OCCURRENCE

Colerainite occurs in veins believed to be of pegmatitic origin in serpentine. Found at the old Standard mine and on the dumps of the Union Pit, Coleraine Township, Megantic County, Quebec. S. G. G.

ABSTRACTS OF MINERALOGIC LITERATURE

CONTRIBUTIONS TO THE MINERALOGY OF BLACK LAKE AREA, QUEBEC. EUGENE POITEVIN and R. P. D. GRAHAM; *Canada Dept. Mines, Museum Bull.* **27**, 82 pp., 12 pl., 22 figs.; 1918.

This bulletin is descriptive of the minerals of the Black Lake Area, in the "serpentine belt," Megantic township, Quebec. The rocks of the belt are predominantly basic,—gabbro, diabase breccia, pyroxenite, peridotite, and serpentine,—but include granite and aplite; all are believed to have originated by progressive differentiation from a single parent magma.

A peculiar occurrence is that of calcium silicates, diopside, vesuvianite and grossularite in compact granular dikes in peridotite or serpentine. It is suggested that these dikes were deposited by hydrothermal solutions as the last stage of the intrusion, deriving much of the lime from the walls of the fissure thru which the solutions passed.

Thirty-four minerals are described, including diamond, chromite, quartz, calcite, aragonite, stichtite, diopside, grossularite, vesuvianite, clinochlore, serpentine, apatite, and one new mineral, colerainite (described under that heading above).

Microscopic diamonds occur in chromite, the crystals exhibiting parallel growth of the octahedron.

The following doubtful forms were observed on quartz: $(13.6.\bar{1}\bar{9}.6)$, $(9.5.\bar{1}\bar{4}.5)$, $(13.9.\bar{2}\bar{2}.9)$, $(6.5.\bar{1}\bar{1}.5)$, the last fairly well defined.

The rare mineral stichtite, previously found only in Tasmania, was noted at the old Megantic mine, occurring as small lilac-colored patches or narrow veinlets in serpentine.

Diopside occurs in several varieties, one remarkable absolutely colorless and transparent, in pseudoprismatic crystals due to the unique development of the acute hemi-pyramid λ $(\bar{3}31)$. Thirty-nine forms were observed, including the new ones: χ_1 (610), D_1 (13.0.4), J_1 (902), I_1(701), Y(423), r. $(\bar{1}5.4.\text{-}10)$, s. $(\bar{5}34)$, x_1 $(\bar{7}73)$, δ_1 $(\bar{8}.11.4)$, N_1 $(\bar{1}91)$, O_1 $(\bar{1}\bar{0}.13.3)$; and the rare forms: g (210), $\Re$ (140), F (301), I (702), M (401), Ψ (501), n $(\bar{1}02)$, ρ $(\bar{3}32)$, W $(\bar{4}41)$, L $(\bar{1}31)$, ϵ $(\bar{1}21)$, and λ_1 $(\bar{5}52)$. An analysis gave: SiO_2 54.77, Fe_2O_3 0.17, FeO 0.89, MnO 0.11, MgO 18.46, CaO 26.33, sum 100.73 %. The refractive indices were determined by total reflection: $\alpha = 1.669$, $\beta = 1.676$, $\gamma = 1.698$.

Grossularite occurs, exhibiting the following forms: a (100), δ (610), e (210), g (320), r (332), m (311), n (211), and s (321); an analysis is given.

Vesuvianite occurs in a variety of colors and fairly rich in forms, including the rare ones v (151), and r (461). An average of 10 fairly good determinations of n by total reflection gave $\omega = 1.768$, $\epsilon = 1.705$, $\omega - \epsilon = 0.003$. Several analyses are given. S. G. G.

WEATHERING OF ALLANITE. THOMAS L. WATSON. Univ. of Virginia. *Bull. Geol. Soc. Amer.*, **28**, 463–500, 1917.

The distribution of allanite in the eastern United States is described, with data as to occurrence and composition. The ordinary black vitreous allanite is apparently not homogeneous, but is made up of at least two types which vary in proportion: one is isotropic, the other birefracting, and probably derived from the former by alteration.

When found at or near the surface, the allanite masses are usually partially or entirely encrusted with a reddish-brown alteration product, composed of a variable mixture of colloidal or metacolloidal isotropic and weakly birefracting grains. Chemical analyses disclose the variable nature of the altered product, composed chiefly of water, ferric oxide, alumina, ceria and silica. S. G. G.

THE RADIOACTIVITY OF ALLANITE. L. S. PRATT. Univ. of Virginia. *Trans. Am. Inst. Min. Eng.*, **60**, 935, 1917.

