NEW MINERALS

CHUBUTITE

Hercules Corti: Chubutite, a new lead mineral. *Anales soc. quim. Argentina*, **6**, 65–72, 1918; thru *Chem. Abstr.*, **13** (4), 298, 1919.

NAME: From the locality, Chubut, Argentina.

PHYSICAL PROPERTIES

Color: yellow, sometimes reddish or greenish; structure, lamellar; H. = 2.5; brittle; D. = 7.952.

OPTICAL PROPERTIES

Under the microscope greenish yellow, with n "not high" and birefringence slight. Crystal system indicated to be tetragonal.

CHEMICAL PROPERTIES

Essentially $7PbO.PbCl_2$, analysis showing: PbO 83.30 and $PbCl_2$ 14.83 per cent., with minor amounts of SiO_2, Al_2O_3, Fe_2O_3 and Sb_2O_3. Similar material was made by fusing the constituents together in these proportions. Insoluble in water, but readily soluble in dilute HNO_3 and in hot 30 per cent. KOH solution.

(The above features suggest that this mineral is practically the same as lorettoite of Wells and Larsen, *J. Wash. Acad. Sci.*, **6** (20), 669–672, 1916; *Am. Min.*, **2** (2), 26, 1917. See: Chubutite, E. Rimann, *Anales soc. quim Argentina*, **6**, 323–328, 1918; *Chem. Abstr.*) E. T. W.

ABSTRACTS OF MINERALOGIC LITERATURE

BIBLIOGRAPHY OF NORTH AMERICAN GEOLOGY FOR 1917. WITH SUBJECT INDEX. JOHN M. NICKLES. *U. S. Geol. Survey Bull.*, **684**, 154 pp., 1918.

Includes many articles on mineralogy. E. T. W.

THE NATURE OF THE WATER OF ZEOLITES. GEORG STOKLOSSA. *Dissertation, Univ. Breslau*, **1917**, 64 pp.; thru *J. Chem. Soc.*, **114**, ii, 122, 1918.

From studies made of heulandite, scolecite, natrolite, harmotome, chabazite, analcite, and apophyllite, it is concluded that the water in all of them is chemically combined. E. T. W.

CRYSTAL STRUCTURE OF THE ALUMS AND THE RÔLE OF THE WATER OF CRYSTALLIZATION. L. VEGARD AND H. SCHJELDERUP. *Ann. Physik*, **54**, 146–164, 1918; thru *Science Abstracts*, **21-A**, 266, 1918.

X-ray measurements on the alums are described. The structures derived are too complicated for brief abstracting. E. T. W.

A PEGMATITE ORIGIN FOR MOLYBDENITE ORES. E. THOMSON. *Econ. Geol.*, **13**, 302–313, 1918.

Study of several deposits in Quebec shows that the molybdenite always occurs in or near pegmatite dikes, or in rocks formed by pneumatolytic action. E. T. W.

MOLECULAR DESTRUCTION OF KAOLINITE BY HEAT. A. M. SOKOLOV. *Z. Kryst. Min.*, **55**, 195–196, 1917; thru *J. Chem. Soc.*, **112**, ii, 492, 1917.

From determinations of the water lost at different temperatures and the amounts of silica and alumina extractable from the residues it is concluded that the kaolinite molecule is broken down into its constituent oxides at 800°.

E. T. W.

ZIRCONIA AS A REFRACTORY. E. H. RODD. *J. Soc. Chem. Ind.*, **37**, 213–215, R, 1918.

This article includes data on the occurrence of the rock zirkite (erroneously called a mineral), noting that it contains 3 minerals, "brazilite," zircon, and an unknown silicate of zirconium. Refers to Meyer, *Wileman's Brazilian Review*, **1916**, p. 826.

E. T. W.

THE MICROSTRUCTURE OF CERTAIN TITANIC IRON ORES. CHARLES H. WARREN. *Econ. Geol.*, **13**, 419–446, 1918.

From metallographic studies of titaniferous iron oxide minerals it is concluded that there is partial solid solution between magnetite and ilmenite, and complete solid solution between hematite and ilmenite. In some cases also rutile appears to enter into solid solution as such. E. T. W.

