

THE LONDON MINERALOGICAL SOCIETY

Meeting of June 20, 1916; Dr. A. E. H. Tutton, past-president, in the chair.

Dr. J. W. Evans: *The relations between different laws of twinning giving the same twin-crystal.*

Dr. G. T. Prior: *The meteorites of Khairpur and Soko-Banja.* The Khairpur meteorite is precisely similar to the Daniels Kuil, and like it, belongs to the rare Hvittis type of chondritic stones, which contain oldhamite, and are almost free from oxide of iron. The Soko-Banja meteorite contains a small amount (4 %) of nickel-iron, very rich in nickel, together with ferro-magnesian minerals rich in ferrous iron.

Dr. G. T. Prior: *The classification of meteorites.* In chondritic stones the richer the nickel-iron in nickel the richer the ferro-magnesian minerals are in ferrous oxide, and in general the smaller the amount of nickel-iron, the richer it is in nickel. On these principles chondritic stones are divided into four groups corresponding to the types: (1) Daniels Kuil; (2) Cronstad; (3) Baroti; (4) Soko-Banja. Under the same groups the meteoric irons may be arranged according to their richness in nickel, and the non-chondritic stones according to the richness in iron of the ferro-magnesian silicates. A fifth group is added for eucrite, howardite, shergottite, angrite, and nakhlite, since they are richer in lime, ferrous oxide, and mostly also in alumina, than any chondritic stone at present known.

Lieut. A. Russell: *Note on an occurrence of gold from Cornwall.*

A. Holmes: *A series of volcanic rocks from the neighborhood of the Lucalla River, Angola.*

Prof. T. L. Walker: *Spencerite, a new zinc phosphate from British Columbia.* The new mineral occurs as the core of stalactites of hemimorphite (calamine) in the H. B. zinc mine near Salmo, in the West Kootenay district. It is snow-white in color, with brilliant pearly luster on the perfect cleavage. The three rectangular cleavages and the optical characters suggest at first sight rhombic symmetry, but complex lamellar twinning is present, and etched figures are symmetrical about one plane only. Analyses of the very pure material conform closely with the formula $Zn_3(PO_4)_2 \cdot Zn(OH)_2 \cdot 3H_2O$, the mineral being a hydrated basic zinc phosphate, and thus differing from the other

zinc phosphates—hopeite, parahopeite, and tarbuttite. It is named after Mr. L. J. Spencer, of the British Museum.

E. L. Bruce: *Magnesian tourmaline from Renfrew, Ontario*. Brown crystals occur at the contact between crystalline limestone and gneiss in a limestone quarry at the town of Renfrew. Analysis showed the presence of 14.53 % of magnesia.—Abstd. from *Nature*, **97**, 374, 1916.

REVIEWS AND ABSTRACTS

MINERALOGIC NOTES, SERIES 3. WALDEMAR T. SCHALLER. U. S. Geological Survey *Bull.* **610**, 164 pp., 1916.

Contents: Koechlinite (bismuth molybdate), a new mineral. Inyoite and meyerhofferite, two new calcium borates. Lucinite, a new mineral,—a dimorphous form of variscite. Schneebergite. Romeite. The natural antimonites and antimonates. Velardinite, a new member of the melilite group. The melilite group. The composition of cebollite. The crystallography of thaumasite. The chemical composition of tremolite. New occurrences of some rare minerals. Gigantic crystals of spodumene. The probable identity of mariposite and alurgite. The amblygonite group of minerals—fremontite = (natramblygonite). The crystallography of fremontite. The chemical composition of nephelite. Large crystals of bloedite. Alunite from Marysville, Utah. The composition and relations of custerite. The composition of hodgkinsonite. Crystals of pisanite from Ducktown, Tenn. The refractive indices of strengite. The calculation of a mineral formula.

S. G. G.

CASSITERITE IN SAN DIEGO COUNTY, CALIFORNIA. WALDEMAR T. SCHALLER. U. S. Geological Survey *Bull.* **620 P**, 351–354, 1916.

Note describing an occurrence of cassiterite in the pegmatites of California, with quartz, feldspar, lepidolite, columbite and transparent blue tourmaline.

S. G. G.

XANTHOPHYLLITE IN CRYSTALLINE LIMESTONE. ARTHUR S. EAKLE. *J. Wash. Acad. Sci.*, **6** (11), 332–335, 1916.

The rare brittle mica xanthophyllite is reported as occurring at an isolated hill of crystalline marble and granodiorite situated