

## NEW MINERAL NAMES

### Lembergite

TOSIO SUDO, On some low temperature hydrous silicates found in Japan. *Bull. Chem. Soc. Japan*, **18**, 281-329 (1943).

This name, for J. Lemberg, who described similar material in 1877, is given to a dark green to brownish-green mineral found in several Japanese deposits of iron-bearing sandstones. These ores contain magnetite, augite, feldspar, quartz, altered volcanic rocks, etc., cemented by the fine-grained green mineral (grains 0.02 mm. or less). The indices of refraction recorded are somewhat variable, 1.56-1.58; double refraction 0.015-0.030. Material was purified by suspension in water and by magnetic separation. The mineral is readily decomposed by hot dilute HCl, and 9 analyses are given (only in the form of molecular ratios) of the soluble portion. These analyses gave the ratios:

	Al <sub>2</sub> O <sub>3</sub>	FeO*	MgO	CaO	H <sub>2</sub> O+	$\left\{ \begin{array}{l} \text{Fe}_2\text{O}_3 \\ \text{FeO} \end{array} \right.$
Average analysis	0.40	0.92	1.00	0.34	1.86	—
Extremes of analyses	0.36	0.67	1.00	0.15	1.70	0.76
	to	to	to	to	to	to
	0.47	1.43	1.00	0.70	2.12	3.40

\* All iron calculated as FeO.

X-ray powder photographs of the green mineral showed a very close similarity to those of nontronite and montmorillonite, and some similarity to those of garnierite and genthite. It is concluded that the mineral belongs to the montmorillonite group.

DISCUSSION: The data do not seem to justify a new name for what appears to be an intermediate member of the montmorillonite group. Furthermore, the name leMBERGITE has already been used, having been given in 1895 to a synthetic hydrated sodium aluminum silicate, see *Dana's System*, 6th Edition, Appendix I, p. 42.

MICHAEL FLEISCHER

### Aluminocopiapite

L. G. BERRY, Composition and optics of copiapite. *Univ. Toronto Studies*, Geol. Ser., No. **51**, 21-34 (1947).

The general structural formula of copiapite is shown to be X (OH)<sub>2</sub> R<sub>4</sub>'(SO<sub>4</sub>)<sub>6</sub> · nH<sub>2</sub>O, where X is one oxygen equivalent of one or more of the following elements: Na, K, Cu, Fe'', Mn, Mg, Zn, Ca, Al, Fe''', and n equals 20. R''' is ferric iron and sometimes in part aluminum. The name aluminocopiapite is proposed for the variety in which X is predominantly aluminum. The names ferricopiapite, magnesiocopiapite, ferrocopiapite, and cuprocopiapite had been proposed previously.

M.F.

### Frohbergite

R. M. THOMPSON, Frohbergite, FeTe<sub>2</sub>: a new member of the marcasite group. *Univ. Toronto Studies*, Geol. Ser., No. **51**, 35-40 (1947).

See abstract in *Am. Mineral.*, **32**, 210 (1947).

M.F.

**Monteponite**

ERNEST E. FAIRBANKS, The punched card identification of ore minerals. *Econ. Geol.*, **41**, 761-768 (1946). The name monteponite is suggested for the mineral cadmium oxide (CdO), reported by Wittich and Neumann in 1901 from near Monte Ponti, Sardinia. (See *Dana's System*, 7th Ed., pp. 502-503.)

M.F.

## NEW DATA

**Heazlewoodite**

M. A. PEACOCK, On heazlewoodite and the artificial compound  $\text{Ni}_3\text{S}_2$ . *Univ. Toronto Studies*, Geol. Ser., No. 51, 59-69 (1947).

Heazlewoodite was described in 1896 by Petterd as a nickel sulfide from Heazlewood, Tasmania. The description was sketchy, and the mineral has been regarded as being probably a variety of pentlandite. Restudy now shows it to be a valid species.

CHEMICAL PROPERTIES: Composition  $\text{Ni}_3\text{S}_2$ . Analysis by I. H. Milne on 0.1 g. gave: Ni 72.13, S 25.96, Fe 0.55, insol. 0.59; sum 99.23%. Etch tests are given.

