

at all. A more accurate title would be "Modern methods of studying, interpreting, and understanding minerals."

In the 150 pages devoted to crystallography we do not find crystals taken up system by system or class by class, as in ordinary books; instead there is an elaborate discussion of arrangement of points in space, of symmetry-operations and their results, and of crystal forms in the order of their number of faces and symmetry features. There is a well-illustrated discussion of twinning and its structural significance; altho crystal measurement and calculation are dismissed rather too briefly. The physical properties of crystals are then considered, being discussed thruout from the structural viewpoint. The chapter on optics is treated in a more usual manner, and curiously enough only rock-making minerals are given as illustrations. Structure determination by X-rays is of course fully described, while radioactivity of minerals is treated briefly.

The section headed "Kristallchemie" is especially interesting. In it polymorphism, isomorphism, etc., are discussed from the most up-to-date viewpoints. Then there is an illuminating treatment of the relation of chemical composition to crystal form. Silicate formulas are written according to a modified Werner coördination plan, to which there is no objection except that unnecessarily complicated ones are used. The chapter on crystal habit and its causes is also good, and the section ends with a useful collection of data on colloid minerals.

Nearly 200 pages are then devoted the subject of origin and occurrence of minerals, with full discussions of pseudomorphs, magmatic phenomena and minerals, weathering and metamorphism and their mineral associations. Graphic methods are freely used in bringing out the relations, and the modern physical chemical viewpoint is held thruout. Finally there is a 6-page list of books on the various subdivisions of mineralogy, and a 23-page mineral list, in which name and formula are given for all minerals which the author has been able to locate, species being emphasized by bold-face type, and varieties or synonyms clearly designated.

The frequent criticism of text-books, that they are necessarily a generation behind the times, is distinctly inapplicable to this up-to-the-minute book. Except in so far as the experimental work of the Geophysical Laboratory is concerned, the modern trend of mineralogical thought in America is, to be sure, inadequately pictured in it. But every American mineralogist must turn to it to find out what has been done in central Europe during the past ten years; and no one writing a mineralogical article which is other than merely descriptive can afford not to refer to it.

W.

PROCEEDINGS OF SOCIETIES

NEW YORK MINERALOGICAL CLUB

The annual meeting of the New York Mineralogical Club was held in the American Museum of Natural History on the evening of Wednesday, April 12th at 8:00 P. M.

The President, Dr. George F. Kunz, presided and there was an attendance of 28 members. Mr. Whitlock reported for the Committee on proposed Sunday field trips as follows: Peekskill (Emery Mine), Davenport Neck, New Rochelle, Portchester, Sing Sing (Prison Quarry), Great Notch, Englewood (Printin Quarry), South River, N. J., Plainfield, N. J., Chimney Rocks, Sommerville, N. J., Hastings-

on-Hudson, Marble Hill, Jerome Park Reservoir, Bedford, Valhalla, Brown's Quarry (Carmel), Upper Montclair and Arlington, N. J. Mr. Hoadley on behalf of the Committee on the preparation of a map of localities within a radius of 25 miles of New York, submitted a map with the localities indicated by stars. After discussion the matter was laid on the table. Mr. Broadwell reported for the Committee on Badges and submitted a design adopted by the Newark Mineralogical Society.

The Committee on Membership reported favorably on the following names: Mr. Edwin F. Gross, 1169 East 17th Street, Brooklyn; Mr. E. Victor Collins, 125 East 28 Street, New York; Mr. Herbert L. Thowless, 765 Broad Street, Newark. The name of Miss Florence Miller of 606 West 115th Street, New York, was submitted to the Committee on Membership by Mr. Westervelt.

The Treasurer submitted the annual report showing a balance of \$478.73. It was moved by the President that the income from life memberships alone be available for the Treasurer to draw against. Motion carried.

The Committee on Nomination of Officers for the Year 1922-23 recommended the continuance of the present officers of the Club. It was moved that Mr. Ashby cast a ballot for the following officers:

For President	George F. Kunz
For Vice President	George E. Ashby
For Corresponding Secretary	Wallace G. Levison
For Recording Secretary	Herbert P. Whitlock
For Treasurer	Gilman S. Stanton

The motion was carried and the above officers declared elected.

Captain Miller moved that a Lecture Committee be appointed by the Chair to arrange for speakers for the coming year. On the motion being carried the Chair appointed the following Committee: President, Recording Secretary (ex officio), Messrs. Manchester, Wintringham, R. M. Allen, Lee, Ashby, and F. I. Allen.