CHEMICAL STUDY OF A TITANIUM MINERAL FROM THE SIERRA DEL PIE DE PALO, SAN JUAN. LUCIANO R. CATALANO. *Anales soc. quim. Argentina*, **6**, 35–48, 83–93, 1918; thru *Chem. Abstr.*, **13** (4), 298, 1919.

Analytical data given for this mineral indicate it to be a variety of ilmenite.

E. T. W.

LEUCITE PSEUDOMORPHOUS AFTER NEPHELITE FROM PARCO CHIGI, ALBANIA. F. ZAMBONINI. *Atti accad. sci. Torino*, **8**, 445–450, 1918; thru *Chem. Abstr.*, **12** (23), 2509, 1918.

Some crystals of nephelite in a rock were found to be altered superficially and in cavities to minute leucite crystals. Some sanidine was admixed, and the material is thought to be the result of the action of solutions containing K_2SiO_3 on nephelite at moderately high temperatures. E. T. W.

NOTES ON THE FORMATION OF CERTAIN ROCK-FORMING MINERALS IN AND ABOUT GLASS FURNACES. G. V. WILSON. *J. Soc. Glass Techn.*, **2**, 177–216, 1918; thru *Chem. Abstr.*, **13** (2), 173–174, 1919.

An elaborate account of the conditions of formation of wollastonite, augite, tridymite, quartz, feldspar, magnetite, biotite, melilite, corundum, and sillimanite.

E. T. W.

THE CALCULATION OF THE "RATIONAL ANALYSIS OF CLAYS." HENRY S. WASHINGTON. *J. Am. Ceram. Soc.*, **1**, 405–421, 1918.

It is pointed out that the results obtained by treating clays with strong reagents are practically impossible to interpret correctly, and the method used with igneous rocks, of making an accurate ultimate analysis and calculating norms, is preferable.

E. T. W.

NOTE ON A PHOSPHORESCENT CALCITE. E. L. NICHOLS AND H. L. HOWES. *Phys. Rev.*, **11**, 327, 1918.

A record of observations on calcite from Franklin Furnace, N. J. It shows a red-yellow phosphorescence of short duration, and the rate of decay of the phosphoresence and the spectrum of the light are described.

E. T. W.

THE PHOTOLUMINESCENCE AND CATHODOLUMINESCENCE OF CALCITE. E. L. NICHOLS, H. L. HOWES, and D. T. WILBER. *Phys. Rev.*, **12**, 351–367, 1918.

The red luminescence of Franklin Furnace calcite appears to be due to the presence of limited amounts of manganese. By adding a salt of this element to pure calcium carbonate and heating, material showing similar effects could be prepared. The physical features of the luminescence are described at length.

E. T. W.

THE CRYSTALLOGRAPHY AND NOMENCLATURE OF HOLLANDITE. L. LEIGH FERMOR. *Rec. Geol. Survey India*, **48**, 103–120, 1917; abstract reprinted by permission from *Chem. Abstr.*, **13** (2), 105, 1919.

Hollandite crystals up to 2 inches (5 cm.) long from the Kajlidongri mine, Jhabua State, Central India, were examined and found to be tetragonal-pyramidal; $c = 0.2039$, with the principal forms m (110), a (100), k (210), p (111) and q (331), and about 57 more or less indefinite forms. Hollandite is considered to be a crystalline form of psilomelane, and a manganate corresponding to the formula H_4MnO_5, probably a member of the scheelite group. Romanéchite of Lacroix and possibly coronadite are identical with hollandite. Fermor suggests that the letter X be prefixed to indicate crystalline phases of amorphous minerals, and the prefix κ to indicate colloidal phases of crystalline minerals.

S. G. G.

THE NUMERICAL RELATIONS BETWEEN THE Et CURVE AND THE Eλ CURVE OF THE EIFEL SANIDINE. S. KÔZU. *J. Geol. Soc. Tokyo*, **25**, 43–45, 1918.

S. G. G.

THE DETERMINATION OF THE LIMITING VALUES OF THE MEDIUM REFRACTIVE INDEX OF A FINELY CRUSHED BIAXIAL CRYSTAL BY THE IMMERSION METHOD. SEITARO TSUBOI. *J. Geol. Soc. Tokyo*, **35**, 38–41, 1918.

