PROCEEDINGS OF SOCIETIES

MINERALOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

MINERALOGICAL SOCIETY, *January 25*. SIR THOMAS H. HOLLAND, President in the chair.

PROFESSOR C. E. TILLEY exhibited specimens and sections of a new mineral hydrocalumite from Scawt Hill, County Antrim, Northern Ireland, and MR. A. T. DOLLAR exhibited bent and twisted quartz crystals from Lundy Island, Devonshire.

DR. JAMES PHEMISTER: *Zoning in plagioclase feldspar*. The paper describes various types of zoning in plagioclase feldspar in the calciferous sandstone basalt lavas in one district of Scotland. The zoning is classified as (a) normal, (b) simple reverse, (c) oscillatory. Simple reverse zoning is associated with other differences in the zones which point to important time intervals between the growth of the zones. Oscillatory zoning is classified as oscillatory-normal and oscillatory-reverse and attention is drawn to the occurrence of oscillatory-zoned crystals which show no general tendency towards either more calcic or more sodic plagioclase. Distinction is drawn between the main zones and the thin shells of alternately more and less calcic composition within the main zones. The alternating composition of the thin shells is possibly the result of lack of balance between rate of growth of the crystal and rate of diffusion from the surrounding magma. Recurrence of calcic plagioclase in the inner part of main zones is explained as the result of eruption of hot magma into the crystallizing liquid, probably consequent on eruption of lava at higher levels.

PROF. H. H. READ: *On zoned associations of antigorite, talc, actinolite, chlorite, and biotite in Unst, Shetland Islands.* In an injection-zone within the staurolite-kyanite-garnet-gneisses of western Unst occur spherical or ellipsoidal bodies, up to 20-ft. diameter, composed of an interior of antigorite, followed outwards by an orderly sequence of zones made up entirely of talc, of actinolite, of chlorite, and of biotite. It is considered that the zoned bodies result from the fragmentation of peridotite sills during the staurolite-kyanite-garnet metamorphism, followed by the entry of fluids into the masses during injection-metamorphism and the formation of the zonally arranged layers. At the same time material displaced from the masses reacted with the country-rock to give the biotite-zone. Transitions to the country-rock were mostly pared away during the later chloritoid- and chlorite-producing metamorphisms that have affected the staurolite-kyanite-garnet-gneisses.

MR. M. H. HEY and MR. F. A. BANNISTER: *Studies on the zeolites. Part VII.* Clinoptilolite, a silica-rich variety of heulandite. Rotation photographs of a single crystal from the original specimen of "clinoptilolite" (so-called "crystallized mordenite" of L. V. Pirsson) show that it is a silica-rich variety of heulandite. The chemical composition and optical properties are in agreement with this interpretation. The mineral bears no relation to ptilolite.

MR. B. RAMO RAO and DR. A. BRAMMALL: *Notes on cordierite in the Dartmoor granite.* Two groups of associated but as yet unrelated facts were recorded concerning the sector-twinned cordierite in the garnetiferous granite of Swelter: (1) an aggregate of cordierite grains is separable into fractions varying in composition; in particular, the molecular ratio FeO/MgO varies from 0.37 to 1.28 in six intermediate fractions analysed, the ratio for the aggregate being 1.52. (2) All sectors are optically negative, but the value of 2V varies between 56° and 72°. Centrally paired sectors give the same 2V value, whereas adjacent sectors often give different values the maximum difference observed being 12°.

PHILADELPHIA MINERALOGICAL SOCIETY

Academy of Natural Sciences of Philadelphia, February 1, 1934

President Gillson presided at a stated meeting, with 41 members and 13 visitors present. The proposed amendment to Article II, section 3 of the By-laws was rejected.

Professor J. E. Shrader of Drexel Institute, Philadelphia, spoke on "Polarized Light," and demonstrated his lecture by means of a projection apparatus which he had constructed. Dr. Gillson outlined the "Use of Polarized Light and the Petrographic Microscope in Mineral Identification."

Mr. H. E. MacNelly exhibited a polarizing microscope which he had constructed at little cost, using pieces of black glass to polarize the light. Mr. Teubner described his use of telescope lenses in a camera attachment for making photomicrographs.

Mr. Charles R. Toothaker showed some lantern slides of unusual Guanajuato calcites.

W. H. Flack, *Secretary*

NEW YORK MINERALOGICAL CLUB

Minutes of the Meeting of February 15th, 1933

A regular meeting of the New York Mineralogical Club was held at The American Museum of Natural History on the evening of February 15th, 1933 with an attendance of 87. The meeting was called to order by 1st Vice-President George E Ashby.