Dr. Kunz exhibited some photographs of notable specimens of minerals from Minas Geraes, Brazil. He then introduced the speaker of the evening, Mr. Samuel G. Gordon of the Philadelphia Academy of Science, who gave a very interesting address on "MINERAL COLLECTING IN THE ANDES." Mr. Gordon described a recent visit to the mineral localities of Bolivia, Peru and Chile, and illustrated his talk by many beautiful lantern slides of Andes scenery, and also of some of the mineral specimens collected for the Philadelphia Academy. At the close of his address a vote of thanks was tendered him for his very instructive and original paper.

HERBERT P. WHITLOCK, *Recording Secretary*

PHILADELPHIA MINERALOGICAL SOCIETY

Academy of Natural Sciences, May 11, 1922

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

Mr. J. C. Boyle addressed the society on "THE ZEOLITES." The physical and chemical characteristics of the group were described, followed by a discussion of

their mode of origin and occurrence. The lecture was illustrated with specimens and lantern slides.

Mr. Gordon presented two short papers on "NOTES ON WILLEMITE, CELESTITE, AND CALCITE FROM FRANKLIN, N. J.," and "THE CRYSTALLOGRAPHY OF GLAUCOCROITE." Specimens were exhibited.

Messrs. Vaux and Wills described two trips to the French Creek mines. Mr. Biernbaum described a trip to the Poorhouse quarry, and the Unionville district.

SAMUEL G. GORDON, *Secretary*

NEW SPECIES

FAMILY: SULFATES, CHROMATES, MOLYBDATES, TUNGSTATES, AND URANATES

SUBFAMILY: URANATES. DIVISION: RO:UO₃:H₂O=2:5:X

Curite

ALFRED SCHOEP: La curite, nouveau minéral radioactif. (Curite, a new radioactive mineral.) *Compt. rend.*, 173, (23), 1186-1187, 1921.

NAME: Stated to be in honor of Pierre Curie.

CHEMICAL PROPERTIES: *Formula*: 2PbO.5UO₃.4H₂O, or Pb₂(4H₂O) U₅O₁₇. Mean of 3 analyses gave: PbO 21.32, UO₃ 74.22, H₂O 4.00, Fe₂O₃ 0.17, sum 99.71. Soluble in cold acids, becomes brown and yields water in closed tube, and shows strong radioactivity.

CRYSTALLOGRAPHIC AND OPTICAL PROPERTIES: Shows only needles too minute to measure, with parallel extinction, + elongation and $n > 1.74$.

PHYSICAL PROPERTIES: Color reddish brown, by transmitted light deep yellow. Streak, orange. H=4-5. Sp. gr.=7.192. Form ranging from crypto-crystalline to massive; also acicular crystals.

OCCURRENCE: Found at Kasolo, Katanga, Belgian Congo, associated with torbernite and an unidentified mineral.

DISCUSSION: In spite of the incomplete crystallographic-optical data, this may be accepted as a valid new species. It is, however, related to the mixture known as gummite, which may contain curite together with other uranates.

E. T. W.

FAMILY: SILICATES. DIVISION: R'':R''':R''':H₂O=1:1:1:1.

Kasolite

ALFRED SCHOEP: Sur la kasolite, nouveau minéral radioactif. (On kasolite, a new radioactive mineral.) *Compt. rend.*, 173 (26), 1476-1477, 1921.

NAME: From the locality, *Kasolo*, Katanga, Belgian Congo.

CHEMICAL PROPERTIES: *Formula*: PbO:UO₃:SiO₂:H₂O or Pb(UO₂)[H₂O](SiO₄). [Author gives 1- $\frac{1}{3}$ H₂O]. Theory: PbO 38.0, UO₃ 48.7, SiO₂ 10.2, H₂O 3.1%. Three analyses were made, on crystallized, crystalline-granular, and compact material, respectively, all giving about the same values, with the ranges: SiO₂ 9.00-9.42, PbO 32.16-36.20, UO₃ 48.36-49.28, H₂O 3.28-3.77, Fe₂O₃ 0.40-0.58, CaO 0.06, MgO 0.03, CO₂ 0.53-0.85%. Optical examination showed the samples analyzed to be homogeneous except for the presence of a little dolomite, which is evidently the source of the several last constituents. Soluble in acids with gelatinization. In closed tube gives H₂O; on charcoal B.B. gives reactions for Pb.