

ABSTRACTS OF MINERALOGIC LITERATURE

BIBLIOGRAPHY OF NORTH AMERICAN GEOLOGY FOR 1916.

JOHN M. NICKLES. *U. S. Geol. Survey Bull.* 665, 172 pp., 1917.

Includes many mineralogical articles, and special lists of minerals described and analyzed. E. T. W.

THE IDENTITY OF SHATTUCKITE AND PLANCHÉITE. F. ZAMBONINI. *Compt. rend.*, 166, 495-497, 1918.

The species shattuckite, described by Schaller in 1914, was recognized to be similar to planchéite in composition, but differed in physical properties. Zambonini does not think these properties significant, and concludes the two minerals to be identical. E. T. W.

PLANCHÉITE AND SHATTUCKITE, COPPER SILICATES, ARE NOT THE SAME MINERAL. WALDEMAR T. SCHALLER. *J. Wash. Acad. Sci.*, 9, (5), 131-134, 1919.

Analyses and refractive indices show conclusively that the two minerals are not identical. Analyses of shattuckite give the formula $2\text{CuO} \cdot 2\text{SiO}_2 \cdot \text{H}_2\text{O}$; of planchéite (as revised) $6\text{CuO} \cdot 5\text{SiO}_2 \cdot 2\text{H}_2\text{O}$. New determinations of n by Larsen gave: for shattuckite: $\alpha = 1.752$; $\beta = 1.782$, $\gamma = 1.815$; for planchéite: $\alpha = 1.645$, $\beta = 1.660$, $\gamma = 1.715$. It is suggested that Zambonini's mineral was really shattuckite and not planchéite, or that the material analyzed, if planchéite, contained enough impurities to approximate the composition of shattuckite. S. G. G.

THE FORMATION OF MISSOURI CHERTS. REGINALD S. DEAN. *Am. J. Sci.*, [4], 45, 411-415, 1918.

These cherts are believed to have been formed by the precipitation of colloidal silica by limestone. E. T. W.

MONOCLINIC DOUBLE SELENATES OF THE IRON GROUP. A. E. H. TUTTON. *Proc. Royal Soc.*, 94, A, 362-366, 1918.

Comparative crystallographic and optical measurements of the double selenates of the alkali metals and ammonium with iron show the properties to be closely related to the atomic weights of the metals. E. T. W.

THE OLD AND THE NEW MINERALOGY. HENRY A. MIERS. *J. Chem. Soc.*, 113, 365-386, 1918; abstract reprinted by permission from *Chem. Abstr.*, 12, (17), 1746, 1918.

The Hugo Müller lecture, delivered before the Chem. Soc., April 18, 1918. Comprises a brief account of the interests of the late Hugo Müller and his contributions to science; an outline of the status of mineralogy and related sciences before and after the middle of the nineteenth century; and a review of the most important recent work, such as the relations of chemical composition to crystal form, the application of X-rays to the study of crystal structure, the measuring of geologic time by radioactivity studies, etc. E. T. W.

APPROXIMATE DETERMINATION OF THE MINERALS IN CONCENTRATES BY MEANS OF THE MICROSCOPE. K. THOMAS and F. W. AFGAR. *Met. Chem. Eng.*, 18, 514, 1918.

A sample of the concentrate is spread out evenly on a microscope slide, and the number of grains of each mineral or group of similar minerals is counted, using a magnification of 30-60 diameters. From the results of several such measurements, taking account of the relative sizes of the various grains, fairly accurate estimates of the amounts present can be obtained. E. T. W.

THE TERNARY SYSTEM $MgO-Al_2O_3-SiO_2$. G. A. RANKIN and H. E. MERWIN. *Am. J. Sci.*, [4], 45, 301-325, 1918.

The pure constituents were melted together in various proportions, and the compounds formed studied chemically and optically. Six minerals were formed: periclas(ite), MgO , corundum, Al_2O_3 , tridymite, SiO_2 , cristobalite, SiO_2 , forsterite, $2MgO.SiO_2$, clinoenstatite, $MgO.SiO_2$, spinel, $MgO.Al_2O_3$, sillimanite, $Al_2O_3.SiO_2$, and cordierite (iolite) which when pure has the definite formula $2MgO.2Al_2O_3.5SiO_2$ or $Mg_2Al_4Si_5O_{18}$. [This formula corresponds to that accepted by Dana, omitting the iron and water. ABSTRACTOR.] Extensive data on the stabilities of these substances is included. E. T. W.

THE DEPOSIT OF STIBNITE AND PYRITE IN THE NAUTILOIDES FORMATIONS OF SUSERGIU, SARDINIA. G. LINCIO. *Compt. rend.* 166, 737-738, 1918.

A discussion of the occurrence and origin of various sulfide minerals in fossiliferous shale and limestone. E. T. W.

THE CHEMICAL COMPOSITION OF MELANOPHLOGITE. E. MANZELLA. *Ann. chim. applicata*, 9, 91-101, 1917; thru *Chem. Abstr.*, 12, (19), 1956-1957, 1918.

