

NEW MINERALS

Crestmoreite

Crestmoreite, a new mineral; in: Minerals associated with the crystalline limestone at Crestmore, Riverside County, California. Arthur S. Eakle, Univ. of Cal. *Bull. Dept. Geol.*, 10, (19), 344-346, 1917.

NAME: After the locality, Crestmore, Riverside Co., Cal.

PHYSICAL PROPERTIES

Color: Snow-white; luster: vitreous to dull; structure: compact massive. H. = 3. G. = 2.22.

OPTICAL PROPERTIES

Crestmoreite has parallel extinction, positive elongation, low birefringence, and $\beta = 1.590 \pm 0.005$.

CHEMICAL PROPERTIES

As most of the water is given off only at high temperatures it is regarded as constitutional, and the formula written as a hydrous basic metasilicate, H_2CaSiO_4 . It is presumably an alteration product of wilkeite, and contains small amounts of the phosphate, sulfate and carbonate radicals.

It fuses quietly and easily to a slightly vesicular glass. Easily soluble in acid, leaving some flocculent silica, while most of the silica goes into solution. Some of the lime can be extracted by boiling water.

It is found disseminated in bunches in blue calcite, probably an alteration product *in situ* of wilkeite. S. G. G.

Riversideite

Riversideite, a new mineral. Arthur S. Eakle, *loc. cit.*

NAME: After the county in which it occurs.

PHYSICAL PROPERTIES

Color: white; luster: silky; structure: compact fibrous. H. = 3. G. = 2.64.

OPTICAL PROPERTIES (by Esper S. Larsen)

$\alpha = 1.595 \pm 0.003$, $\gamma = 1.603 \pm 0.003$; extinction, parallel; Z parallel to the fibers.

CHEMICAL PROPERTIES

The simplest formula is $2CaSiO_3 \cdot H_2O$, but it contains also P_2O_5 and SO_3 , possibly due to indirect formation from wilkeite or crestmoreite.

Riversideite fuses at 2 to a white glass. It is easily soluble in dilute acids, leaving flocculent silica.

It occurs as narrow seams in masses of vesuvianite.

S. G. G.

ABSTRACTS OF MINERALOGIC LITERATURE

MINERALS ASSOCIATED WITH THE CRYSTALLINE LIMESTONE AT CRESTMORE, RIVERSIDE COUNTY, CALIFORNIA. ARTHUR S. EAKLE, *Univ. Cal. Bull. Dept. Geol.*, 10 (19), 327-360, 1917. [For sale by University of California Press, Berkeley, Cal.]

At Crestmore, eight miles westerly from Riverside, there is an isolated mass of granodiorite with a capping of crystalline limestone in which there have been developed upwards of 50 minerals by contact and hydrothermal metamorphism. Chino Hill consists of white limestone, with little development of metamorphic minerals. Brucite occurs disseminated thru the limestone in rounded, pisolitic bodies, and it is presumed that it is an alteration product of primary periclase. Some of the brucite has been altered to hydromagnesite. Other minerals are graphite, phlogopite and serpentine.

The limestone of "Sky Blue Hill" was subjected to later and more intensified metamorphism by intrusions of quartz-monzonite and pegmatite, and by the hydrothermal action of the silicated-carbonated solutions accompanying or following these intrusions. Calcite of an intense blue color has developed by recrystallization and occurs in large cleavage rhombohedrons. It forms the matrix of wilkeite, crestmöreite, xanthophyllite, monticellite, and also contains minute crystals of vesuvianite and diopside. Wollastonite has been abundantly formed, and is represented by several varieties, one a fine granular, friable, and loosely coherent material. Well-formed crystals occur, glassy white to clear and colorless, on which 31 forms were observed, among them the following new ones: *l* (740), *m* (140), *r* (104), *θ* (104), *p* (111), *p* (744), *o* (344), *n* (144), *δ* (744), *i* (344), *u* (144), *ω* (142), and *ε* (142). A unique fact about one type of the crystals is that for every positive pyramid there is a negative one with like symbols, but the symbols for the rear faces do not correspond to the front ones; these crystals have three or four prism faces on their ends, each representing a different form. There is thus no apparent axis of symmetry, and the crystals could belong to the hemimorphic class of the monoclinic system or to the triclinic system. The mineral is strongly triboluminescent. An analysis is given. The following optical properties were determined by E. S. Larsen: $\alpha = 1.614$, $\beta = 1.629$, $\gamma = 1.631$; $2E = 58^\circ \pm 5^\circ$; $2V = 35^\circ \pm 4^\circ$; *Y* || fibers; *Z* ⊥ fibers; parallel extinction; dispersion perceptible.

Vesuvianite occurs both massive and in crystals, 13 faces being identified, among which one is new: *n* (154). Analysis of green vesuvianite is presented.

Diopside is found in crystals associated with garnet. The following new form was identified: *n* (231).

Two new minerals, crestmöreite and riversideite, are described, and are here noted under that heading.

The following minerals are also noted: grossularite (with an analysis), xanthophyllite var. valuevite (with an analysis), monticellite (with an analysis), wilkeite (with an analysis), clinocllore, apatite, aragonite; in the intrusives: feldspars, pyroxene, augite, hornblende, biotite, titanite, zircon, epidote, quartz, tourmaline, axinite, datolite, scapolite, apophyllite, okenite (with an analysis), orange-colored prehnite (with an analysis), laumontite (with an analysis), opal, a number of sulfides, azurite, malachite, limonite, and hematite.

An excellent photograph of the district is appended.

S. G. G.

THE MINERAL COLORING THE PLASMA OF MADAGASCAR. AND CELADONITE. A LACROIX. *Bull. soc. franc. min.*, 39 (5), 90-95, 1916. Abstract by P. A. v. D. MEULEN, reprinted by permission from *Chem. Abstr.*, 11 (2), 132, 1917.

The coloring material of the plasma consists of a mineral with optical properties similar to those of mica. The substance is undoubtedly celadonite, which L. considers as being probably not one mineral, but a group of minerals, the optical properties of whose members vary but slightly with variation in the composition. Analyses of celadonite are given.

THE EXISTENCE OF RANDANNITE IN MADAGASCAR. A. LACROIX. *Bull. soc. franc. min.*, 39 (4), 85-88, 1916.

The material so named is a diatomaceous earth, and should be classed as a rock rather than a mineral, altho listed by Dana; an analysis of the Madagascar occurrence is given.

E. T. W.

SOME REACTIONS INVOLVED IN SECONDARY COPPER SULFIDE ENRICHMENT. E. G. ZIES, E. T. ALLEN, and H. E. MERWIN, *Geophys. Lab. Econ. Geol.*, 11 (6), 407-503, 1916.

A description of elaborate experiments performed on chalcopyrite, bornite, and other sulfide minerals, consisting of heating them under various conditions with solutions of copper sulfate, sulfuric acid, etc. Chalcocite, covellite, metallic copper, etc., were obtained, and their conditions of formation are discussed.

E. T. W.