The radioactivity of allanite from Topsham, Maine, was measured with an electroscope. S. G. G.

NOTES ON THE TECHNIQUE OF MINERAGRAPHY. W. L. WHITEHEAD, *Econ. Geol.*, **12**, (8), 697–716, 1917.

The preparation of polished sections of sulfides presents difficulties due to variations in hardness, pronounced cleavage, etc., causing the formation of pits, cracks, and high relief, which obscure the contact relations. Accordingly elaborate methods have been developed for grinding and polishing sections, which are described in great detail, with further notes on microscopic and photomicrographic procedure. A method for the identification of the silver sulfides by "light etching," and a table of microchemical tests is also given. S. G. G.

MINASRAGRITE, A HYDROUS SULFATE OF VANADIUM. WALDEMAR T. SCHALLER. U. S. Geol. Survey. *J. Wash. Acad. Sci.*, **7**, (16), 501–503, 1917.

This mineral was first noted in "Four new minerals," described in *J. Wash. Acad. Sci.*, **5**, (1), 7, 1915; and later (W. T. S., priv. contr.) in the *Third Appendix* to *Dana's System of Mineralogy*, p. 51, 1915. The present paper presents an analysis of the mineral. From examination of cleavage fragments it is concluded that it is monoclinic or triclinic. S. G. G.

A NEW METEORITE. HENRY L. WARD. Public Museum of Milwaukee. *Science*, **46**, (1185), 262, 1917.

Note of fall of an achondritic aerolite in Colby, Wis., July 4, 1917, about 6.20 P. M. A brief description is given of the stone. S. G. G.

AN EGYPTIAN METEORITE. HENRY WILDE. *Manchester Lit. Phil. Soc. Memoir* **4**, 1917, 2 pp.

Note on a stone weighing 3.5 lbs. that fell near the encampment of a British regiment on the Sinai Peninsula, in August, 1916. S. G. G.

ON THE PHOTOGRAPHIC SPECTRA OF METEORITES. Sir William Crookes. *Phil. Trans. Roy. Soc. London*, **217** (A, 559) 441–450, 1917.

The spectroscope used is described in detail. The arc spectra of 30 aerolites were examined. S. G. G.

LOW-TEMPERATURE FORMATION OF ALKALINE FELDSPARS IN LIMESTONES. Reginald A. Daly, Harvard University. *Proc. Nat. Acad. Sci.*, **3**, (11), 659–665, 1917.

The author reviews the work of ten writers describing the occurrence of orthoclase and albite in automorphic crystals in non-metamorphosed limestones, describing another similar occurrence in the Rocky Mt. dolomite at Waterton Lake, with analyses. It is believed that the minerals crystallized at low temperatures in the calcareous muds. S. G. G.

THE FORMATION OF CRYSTALS IN GELS. Harry N. Holmes, Oberlin College. *J. Frank. Inst.*, **184**, (6), 743–773, 1917; *J. Phys. Chem.*, **21**, (9), 709–733, 1917.

A number of experiments were made in growing crystals of metallic salts in gels (principally silicic acid gel), by diffusion. Good crystals, sometimes of large size, were obtained. S. G. G.

FAMATINITE FROM GOLDFIELD, NEVADA. Earl V. Shannon *Am. J. Sci.* [4], **44**, (12), 469–470, 1917.

Famatinite is shown to be isomorphous with enargite; prism angles:

	Observed. Famatinite	Enargite (Dana)
$x : x'''$	60° 24′	60° 17′
$h : h$	59° 12′	59° 43′

The domes observed, (104) and (025), gave too poor reflections for the calculation of the *c* axis. S. G. G.

THE MINERALS OF THE MEEKATHARRA DISTRICT (WESTERN AUSTRALIA). E. S. Simpson. Western Australia Geol. Survey. *Bull.* **68** 288–307, 1917.

An annotated list of the minerals of the district and their paragenesis. S. G. G.

VIVIANITE FROM THE LAND PEBBLE PHOSPHATE DEPOSITS OF FLORIDA. Thomas L. Watson and Stapleton D. Gooch. *J. Wash. Acad. Sci.*, **8**, (4), 82–88, 1918.

Vivianite occurs distributed irregularly as single crystals and crystalline aggregates in a ferruginous or dark yellow ocherous earth, about 1½ m. southeast of Plant City, Fla. A description of the physical and optical properties of the material is given, with an analysis. The color of the mineral varies from light green to indigo blue. The latter color is also derived from the former by exposure to light, and is caused by oxidation, induced by fine grinding of the mineral. The vivianite is of secondary origin, formed, it is believed, by the action of ferrous iron in solution on the phosphate pebbles. S. G. G.