After attempts at purification, analyses of this material were made, and it is concluded that it consists of SiO_2 containing a variable proportion of SO_3 . [The true nature of the mineral is not, however, explained. ABSTR.] E. T. W.

NOTES ON THE ORIGIN OF COLERAINITE. EUGENE POITEVIN. *Trans. Royal Soc. Canada*, [3], 12, 37-39, 1918.

The Black Lake Area, Quebec, was revisited, and further study showed the need of revision of the original theory of the origin of the mineral (cf. *Am. Min.* 3, 165, 1918). Colerainite was observed in place confined to those portions of the pegmatite dikes subject to the action of surface waters, associated with porcellophite, aphrodite, mica, garnet, tourmaline and zircon. The theory is now presented that the colerainite was formed near the surface of the pegmatite dikes as the result of the action of magnesia-bearing surface waters on the aluminous minerals of the dike. S. G. G.

MINERALOGY OF THE H. B. MINE, SALMO, B. C. T. L. WALKER. (*Toronto*) *University studies, Geol. Series*, No. 10, 25 pages, 1918.

A collection of papers on the minerals of this locality, most of which have been previously published elsewhere. Full descriptions, with crystal drawings and analyses, are given of calamine, spencerite, hopeite, parahopeite, hibbenite, a clay crust of stalactites, and cerussite. E. T. W.

THE PRODUCTION OF PRECIOUS STONES FOR THE YEAR 1917. GEORGE F. KUNZ. *Mineral Industry*, 26, 576-601, 1918.

A discussion of trade conditions, with detailed accounts of occurrences of

diamond, pearls, opal, and chrysolite; also miscellaneous precious stones in California, Brazil, Madagascar, and Australia. E. T. W.

THE OXIDIZED ZINC ORES OF LEADVILLE, COLORADO. G. F. LOUGHLIN. *U. S. G. S. Bull.* 681, 91 pp., 1918.

Altho primarily a description of the ore deposits and a discussion of their origin, the bulletin reviews the occurrences of the minerals of the deposits and their paragenesis. S. G. G.

NOTES ON MIMETITE, THAUMASITE AND WAVELLITE. EDGAR T. WHERRY. *Proc. U. S. Nat. Mus.*, 54, 373-381, 1918.

A specimen labeled "penfieldite, Tintic District, Utah," was shown by optical, chemical, and crystallographic study to be mimetite. Two new forms, α (3032) and z (3031) were observed.

In a lot of 50,000 minute thaumasite crystals from West Paterson, 5 were found with pyramidal forms. The axial ratio $c = 0.931 \pm 0.003$, and the forms represented are: $c(0001)$, $a(11\bar{2}0)^*$, $m(10\bar{1}0)$, $e(10\bar{1}2)^*$, $f(20\bar{2}3)^*$, $p(10\bar{1}1)$ and $g(30\bar{3}2)^*$. (New forms starred*.) The chemical composition of this mineral is discussed, and it is shown to be a sulfate, belonging in a group with conchellite and hanksite.

Measurable crystals of wavellite have been found at Hellertown, Pa. Their forms are described, and an analysis given. The mean of all recent values for the axial ratio of this mineral is: $a : b : c = 0.564 : 1 : 0.404$. The Groth formula is accepted.

(Note: The following misprints in this paper may be corrected here: page 375, line 21, for $10\bar{1}1$, read $10\bar{1}0$; page 379, line 22, for p read o ; and line 23, for $5'$ read 5 ; reprints obtainable from author on request.) S. G. G.

THE DISCOVERY OF A METHOD OF ARRESTING THE DECOMPOSITION OF METEORIC IRONS, APPLIED SUCCESSFULLY TO METEORITES IN THE BRITISH MUSEUM (NATURAL HISTORY). G. F. H. SMITH. *Geol. Mag.*, [6], 6, (1), 47-48, 1919.

The irons are coated with a thin transparent film of shellac by the process of french-polishing. S. G. G.

THE FAYETTE COUNTY, TEXAS, METEORITE FINDS OF 1878 AND 1900 AND THE PROBABILITY OF THEIR REPRESENTING TWO DISTINCT FALLS. GEORGE P. MERRILL. *Proc. U. S. Nat. Mus.*, 54, 557-561, 1918.

The find of 1900 differs from that of 1878 (Bluff) in the physical conditions of the olivine and enstatite, which in the 1900 stone are clear and pellucid, and that of 1878 filled with dust-like particles. Further, the ground of the 1900 stone is doubtfully crystalline; fragmental, and to be classed as a veined spherulitic chondrite (Cca); the numerous chondrules are composed wholly of polysynthetically twinned pyroxene, none of which appears in the 1878 find. The 1900 find is more deeply weathered than that of 1878. The 1900 stone is peculiarly pitted in the interior in contrast with the compact exterior portion, the cause of which cannot be satisfactorily explained. It is suggested that the newer find be named the Cedar, Fayette County, stone. S. G. G.