The value of index β being always between the two observed on any grain, it is possible to determine it approximately by immersing successively in liquids with indexes differing by 0.003 and observing the relations of the indexes of the grains with that of each liquid on a considerable number of grains.

S. G. G.

SPOTTED LAKES OF EPSOMITE IN WASHINGTON AND BRITISH COLUMBIA. OLAF P. JENKINS. *Am. J. Sci.* [4], **46**, 638–644, 1918.

Epsomite and thenardite occur in lakes on Kruger mountain. These salts are thought to have formed by the action of sulfuric acid from decomposing pyrite in adjacent rocks on other rocks containing Mg, Ca, and Na.

E. T. W.

THE PROBABLE IDENTITY OF PEGANITE WITH VARISCITE. LORENZO MOSCHETTI. *Atti reale accad. sci. Torino*, **53**, 1062–1066, 1917–1918.

A specimen of alleged peganite was analyzed and found to have the composition $AlPO_4.2H_2O$, and because of this and other features it is suggested that peganite is nothing but variscite. [Not the slightest optical or crystallographic data are given, so little weight can be attached to this conclusion. Abstr.] E. T. W.

THE BARITE DEPOSITS OF MISSOURI. WILLIAM A. TARR. *Univ. Missouri Studies*, **3**, 111 pp., 1918.

A detailed description of the mineral association, occurrence, origin, etc., of the barite. S. G. G.

A GRAPHIC INTERGROWTH OF DIOPSIDE AND ILMENITE FROM THE BEMBESI DIAMOND FIELD, SOUTHERN RHODESIA. A. M. MACGREGOR. *Trans. Geol. Soc. S. Africa*, **18**, 1–4, 1916.

The composition and origin of the material are discussed. S. G. G.

THE OCCURRENCE OF RADIOACTIVE MINERALS IN SOUTH AFRICA. A. W. ROGERS. *Trans. Geol. Soc. S. Africa*, **18**, 5–10, 1916; abstract reprinted by permission from *Chem. Abstr.*, **13** (7), 692, 1919.

Monazite, euxenite and fergusonite occur in gravels, with cassiterite, corundum, scheelite, magnetite, and garnet, in Embabaan Swaziland, supposedly derived from the gneissic rocks of the region. Euxenite occurs in pegmatites at Kenhardt. Tantalite and columbite occur in lumps and crystals (one group weighed 16 pounds (7 kg.)) in pegmatite with feldspars, quartz, muscovite, lepidolite, garnet, beryl, and spodumene in Little Namaqualand. Analyses of euxenite, columbite, and tantalite are given. S. G. G.

DESCRIPTION OF A CARBONACEOUS MINERAL OCCURRING IN THE WITKOP MINE, NEAR ZEERUST, TRANSVAAL. C. ANDERSON. *Trans. Geol. Soc. S. Africa*, **18**, 129–131, 1916.

The properties and compositions of specimens consisting of anthraxolite and schungite are described. S. G. G.

NOTES ON THE GEOLOGY OF RHODE ISLAND. A. C. HAWKINS. *Am. J. Sci.* [4], **46**, 437–472, 1918.

The occurrence of orthoclase, epidote, calcite, wernerite, actinolite, and apatite are noted, developed by contact metamorphism at Manton and South Foster. Tiny brilliant white crystals of apatite on biotite showed the forms: o $(00\bar{0}1)$, s $(11\bar{2}1)$, y $(20\bar{2}1)$, x $(10\bar{1}1)$, r $(10\bar{1}2)$, z $(30\bar{3}1)$, a $(10\bar{1}0)$ and $(6.6.\bar{12}.1)$. S. G. G.

A NEW SYNTHESIS OF PHOSGENITE. W. A. HAMOR AND H. E. GILL. *Am. J. Sci.* [4], **47** (6), 430, 1919.

Lead hydroxide and phosgene in excess under pressure were heated in a sealed tube at a number of temperatures from 95° to 250° C., from 1 to 4 hours. The best results were obtained at 175°. The phosgenite crystals were small, but well defined. S. G. G.