

NEW MINERALS—DOUBTFUL SPECIES

FAMILY 2. SULFIDES, ETC.

(Unnamed)

S. PIÑA DE RUBIES: A new antimoniferous bismuth sulfide mineral. *Anales soc. españ. fis. quim.*, 18, 335-338, 1920.

PHYSICAL PROPERTIES: Metallic. Structure fibrous. H. = 2; sp. gr. = 6.8. Unusual in conducting electricity.

CHEMICAL PROPERTIES: Analysis leads to formula  $8\text{Bi}_2\text{S}_3\cdot\text{Sb}_2\text{S}_3\cdot\text{Bi}_2(\text{Se}, \text{Te})_3$ .

OCCURRENCE: Found associated with "oruetite" (*Am. Min.*, 4, 152, 1919).

DISCUSSION: [This, like "oruetite," is clearly a mixture or solid solution, and it is fortunate that the author in this case did not venture to name it. A mineralogical study of it would be interesting.] E. T. W.

FAMILY 7. PHOSPHATES, ETC.

Schafarzikite

JOSEPH A. KRENNER: Schafarzikit, ein neues Mineral. (Schafarzikite, a new mineral.) Presented to the Hungarian Scientific Academy, January 15, 1915; published in *Zeitschrift für Kristallographie*, 56 (2), 198-200, 1921 (after death of author).

NAME: In honor of Professor Franz Schafarzik of Budapest.

PHYSICAL PROPERTIES: Color red, resembling kermesite. Cleavage perfect on 1st and 2d prisms, best on (110).

CRYSTALLOGRAPHIC PROPERTIES: Tetragonal, holohedral.  $a : c = 1 : 0.9787$ . Forms  $a$  (100),  $c$  (001),  $v$  (201),  $e$  (102),  $l$  (301),  $r$  (312). Habit prismatic to thick-needle-like, vertically striated.

CHEMICAL PROPERTIES: Gives qualitative tests for iron and phosphorus, and since it is isomorphous with trippkeite, which is supposed to be a copper arsenite, it is suggested to be an iron phosphite.

OCCURRENCE: Occurs in the antimony mine at Pernek, Comitad Pozsony, mingled with the independent of the oxidation products of the stibnite, especially valentinite, senarmonite and kermesite. W. F. F.

DISCUSSION: [Crystallographically this is near eosite, heldburgite and trippkeite, but curiously enough the composition of none of these is known. It should not be accepted as a distinct new species until enough material is found for further chemical work and for optical study.] E. T. W.

FAMILY 9. SILICATES

Ferroanthophyllite

EARL V. SHANNON: Description of ferroanthophyllite, an orthorhombic iron amphibole from Idaho, with a note on the nomenclature of the anthophyllite group. *Proc. U. S. Nat. Mus.*, 59, 397-401, 1921.

NAME: From *ferrum*, iron, and the mineral name; preferred to iron-anthophyllite, the translation of the German term eisenanthophyllit (used by Palmgren, 1917). "This nomenclature is in accord with that recently used by American mineralogists to designate end-members of isomorphous groups."

**PHYSICAL PROPERTIES:** Color pale grayish green, olive green when moist; luster silky; soft; sp. gr. 3.24. Structure splintery-fibrous; resembling impure chrysotile.

**OPTICAL PROPERTIES:** Refractive indices:  $\alpha$  1.668,  $\gamma$  1.685,  $\gamma - \alpha$  0.017, all  $\pm$  0.003. 2V large. Pleochroism distinct in aggregates,  $\alpha$  pale brownish green,  $\gamma$  deep brownish green. Extinction parallel; elongation +.

**CHEMICAL PROPERTIES:** Before the blowpipe fuses at high temperature to a magnetic slag. Reacts for Fe and Mn. Analysis on material shown to be pure by optical study gave: SiO<sub>2</sub> 49.30, Al<sub>2</sub>O<sub>3</sub> 1.30, Fe<sub>2</sub>O<sub>3</sub> 2.15, FeO 30.50, MnO 3.48, CaO 10.73, MgO 0.66, H<sub>2</sub>O - 0.18, H<sub>2</sub>O + 2.13, sum 100.43 per cent. After deducting the Al<sub>2</sub>O<sub>3</sub> and Fe<sub>2</sub>O<sub>3</sub> as gedrite, but admitting the H<sub>2</sub>O + as constitutional, this gives the ratio RO : SiO<sub>2</sub> = 1.00 : 1.02, so that the formula may be stated as: (Fe, Ca, H<sub>2</sub>, Mn)O.SiO<sub>2</sub>.

**OCCURRENCE:** Associated with galenite, in the Tamarack-Custer mine near Gem, Coeur d'Alene District, Idaho. Found also in the Hercules mine in the same district.

**DISCUSSION:** Here belongs also the "anthophyllite" which appeared to be an iron metasilicate described by Warren from Cape Ann, Mass., in 1903; and the "eisenanthophyllit" from Sweden described by Palmgren in 1917.

[Preferably classed as a sub-species. Abstractor.]

E. T. W.

#### Magnesioanthophyllite

EARL V. SHANNON, *loc. cit.* (preceding abstract). The chemical name of the magnesium end-member of the anthophyllite series, complementary to the above name, ferroanthophyllite. The possibility of the existence of Ca and Mn end-members is also indicated (but they need not be named until actually found).

E. T. W.

#### Amosite

This mineral was announced about two years ago in this column (*Am. Min.*, 5, 16) but was included under doubtful and discredited species because the original description was incomplete. Another paper including data upon it has recently been received: A. L. Hall, Asbestos in the Union of South Africa. *Un. S. Afr. Geol. Survey, Mem.* 12, 152 pp., 1918. The average of 7 rather wide-ranging analyses, with Fe<sub>2</sub>O<sub>3</sub> recalculated to FeO, gives: SiO<sub>2</sub> 49.58, Al<sub>2</sub>O<sub>3</sub> 2.25, FeO 39.64, MgO 4.79, CaO 0.53, H<sub>2</sub>O 3.16, sum 99.95%. This being very close to the composition of grüenerite and of ferroanthophyllite, it seemed desirable to study amosite optically.

A specimen of "amosite" was obtained thru the kindness of Mr. E. B. Sampson of the U. S. Geological Survey and examined by the abstractor. It showed, within the limits of error of measurement, the exact optical properties of ferroanthophyllite as above given. The latter name, in its German form, has priority. "Amosite" therefore comprises both grüenerite (the original monoclinic material) and ferro-anthophyllite.

E. T. W.