

Trips to Moore Station were described by Messrs. Lewis and Biernbaum, on which much stilbite, calcite, and natrolite were obtained. Mr. Cienkowski reported a visit to Mullica Hill, and Mr. Millson, one to Mineral Hill, where the usual minerals were obtained.

SAMUEL G. GORDON, *Secretary.*

Academy of Natural Sciences, June 12, 1924

A stated meeting of the Philadelphia Mineralogical Society was held on the above date with the president, Mr. Vaux, in the chair. Twenty-eight members and thirteen visitors were present.

Mr. Frederick Oldach addressed the society on the "*Pyroxenes and Amphiboles.*" The crystallographic relations of the pyroxenes and amphiboles were described, followed by a discussion of their classification, and a review of the older and more modern theories of their composition. Many specimens were exhibited. A vote of thanks was extended to the speaker for his instructive communication.

Messrs. Trudell, Biernbaum, and Cienkowski described various phases of the Society's excursion to Falls on French Creek on May 30-June 1, participated in also by Messrs. Vaux, Gordon, McClure, White, Rosen, Faust, Hoadley, Boyle, Arndt, Moerk, Wills, and Frankenfield. Specimens of apophyllite, pyrite, erythrite pyrrhotite, and chalcopyrite were exhibited.

Mr. Biernbaum described a trip to Branchville, Conn. with Mr. Hoadley. Smoky quartz, beryl, albite, microcline, and spodumene were collected. Four trips to Moore Station, New Jersey were reported by Messrs. Boyle, Wills, Bengé, Trudell, Gordon, Biernbaum, Thatcher, and Frankenfield. Many fine specimens of stilbite, natrolite, and calcite were found. Mr. Bengé exhibited vivianite from Mullica Hill.

Mr. Gordon reported an excursion to the Line Chrome Pit in Maryland on May 2, with Drs. Schaller, Shannon, Foshag, and Ross. Williamsite, kammererite, magnesite, and chromite were found. On May 10, he visited Quincy, Mass., in company with Drs. Palache, Larsen, and Gilson, finding some riebeckite.

On behalf of the special class in mineralogy at the Northeast High School, Mr. Rosen presented Mr. Biernbaum with specimens of realgar and tennantite from the Binnenthal, as an expression of their appreciation for his instruction.

SAMUEL G. GORDON, *Secretary.*

BOOK REVIEWS

MIKROSKOPISCHE PHYSIOGRAPHIE DER MINERALIEN UND GESTEINE. Rosenbusch-Wülfing, 5th edition, fully revised. Vol. I, First Half, octavo, pages 253-532 with 349 text figures and 2 plates. E. Schweizerbart'sche Verlagsbuchhandlung, Stuttgart, 1921.

This delivery constitutes the second section of volume one of this standard reference work. (For review of the first section see *Am. Min.*, 1922, 7, 211.)

The subjects discussed include geometrical optics, the hand lense and its use, the microscope and its use, including the measurement of lengths, surfaces, and angles, the determination of extinction angles, and the application of the universal methods of Fedorow. The text is profusely illustrated.

E. H. KRAUS

PETROLOGY FOR STUDENTS. AN INTRODUCTION TO THE STUDY OF ROCKS UNDER THE MICROSCOPE. ALFRED HARKER. 6th edition, revised. 302 pages with 100 text figures. Cambridge University Press, London; The MacMillan Co., New York, 1923.

The popularity of this book as a text for students in petrology is clearly shown by the rapid succession in which new editions follow one another. The subject matter and presentation in the sixth edition conform very closely to that of the fifth edition which appeared in 1919. A few new figures have been added and some old ones have been withdrawn. Of the 300 pages, slightly more than two-thirds of the book is devoted to a discussion of igneous rocks, about 60 pages to sedimentary rocks and 40 pages to the effects produced by thermal and dynamic metamorphism.

Judged from an American standpoint, in the opinion of the reviewer, this edition, like the previous one, suffers from three minor weaknesses. (1) Not a single chemical analysis is recorded in the entire book. (2) As a text for the "English-speaking students" greater emphasis should have been given to the description and occurrence of rock types in America. (3) In recent years unusual progress has been made along the line of quantitative petrology. Not only has the chemical system (commonly referred to as the C. I. P. W. system) been firmly established in America, but more recently a rational mineralogical quantitative system (Johannsen) has been proposed as well. It would seem that a chapter or two devoted to this phase of petrology would have been quite appropriate and exceedingly helpful to both English and American students.

W. F. H.

NEW MINERALS: NEW SPECIES

CLASS: SULFO-SALTS. DIVISION: $RS:R_2S:Sb_2S_3=5:9:7$.

Berthonite

H. BUTTGENBACH: Sur un nouveau Mineral Provenant de Tunisie. [On a new mineral found in Tunisia.] *Ann. soc. geol. Belg.* 46, 212, (1923).

NAME: In honor of M. Berthon, mining engineer.

CHEMICAL PROPERTIES: *Formula*, $5PbS.9Cu_2S.7Sb_2S_3$. Theory, Pb 20.79, Cu 22.96, Sb 33.75. Analysis gave Pb 21.83, Cu 23.68, Sb 32.45. Gives the usual blowpipe reactions for lead, copper and antimony. Easily fusible.

PHYSICAL PROPERTIES: Fine granular without cleavage; metallic luster; color lead gray; streak black; density 5.49; hardness 4 — 5.

OCCURRENCE: Associated with galena in small, later veins in the iron mines of Slata, Tunisia.

DISCUSSION: This mineral has been examined minerographically by Mr. E. B. Samson. The material was found to be essentially homogeneous. A few minute veins, of what is apparently limonite, penetrate the mass and become abundant near the border of the veins. The mineral appears to be isotropic. No structure was developed by etching. With conc. HNO_3 the mineral is strongly attacked with effervescence. Negative with HNO_3 , HCl , KOH , KCN , $HgCl_2$, $FeCl_3$. With