Those minerals now commonly recognized as independent species are then arranged in isomorphous series, as far as possible, under the following general headings: elements (3 pages), sulphides and sulpho-salts (15 pages), oxygen compounds (6 pages), haloids (5 pages), nitrates, carbonates, and related minerals (7 pages), sulphates and related compounds (11 pages), borates, aluminates, and so forth (4 pages), phosphates and allied compounds (18 pages), silicates, titanates, and so forth (46 pages), and organic compounds (2 pages). There is also a list, extending over 5 pages, of minerals, which are now interpreted as mechanical mixtures, or which have not been sufficiently investigated to permit them to be accurately classified. Each series of minerals is accompanied by a concise, critical discussion of the relationship of the minerals in the series, and in addition to the chemical data, the elements of crystallization are given, whenever available.

This classification of minerals deserves to be more widely known in America, for it has many admirable features to commend it, among which is the passing progressively from the simplest, the elements, to the most complex minerals, the silicates and organic compounds.

In the determinative tables the more common minerals are grouped according to hardness and streak. Other properties made use of are color, luster, crystallization, cleavage, structure, occurrence, and associates.

E. H. K.

PROCEEDINGS OF SOCIETIES

NEW YORK MINERALOGICAL CLUB

November 30, 1921

The regular monthly meeting of the New York Mineralogical Club was held in the American Museum of Natural History on the evening of Wednesday, November 30, at 8:15 P.M. There were present 22 members. During the temporary absence of the President, the Vice President presided.

The matter of identification of the Club members at field meetings was introduced by Mr. Tansley who moved that the members on such occasions provide themselves with a white ribbon to be worn conspicuously and that the Secretary remind the members of this by inserting a note in the field meeting announcements. The Secretary called attention to the advisability of printing a list of the members of the Club for the convenience of responsible parties requiring such information. A motion to print such a list was carried. The President then introduced the speaker of the evening, Professor Charles Palache of Harvard University who read a paper on "*The minerals of Franklin Furnace.*"

The speaker, who had begun the study of this deposit in 1896, called attention to the results of his investigations as published in the Franklin Furnace Folio in 1908. Reading from a manuscript soon to be printed, he took up briefly the history of the deposits, mentioning the description of zincite by Bruce in 1810, and tracing the history back to the Dutch period in 1640, and to the shipping of ore by Lord Sterling early in the 17th Century. He drew attention to the fact that McClure sent franklinite abroad for identification, and to the work of Dr. Fowler and his son in interesting geologists in the scientific possibilities of the deposits. He spoke of the scientific interest displayed by Mitchell, Torry and particularly Alger and of the first successful exploitation by the New Jersey Zinc Co. in 1850.

In calling attention to some of the important collections he cited those of Canfield, Hancock and Loesie and mentioned the service to science of Lazard Cahn as a distributor of unique Franklin minerals.

The talk was followed by a discussion of the various species, illustrated in many instances by original and unpublished drawings of the crystal forms.

Briefly discussing the origin of the deposits the speaker first took up the older theory of a strictly igneous origin, following which he spoke of Nason's theory of a purely metamorphic genesis and the third suggestion that the ore bodies were contact deposits. The speaker next advanced his own theory that they represented replacement deposits produced by the permeation of the Precambrian limestone by solutions similar to those which produced the surface deposits of Sterling Hill, but here depositing anhydrous minerals. At the close of Professor Palache's paper, his last statement was discussed by Professor Finlay.

On a motion by Mr. Ashby, a vote of thanks was tendered to the speaker for his highly interesting and valuable paper.

HERBERT P. WHITLOCK, *Recording Secretary*

THE PHILADELPHIA MINERALOGICAL SOCIETY

Academy of Natural Sciences, December 8, 1921

A stated meeting of the Philadelphia Mineralogical Society was held on the above date with the president, Mr. Trudell, in the chair. Nineteen members were present.

The following proposals for membership were made: Messrs. Frank J. Keeley, Arthur Low, and Walter Lapp.

Mr. Frederick Oldach presented a paper, illustrated with specimens, on "The Mineralogy of Brinton's Quarry," in which the origin and occurrences of the various minerals were discussed. Mr. Vaux called attention to a sepiolite locality where the Newton Square R.R. crosses Bryn Mawr Ave.

Messrs. Frankenfield and Boyle described the society's excursion on November 14 to Brinton's quarry, attended by Messrs. Boyle, Chalfont, Frankenfield, Jones, Knabe, Oldach, and Trudell. Clinochlore and colerainite (?) were found.

The secretary called attention to the exhibition case in the rear of the hall containing some new accessions, including a series of specimens from Sweden, Japan, Peru, Bolivia, and Chile, among them very fine tetrahedrites from Peru, remarkably translucent cassiterite crystals from Bolivia, and wavellite in crystals measuring 5×3 mm. from Bolivia.

SAMUEL G. GORDON, *Secretary*

NOTES AND NEWS

THE STATEMENT OF THEORETICAL COMPOSITIONS OF MINERALS.—In his *System of Mineralogy*, Dana stated the theoretical percentage compositions of minerals only to the first decimal place; but every now and then a mineral analyst, affecting greater precision, will state them to the second or even to the third place. The number of decimal places which can be correctly used is of course determined by that to which the atomic weights of the elements concerned is known, so the latter procedure implies that these values are established with great certainty. While this may be true of a few elements, as for instance bromine, chlorine, hydrogen, potassium, silver, and sodium,—modern precise work is con-