

here done was incidental to a study of biotite and leads us to call attention to the peculiar features of the new chemical data. The analyses here made (and checked by independent laboratories), show less water and more potash than older analyses. To check our work, tests were made on stilpnomelane from Baern, Bohemia, found in our museum collection. It contains 2.62 per cent potash, a trace of soda, and about 43 per cent silica; it has  $2V$  very small,  $\gamma = 1.677 \pm 4$ ;  $\alpha = 1.58 \pm 1$ .

In both potash and water, therefore, some stilpnomelane resembles biotite almost as closely as it does chlorite. The optical characters, especially the birefringence, make it very difficult to distinguish from biotite. In many respects, then, stilpnomelane seems to be intermediate between chlorites and biotites, but perhaps it should be considered independently of either group.

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## PROCEEDINGS OF SOCIETIES

### PHILADELPHIA MINERALOGICAL SOCIETY

*Academy of Natural Sciences, September 11, 1924*

A stated meeting of the Philadelphia Mineralogical Society was held on the above date with the vice-president, Mr. Trudell, in the chair. Twenty-nine members and three visitors were present.

Reports of summer trips constituted the program of the evening. The following local trips were reported, specimens being exhibited: Mr. Biernbaum, Avondale, Delaware County; Mr. Hoadley, New England and Canadian localities; Mr. Oldach, Worrall's farm, Delaware County, and the French Creek mines; Mr. Clay, Stockton, N. J.; Mr. Frankenfield, Moore, Delaware County; Mr. Warford, Moore, N. J.; Mr. Boyle, Moore, N. J., and Henderson, Penna.; Mr. Knabe, Howellville; Mr. Millson, Sterling Hill, N. J. Mr. Gordon reported a visit to the Ecton and Perkiomen mines, with Dr. Wills; linarite and aurichalcite in minute amount were found at the former locality.

Mr. Blank presented an account of a trip over the Fourth of July, to Franklin, N. J., and Branchville, Conn., taken by Messrs. Frankenfield, Biernbaum, Gordon, and himself. Considerable lithiophilite, spodumene, beryl, albite, and cyrtolite were found at Branchville. Considerable hancockite was found on the dumps of the Parker shaft at Franklin.

Mr. Oldach reported an excursion to the French Creek mines over Labor day, taken by Messrs. Biernbaum, Frankenfield, Faust, McClure, and Oldach. A specimen of brilliant magnetite crystals measuring  $20 \times 9$  cm., with individual crystals measuring 15 mm. was found by Mr. Biernbaum.

Mr. Biernbaum described in detail an expedition to Nova Scotia, participated in also by Messrs. Frankenfield and Broadbelt, from July 2 to August 10th. On the way, stops were made at the fibrous quartz locality at Providence, R. I., and

the inyoite locality at Hillsboro, New Brunswick. The geology about Minas basin was briefly described, followed by details regarding the zeolite localities. The difficulties encountered owing to the high tides were vividly narrated. The following minerals were found: at Partridge Island: calcite, stilbite, heulandite, chabazite; Two Islands: heulandite, chabazite, gmelinite, and analcite; Wasson's Bluff: analcite, natrolite, chabazite, heulandite, and mesolite; Pinnacle Island: natrolite, gmelinite, and analcite; Cape Blomidon and Amethyst Cove: heulandite, analcite, stilbite, apophyllite, natrolite, quartz. Two maps, and a beautiful series of specimens were exhibited, noteworthy among which was a specimen of gmelinite crystals from Pinnacle Island collected by Mr. Frankenfield which measured  $9 \times 10$  cm., the largest crystal of which measured 4.5 cm. across. At the conclusion of Mr. Biernbaum's communication, Mr. Frankenfield exhibited a series of lantern slides of photographs taken on the trip.

A very fine suite of radioactive minerals, including curite, kasolite, schoepite, chinkolobwite, becquerelite, soddite, parsonite, and dewindtite, from the Belgian Congo, were exhibited.

SAMUEL G. GORDON, *Secretary.*

## ABSTRACTS

OPTICAL CHARACTERS OF CORDIERITE AFTER THE ACTION OF RADIUM RADIATIONS. O. ANSHEELS. *Bull. Sci. Inst., (P. F. Lesgaft) 2*, 132-40 (1920); thru *Mineral. Abstr.*, 2, 123-4.

New determinations have been made of the optical characters of cordierite both before and after a year's radiation by a Ra preparation. The changes so produced are analogous to those seen in natural pleochroic haloes in cordierite, only weaker, and support the author's theory that the haloes are of radioactive origin.

E. F. H.

CRYSTALS OF SILICATES IN THE DOLOMITES NEAR THE TOWN POVYENTZ. P. A. BORISOV. *Bull. Acad. Sci. Russia*, 11, pt. 2, 1289-1314 (1917); thru *Mineral. Abstr.*, 2, 125-6.

The following minerals were found in dolomites from an island in Lake Onega. They are thought to be of hydrothermal origin, caused by a nearby mass of diorite. Microcline, cherry- to brownish-red crystals; orthoclase, sporadically as a new generation of idiomorphic crystals; albite crystals, red and pink and colorless in the pink dolomites; phlogopite crystals, non-pleochroic, very small optic axial angle; diopside; actinolite; isolated dolomite crystals. Analyses are given of albite, phlogopite, the dolomite rocks and the residue insoluble in HCl.

E. F. H.

CRYSTALLOGRAPHIC AND OPTICAL STUDY OF THE CINNABAR OF AVALA. STÉVANOVICH SVETOLIK. *Bull. soc. franc. mineral.*, 45, 134-61 (1922).

Forty-five cinnabar crystals from the mercury mine Suplja Stena, on the Avala mountain, near Belgrade, are shown. The crystals fall into four groups: (1) those with no trapezohedral or pyramidal faces to reveal their character; (2) those with right trap zohedrons and pyramids; (3) those with left; (4) twins of right and left together. The forms noted are: 39 rhombohedrons, 8 new; 20 bipyramids, + and - ,