Dr. Laurence F. Rainsford of Rye, N.Y., Mr. Frederick Schneider of Woodhaven, L.I., and Mr. Herbert S. Zim of New York City were elected to active membership.

President Alfred C. Hawkins introduced the speaker of the evening, Dr. Clarence S. Ross of the United States Geological Survey, Washington D.C., who lectured on "The Minerals and Mineral Relations of the Nelson County, Virginia, Titanium Locality." Dr. Ross described the titanium deposits of Virginia as occurring in the Piedmont section of the state, between Charlottesville and Lynchburg, in an area, roughly elliptical, 17 miles long and 3½ miles in the widest place. He pointed out that there are two types of occurrences—one, disseminated in a feldspathic rock of pegmatitic habit, and the other as "nelsonite," a rock composed essentially of rutile or ilmenite and apatite. The feldspathic rock has been profoundly fractured, recrystallized, and locally replaced by narrow, roughly parallel lenses of a ferromagnesian rock. The titanium minerals have been introduced along with this ferromagnesian rock as the hydrothermal solutions migrated outward replacing the feldspar. Ilmenite has formed closest to the ferromagnesian rock and rutile at a greater distance. Although the mode of origin of all the nelsonite bodies is uncertain, it is believed some have been formed in the same manner as the lenses in the feldspathic rock; i.e., through replacement by hydrothermal solutions. Blue quartz, which is abundant in the area, owes its color to minute needles of rutile 0.3 to 0.4 microns in diameter. The lecture was illustrated with lantern slides. Dr. Ross was enthusiastically thanked by President Hawkins on behalf of the Club for his very interesting lecture. The discussion which followed led from the blue quartz discussed by Dr. Ross to rose quartz and the probable cause of its color; it was explained as due to manganese in colloidal form. Mr. H. R. Lee mentioned that a rose quartz had been produced by heating pieces of quartz in a nickel crucible.

Following the lecture the meeting was again opened for business. Mr. Gilman S. Stanton reported for the committee empowered to purchase certain minerals at the January meeting and revealed that they had secured for the Club Collection two famous specimens of chrysoberyl from New York City, formerly in the collection of the late Wallace Goold Levison. When Dr. Levison died in 1924, his family refused to part with the specimens, but they were finally obtained from his nephew.

In response to the letter from Professor Edward Salisbury Dana of Yale University soliciting aid for the needy mineralogists abroad, a motion was made by Dr. Paul F. Kerr and seconded by Mr. James F. Morton that the Club again send twenty-five dollars to Professor Dana for this worthy purpose, and it was so ordered.

DANIEL T. O'CONNELL, *Secretary*

NEW MINERAL NAMES

Cuprosklodowskite

J. P. VAES: Sur un Minéral de Kalongwe (Katanga), *Ann. Soc. Geol. Belg.*, Bull. 10, vol. **56**, pp. 331–2, 1933. H. BUTTGENBACH: Communications, *ibid.*

NAME: From its analogy to sklodowskite.

CHEMICAL PROPERTIES: A hydrous silicate of copper and uranium.

CRYSTALLOGRAPHICAL PROPERTIES: Orthorhombic. Habit acicular. Forms: (110), (100), rarely (010); frequently terminated by (*okl*), probably (031). $110 \wedge 031$ about 69°–72°.

PHYSICAL AND OPTICAL PROPERTIES: Color greenish yellow. Pleochroism greenish yellow parallel to elongation, colorless normal to needles. The face *m* shows an eccentric emergence of an optic axis. Dispersion very strong $r > v$. $n = 1.68–1.70$.

OCCURRENCE: Found in small acicular needles in a fissure in a talcose argillaceous rock at the uranium occurrence at Kalongwe, Katanga.

W. F. FOSHAG

Uranolepidite

J. THOREAU: L'uranolépidite, Nouveau Minéral uranifere de Shinkolobwe (Katanga), *Ann. Soc. Geol. Belg., Publ. spéc. relat. Congo Belge.*, 1931–1932 pp. C3–C5, 1933.

CHEMICAL PROPERTIES: A hydrous copper uranate, $CuO \cdot UO_3 \cdot 2H_2O$. Analysis (by W. Boubnoff), CuO 18.98, CaO 0.26, MgO 0.57, UO_3 70.40, SiO_2 0.28, CO_2 None, H_2O (580°) 9.46; Sum 99.95.

PHYSICAL AND OPTICAL PROPERTIES: Color deep green. Pleochroism deep bluish green to paler yellowish green. Three cleavages, parallel to needles, perfect; normal