A

SYSTEM

OF

MINERALOGY.

DESCRIPTIVE MINERALOGY,

COMPRISING THE

MOST RECENT DISCOVERIES.

BY

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"*Hæc studia nobiscum peregrinantur....rusticantur.*"

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1868.

Obs.—Occurs with other antimonial ores, and results from their alteration. Found at Przibram in Bohemia, in veins traversing metamorphic rocks; at Felsobanya in Hungary, with stibnite and arsenopyrite; Malaczka in Hungary; Bräunsdorf near Freiberg in Saxony; Allemont in Dauphiny. Also at the antimony mine of South Ham, Canada East.

Antimonophyllite of Breithaupt, of unknown locality, occurring in thin angular six-sided prisms, is probably valentinite.

The *prismatic* form of $\dot{S}b$ is obtained from solutions at a temperature above 100°C.

Named after Basil Valentine, an alchemist of the 15th century, who discovered the properties of antimony.

222. BISMITE. Oxyd of Bismuth, Bismuth Ochre. Wismuthocker *Germ.* Bismuth oxydé *Fr.* Bismite *Dana.*

Crystalline form not observed. Occurs massive and disseminated, pulverulent, earthy; also passing into foliated.

G.=4·3611, Büsson. Lustre adamantine—dull, earthy. Color greenish-yellow, straw-yellow, grayish-white. Fracture conchoidal—earthy.

Comp.—$\dot{B}i$=Oxygen 10·35, bismuth 89·65=100, along with some iron and other impurities. Analysis by Lampadius (Handb. ch. Anal., 286):

Oxyd of bismuth 86·4, oxyd of iron 5·1, carbonic acid 4·1, water 3·4=99.

Suckow obtained for another from Fichtelgebirge, derived from the decomposition of aikinite (Die Verwitt. im Min., 14), $\dot{B}i$ 96·5, $\dot{A}s$ 1·5, $\dot{F}e^3$ H^3 2·0=100.

Pyr., etc.—In the closed tube most specimens give off water. B.B. on charcoal fuses, and is easily reduced to metallic bismuth, which in O.F. gives a yellow coating of oxyd. Soluble in nitric acid.

Obs.—Occurs pulverulent at Schneeberg in Saxony, at Joachimsthal in Bohemia; with native gold at Beresof in Siberia; in Cornwall, in St. Roach, and near Lostwithiel.

Dr. Jackson reports an oxyd of bismuth not carbonated, as occurring with the tetradymite of Virginia.

See further, BISMUTITE, p 716.

223. KARELINITE. Karelinit *Hermann*, J. pr. Ch., lxxv. 448, 1858.

Massive. Structure crystalline. Cleavage in one direction rather distinct.

H.=2. G.=6·60, Herm. Lustre strongly metallic within. Color lead-gray.

Comp.—$\dot{B}i$ with $\dot{B}i\ddot{S}$. Analysis: Hermann (l. c.):

O [5·21] S 3·53 Bi 91·26=100

Pyr., etc.—In tube gives sulphurous acid but no sulphur, yielding a gray slag with globules of bismuth.

Obs.—From the Savodinsk mine in the Altai, along with hessite (telluric silver). The mineral is not homogeneous, containing along with the metallic substance a gray, earthy mass of bismutite. By treating the powdered mass with muriatic acid, a metallic powder remains, which, examined with a lens, and washed, proves to be entirely free from any native bismuth, and is the mineral karelinite.

Named after Mr. Karelin, the discoverer.

224. MOLYBDITE. Molybdena or Molybdic Ochre, Molybdic Acid. Molybdänocker *Germ.* Molybdine *Greg & Lettsom*, This Min., 144, 1854. Brit. Min., 848, 1858. Molybdite *Breith.*, B. H. Ztg., xvii. 125, 1858.

Orthorhombic. $I \wedge I = 136° 48'$, and isomorphous with valentinite, Breith.