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forty feet square yielding emeralds, while still others have afforded quartz, rutile, monazite, mica and other species. So far as the explorations have been carried, the pockets have been in a crumbling condition and the crystals have been found detached, lying in the bottom of the cavities. As the work is carried down deeper it is to be expected that the rock will increase in firmness. The largest cavity yet discovered had a depth of sixteen feet, and was three feet wide and seven in length. The surface walls were thickly studded with large crystals of quartz, some of twenty-five pounds in weight, and with them nine fine emeralds. Their form was that of a twelve-sided prism (*I* and *i-2*), with basal planes, all well polished. The largest crystal had a length of eight and one-half inches and an average diameter of one inch. The others varied in length from two to six inches. Most of the crystals found are vertically deeply striated or ribbed, and are transparent, though not free from flaws. In some of the crystals the color near the surface is the deepest and the core is nearly colorless. The North Carolina emeralds do not quite equal in color those from Muso, New Granada, but are nevertheless very beautiful and will bear comparison with those from other known localities.

8. *Brief notices of some recently described minerals.* (Continued from page 155.) **ILESITE.**—A white friable mineral with a bitter, astringent taste, readily soluble in cold water. An analysis afforded Dr. Iles— $\text{SO}_3$  35.85,  $\text{MnO}$  23.18,  $\text{FeO}$  4.55,  $\text{ZnO}$  5.63  $\text{H}_2\text{O}$  30.18=99.39, corresponding approximately to  $\text{Mn}(\text{Fe}, \text{Zn})\text{SO}_4 + 4\text{aq}$ . Occurs with pyrite and sphalerite forming a band two to eight inches in width; locality, Hall Valley, Park Co., Colorado. Named after Dr. M. W. Iles, of Leadville.—*Mining Index*, Leadville, Nov. 5, 1881.

**SEMSEYITE.**—Briefly mentioned by Kreuner as a mineral containing lead, antimony and sulphur, occurring in gray crystals, and resembling pligionite. Found with diaphorite, sphalerite and pyrite at Felsöbanya.—*Ungarische Revue*, April, 1881.

**ÄNNERÖDITE.**—Occurs in crystals closely related to columbite both in habit and angles.  $\text{H.}=6$ .  $\text{G.}=5.7$ . Luster metallic to submetallic. Color, black to blackish-brown. Translucent in thin splinters. Fracture sub-conchoidal. An analysis by C. W. Blomstrand gave  $\text{Cb}_2\text{O}_3$  48.13,  $\text{SnO}_2$  0.16,  $\text{SiO}_2$  2.51,  $\text{ZrO}_2$  1.97,  $\text{ThO}_2$  2.37,  $\text{U}_2\text{O}_3$  16.28,  $\text{Ce}_2\text{O}_3$  2.56,  $\text{Y}_2\text{O}_3$  7.10,  $\text{PbO}$  2.40,  $\text{FeO}$  3.38,  $\text{MnO}$  0.20,  $\text{CaO}$  3.35,  $\text{MgO}$  0.15,  $\text{K}_2\text{O}$  0.16,  $\text{Na}_2\text{O}$  0.32,  $\text{Al}_2\text{O}_3$  0.28,  $\text{H}_2\text{O}$  8.19=99.51. The formula deduced is  $\text{R}_2\text{Cb}_2\text{O}_7 + 2\frac{1}{2}\text{aq}$ , which makes the mineral related in composition to samarskite. Found in a pegmatite vein at Ännerod, near Moss, Norway. Described by W. C. Brögger.—*Geol. För. i. Stockholm Förhandl.*, v, 354, 1881.

**ZINCALUMINITE.**—Found in very small thin hexagonal crystals; optically, uniaxial negative. Color white, or slightly tinted with blue. An analysis by Damour gave  $\text{SO}_3$  12.94,  $\text{Al}_2\text{O}_3$  25.48,  $\text{ZnO}$  34.69,  $\text{CuO}$  1.85,  $\text{H}_2\text{O}$  25.04=100. From the

zinc mines at Laurium, Greece, associated with smithsonite, serpentine and several undetermined species. Described by Bertrand and Damour.—*Bull. Soc. Min. de France*, iv, 185, 136, 1881.

ALASKAITE.—Massive, small foliated.  $G.=6.878$ . Luster, metallic. Color, whitish lead-gray. Opaque. Analysis (after deducting impurities), S 17.83, Bi 56.97, Sb 0.62, Pb 11.79, Ag 8.74, Cu 3.46, Zn 0.79=100; another analysis gave 3 p. c. Ag, and 5.38 p. c. Cu. The formula deduced is  $(R,R)S+Bi_2S_3$ . Occurs intimately mixed with quartz, barite, chalcopyrite and tetraedrite at the Alaska mine, Poughkeepsie Gulch, Colorado. Described by G. A. König.—*Amer. Phil. Soc. Philad.*, 1881, 472.

9. *Artificial formation of the Potash-feldspar, Orthoclase*; by C. FRIEDEL and E. SARASIN (*Bull. Soc. Min. de France*, iv, 171).—The process used by these chemists for the formation of orthoclase in crystals consisted in heating together in a tube of steel having red copper within, for 15 to 20 hours to a temperature between 400 and 500° C., a mixture one part of aluminum silicate and another of a potassium silicate rich in alkali. A higher temperature was disadvantageous, it producing a crystallization of the silica either as quartz or as tridymite. The trials gave a crystalline powder, which was made up of crystals of orthoclase large enough to be studied crystallographically. Thoulet's method gave for the specific gravity that of orthoclase. An analysis afforded alumina 15.59, potash 14.38, leaving for the silica 70.03. There is here an excess of silica of 6.30 per cent, which was due to the presence of some free silica; the other ingredients have the orthoclase proportions. The authors did not succeed when the mixture was made to consist of silica, alumina and potash, in the proportions they have in orthoclase.

10. *English Plant-Names from the Tenth to the Fifteenth Century*. By JOHN EARLE, M.A., Rector of Swanswick, Professor of Anglo-Saxon in University of Oxford. Oxford: Clarendon Press, 1880. 16mo, pp. cxii and 122.—A notable little book, consisting in the first place,—yet in the volume occupying the last place,—of sundry Saxon vocabularies in which “the native plant-names have been preserved in the most primitive form extant, printed for the use of friends of Saxon studies” without any idea of making a book. To this is prefixed an Introduction, on the history of plant-names from Theophrastus down to the modern system of nomenclature; the signification of the old native plant-names; their relation to the Roman ones; grammatical elements of English plant-names; on the neglect of vernacular names, etc. Of the matters linguistic we are not now to speak; and probably Professor Earle is only a superficial botanist. But his sketch of the history of nomenclature, and of the development of mere herb-lore or the rude knowledge of simples into botanical science is as critically excellent as it is terse and fresh. Indeed, we know of nothing half so good within so small a compass. Then we begin to understand “the fascination of vernacular plant-names,” which, as the author remarks, “has its foundation in two instincts,