

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 - ,

7 new; 57 + and - trapezohedrons, 11 new. Dextrogyrate crystals have their + trapezohedrons and pyramids on the right side of (211) or (100), their - forms on the right side of (211) or (221) [Miller's symbols]. E. F. H.

EXPERIMENTAL INVESTIGATIONS ON THE ROTATORY POWER OF CRYSTALLINE SUBSTANCES. L. LONGCHAMBON. *Bull. soc. franc. mineral.*, 45, 161-252 (1922).

A method is described by which measurements of the rotation in biaxial crystals can be made with an error of only a few minutes. All crystalline substances examined which had a structural or molecular asymmetry were active, except several cubic crystals. An investigation of rotatory power is suggested as a sensitive physical method for furnishing evidence of asymmetry in crystalline structures when etch figures may fail. Numerical results for several biaxial minerals follow: epsomite, for 579 $\mu$ m, 1.98; 546 $\mu$ m, 2.30; 436 $\mu$ m, 3.18; goslarite, 2.41, 2.72 and 4.05 respectively; morenosite, 6.1, 6.31 and —. E. F. H.

THE CORNETITE FROM BWANA MKUBWA (NORTHERN RHODESIA) AND THE FORMULA OF CORNETITE. G. CESÀRO. *Ann. Soc. géol. Belg.*, (Bull.), 45, 102-8 (1922); thru *Rev. Géol.*, 4, 20 (1923).

A basic Cu phosphate from northern Rhodesia, which was first described by Hutchinson and MacGregor, is identical with cornetite. C. arrives at the formula  $Cu_2(PO_4)_2 \cdot 3Cu(OH)_2$ , corresponding to pseudomalachite. The all'n varieties of pseudomalachite are, however, entirely different from cornetite. E. F. H.

ALBITE FROM KATANGA. G. CESÀRO AND M. BELLIÈRE. *Ann. Soc. géol. Belg.* (Bull.), 45, 184-8 (1922); thru *Rev. Géol.*, 4, 21 (1923).

The authors describe a curious rock composed essentially of albite imbedded in a yellowish-brown substance soluble in warm HCl; with small amounts of hematite, rubellite, and mica. E. F. H.

DIASPORE, LIBETHENITE, AND SEVERAL OTHER MINERALS FROM KATANGA. G. CESÀRO AND M. BELLIÈRE. *Ann. Soc. géol. Belg.* (Bull.), 45, 172-81 (1922); thru *Rev. Géol.*, 4, 21-2 (1923).

The following minerals occur at Lualaba hill: corundum; diaspore in platy xls.; white mica of two types, optically; rutile xls.; libethenite; and a pseudomalachite, probably of the composition  $3Cu_3(PO_4)_2 + 8Cu(OH)_2$ . E. F. H.

TWO ANCHIMONO-MINERAL FACIES OF THE WESTERN BOHEMIAN GABBRO. FRANTIŠEK SLAVÍK. *Rozpravy České Akad.*, cl. 2, 31, no. 16, 6 pp. (1922); thru *Mineral Abstr.*, 2, 118-9.

At Lhota, near Pocínovice, the normal gabbro is differentiated into rocks consisting almost entirely of a single mineral, as shown by the following analyses (Veselý): (1) ilmenite; (2) hortonolite.

	SiO <sub>2</sub>	TiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	FeO	MnO	MgO	CaO	Na <sub>2</sub> O	K <sub>2</sub> O	H <sub>2</sub> O
1.	0.06	50.29	.....	6.99	38.16	0.27	1.82	2.62	.....	.....	.....
2.	29.08	3.16	3.28	5.00	44.58	0.40	11.95	0.76	0.61	0.18	0.39

The hortonolite is optically -, with  $\rho > \nu$  and  $n > 1.74$ .

E. F. H.

THERMAL ANALYSIS AS A MEANS OF DETECTING KAOLINITE IN SOILS. JOSEF MATĚJKA. *Chem. Listy*, 16, 8-14 (1922); thru *Mineral. Abstr.*, 2, 131.

The presence and amount (down to 3%) of kaolinite in a soil can be determined from the dehydration diagram, since the dehydration curve of pure kaolinite has a characteristic break at 570-580°, which is not appreciably changed by the presence of quartz, orthoclase, calcite, or muscovite. But magnesite must previously be removed by HCL, as it affects the curve. E. F. H.

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## NOTES AND NEWS

Attention is called to the approaching annual meeting of The Mineralogical Society of America which will be held at Ithaca, New York, during the Christmas holidays; the exact date will be announced later. Attendance is urged to insure a large and successful meeting.

Dr. Kinoshige Inouye, director of the Imperial Geological Survey of Japan, has made an appeal for publications of a geological and mineralogical character to replace the periodicals destroyed by the recent earthquake and fire.

Models illustrating crystal structure, prepared under the direction of Professor A. Sommerfeld, may now be purchased through the Central Scientific Co., Chicago, Illinois. Models of rock salt, diamond, graphite, calcite, pyrite, rutile and anatase can be constructed immediately upon order. The list price is approximately \$35 each, f.o.b. Chicago.

Professor W. A. Tarr, of the University of Missouri, will spend the coming year in Europe on sabbatical leave. He will continue his studies of stylolites and related features of sedimentary rocks as well as visit the more important mineral deposits.

Dr. Edmund Otis Hovey, curator of the department of geology and invertebrate paleontology of the American Museum of Natural History, and for many years secretary of the American Geological Society, died on September 26, aged sixty-two years.

Professor William J. Miller has resigned as head of the department of geology in Smith College to become professor of geology and chairman of the department in the University of California, Southern Branch, Los Angeles.

The new England Intercollegiate Geological Excursion was held in the vicinity of Brown University, Providence, October 10 and 11. The carboniferous series including the coal deposits were studied, also the metamorphic rocks, the shore lines and the glacial geology.