

## PROCEEDINGS OF SOCIETIES

## PHILADELPHIA MINERALOGICAL SOCIETY

*Academy of Natural Sciences of Philadelphia, December, 1, 1927.*

A stated meeting of the Philadelphia Mineralogical Society was held on the above date with the president, Mr. Clay, presiding. Thirty members and twelve visitors were present.

Messrs. J. G. Denton and J. M. Poli were elected to membership and W. Parrish and J. Gottshalk to junior membership.

The speaker of the evening was Dr. D. H. Kabajian of the University of Pennsylvania who addressed the Society on "*Luminescence in Minerals due to Radio-activity.*" Three types of luminescence were described: (1) that due to molecular forces and dependent on the chemical composition of the substance and not greatly affected by temperature, (2) the luminescence of radium salts when heated, (3) the luminescence of substances that have absorbed energy by exposure to radium, when heated (thermoluminescence). Spectacular lecture demonstrations of each of the above types were given: the luminescence of activated zinc sulfide, of heated radium salts, calcite, fluorite, gypsum and of artificial gems upon heating after exposure to radium.

Trips were reported by Messrs. Hoadley, Biernbaum, Cienkowski, Vanartsdalen, Hallowell and Trudell.

A paper entitled *Chromrutile, a new mineral from California*, by Samuel G. Gordon and Earl V. Shannon, was read by title. The mineral occurs as small, brilliant black crystals, with kämmererite, on specimens of chromite from the Red Ledge Mine, in the Washington district of Nevada Co., California. An analysis by Shannon gave: SiO<sub>2</sub> 5.51, TiO<sub>2</sub> 69.71, Al<sub>2</sub>O<sub>3</sub> 0.57, Fe<sub>2</sub>O<sub>3</sub> 0.80, Cr<sub>2</sub>O<sub>3</sub> 16.61, CaO 0.76, MgO 5.52, ignition 1.48; sum 100.96; hence the name *Chromrutile*. The mineral is distinct from rutile, however, crystallographically; the crystals have the symmetry of the tetragonal bipyramidal class (scheelite type), and  $p_0 = 0.611$ ;  $\rho = 40^\circ 50'$ .

F. A. CAJORI, *Secretary.*

## THE MINERALOGICAL SOCIETY (ENGLAND)

*Mineralogical Society (Anniversary Meeting):*—November 1, 1927. Dr. G. T. Prior, President, in the chair.

L. J. SPENCER: *Specific gravities of minerals: an index of some recent determinations:*—Specific gravity as determined by heavy liquids affords a convenient first-aid in the determination of minerals. 2277 determined values collected from the recent mineralogical literature are arranged numerically, and an alphabetical index of mineral names gives the minimum and maximum values for each mineral.

L. J. SPENCER: *South African occurrences of willemite. Fluorescence of willemite and some other zinc minerals in ultra-violet rays:*—Willemite is described from Broken Hill, and two other localities in Northern Rhodesia where it appears to be of abundant occurrence, and from Guchab in South-West Africa. Unlike the willemite of Franklin Furnace, New Jersey, some of these do not fluoresce in ultra-violet rays. Fluorescence is not a constant and essential character of a mineral species, and it evidently depends on the presence of admixed impurities.

T. V. M. RAO: *A Study of Bauxite:*—Specimens of laterites from India, Gold

Coast and other countries were described and the occurrence in them of bauxite and several accessory minerals was pointed out. It was shown that laterite was a rock largely composed of the mineral bauxite, which had a definite composition corresponding to the formula  $Al_2O_3, 2H_2O$ . Details of an experiment to trace the process of laterisation were also given.

P. K. GHOSH: *Biotite bearing greenstones*:—The biotite constituent, which has so far been ascribed to the metamorphic action of the Armorican granite on the pre-existing greenstone, is proved to be the undigested and residual part of the slate fragments stoped by the greenstone magma at the time of its intrusion. Rhyolitic pumice is noted for the first time in this region and its mineralogical characters are described.

W. CAMPBELL SMITH, *General Secretary*

## NOTES AND NEWS

### MINERALS IN EASTERN EXPOSURES OF THE LOCKPORT IN NEW YORK STATE

JOSEPH W. MONAHAN, *New York City*.

This note deals with certain mineral localities in the Lockport group of Oneida county, New York. The minerals occurring there, in order of abundance, are dolomite, calcite, celestite, sphalerite, quartz, and pyrite. A reference in Dana<sup>1</sup> to the occurrence of gypsum near Starkville, in Herkimer county, probably also refers to an outcrop of the Lockport.

At Sherrill, in outcrops along the Sconodoo Creek, dolomite is extremely abundant, calcite and celestite fairly abundant, quartz, sphalerite, and pyrite, rare. The exposure here is composed of eighteen feet of black shale interbedded with stromatoporoid reef dolomite and overlain by twelve feet of thin bedded, brownish dolomite. A westerly monoclinical dip keeps the principal reef above the surface for about half a mile.

Along the growth surfaces of the stromatoporoid reefs, irregular geodes have developed, decidedly flattened, and curved parallel to the surfaces. They are often a foot in longest dimension but never more than three inches in thickness. In the overlying dolomite the geodes are of a roughly spherical form, up to six inches in diameter. The occurrence of geodes in the dolomite is, however, rather rare as contrasted with their notable abundance in the reefs.

Dolomite lines all of the geodes of the reefs, and occurs as well in those of the dolomite beds. The unit rhombohedron alone was observed. The crystals are small, usually one third to two-thirds of an inch on the long diagonal.

Calcite occurs in the reef geodes in moderate amount as dog-tooth scalenohedra three-fourths of an inch to an inch in length. In the geodes of the upper beds both scalenohedra and nail-head crystals occur. Both dolomite and calcite show the presence of strontium.

Celestite occurs in the reef geodes having crystallized with the calcite, or a little later. It forms small, yellowish, poorly developed, acicular crystals with radiating structure on the surfaces of the dolomite crystals. In the geodes of the upper beds celestite is more common. Here it forms comb-like and radiating masses of white or bluish tabular crystals. Half inch crystals are common, and in the Root collec-

<sup>1</sup> Dana, J. D.; System of Mineralogy, 6th edition, p. 1063 (1914).