NAMES

### Harbortite

Friedrich Brandt: Ein Neuer Typ von Eisen–Tonerdphosphat–Vorkommen (Maranhao, Nordbrasilien). (A new type of iron aluminum phosphat occurrence, Maranhao, Northern Brazil). *Chem. Erde*, **7**, pp. 383–433, 1932.