CRYSTALLOGRAPHIC AND X-RAY DATA: X-ray powder photographs of the natural material were identical with those of the material synthesized by fusing Ni and S in the proportions 3:2 in an evacuated silica glass tube. The spacings agreed closely with those of Westgren (1938) on artificial  $\text{Ni}_3\text{S}_2$ . The mineral is rhombohedral with  $a$  5.730,  $c$  7.125 kX;  $r$  4.072 kX,  $\alpha$  89°25'. The space group is  $D_3^7-R$  32 and the rhombohedral unit cell contains  $\text{Ni}_3\text{S}_2$ . X-ray powder data are given.

PHYSICAL PROPERTIES: Luster metallic, color pale bronze, streak light bronze. The mineral is non-magnetic.

Hardness 4, Talmage hardness C+, G. (pycnometer) 5.82 on natural material, 5.87 on synthetic material, 5.87 calculated from x-ray data. In polished section, the mineral is yellowish cream-colored, with strong anisotropism and polarization colors brown to bluish gray, or even lilac to green. A mosaic structure was present (twinning?)

OCCURRENCE: Occurs intergrown with magnetite in a band in serpentine. A very small amount of pentlandite was present. The surface was coated with zaraitite.

M.F.

**Sjögrenite**

P. QUENSEL, Om sjögrenite som mineralnamn. *Geol. För. Förh.*, **68**, 110-111 (1945).

Quensel points out that the name sjögrenite, proposed by Frondel (*Am. Mineral.*, **26**, 309 (1941)) for the hexagonal dimorph of pyroaurite, had previously been given by Krenner (*Proc. Geol. Congress Stockholm*, Vol. 1, 129 (1910)) to a basic ferric phosphate. This mineral, with the formula  $5\text{Fe}_2\text{O}_3 \cdot 3\text{P}_2\text{O}_5 \cdot 8\text{H}_2\text{O}$ , was first described, without a name, by Kinch and Butler (*Mineralog. Mag.*, **7**, 65 (1886)). The phosphate has priority.

DISCUSSION: The phosphate should be re-studied. If it is a valid species, the dimorph of pyroaurite will have to be renamed.

M.F.

## Wiserite

W. EPPRECHT, Die Eisen- und Manganerze des Gonzen. *Beitr. Geol. Schweiz, Geotechn. Ser. Lief.* **24**, 128 pp. (1946).

Wiserite, first described from Gonzen, Switzerland, in 1842, and considered since 1868 to be altered pyrochroite, was re-examined. The mineral occurs as fibrous, asbestiform masses in fissures on hausmannite, pyrochroite or rhodochrosite. The luster is silky, color white to brownish or reddish. Optically uniaxial, negative,  $n_E$  1.66–1.67,  $n_O$  about 1.74, weakly pleochroic, with E bright yellow-orange, O colorless. Fresh pyrochroite had  $n_E$  1.681,  $n_O$  1.723.

X-ray powder photographs were distinct from those of pyrochroite, manganite, and synthetic  $\alpha$ -MnOOH and  $\beta$ -MnOOH. (Also seem to be distinct from that of groutite—Abstractor.) Dehydration study showed that most of the water is lost at 200–300°, hausmannite and  $\beta$ -Mn<sub>2</sub>O<sub>3</sub> being among the products formed. Pyrochroite gave a very similar dehydration curve.

Analysis by J. Jakob gave: Mn<sub>2</sub>O<sub>3</sub> 64.23, Al<sub>2</sub>O<sub>3</sub> none, Fe<sub>2</sub>O<sub>3</sub> 0.13, MnO 9.38, MgO 3.09, CaO, K<sub>2</sub>O, Na<sub>2</sub>O none, H<sub>2</sub>O+ (120°) 16.17, H<sub>2</sub>O– 1.10, CO<sub>2</sub> 5.26, Cl, SO<sub>3</sub> none; sum 100.00%. The active oxygen content was not determined, but Mn<sub>2</sub>O<sub>3</sub> was calculated after assigning the analytical deficiency to active O. This gives roughly 4Mn<sub>2</sub>O<sub>3</sub> · (Mn, Mg)<sub>2</sub>(CO<sub>3</sub>)(OH)<sub>2</sub> · 8H<sub>2</sub>O.

M.F.

## DISCREDITED MINERALS

## Stiepelmannite = Florencite

ERIK R. YGBERG, Svanbergite from Horrsjöberg. *Arkiv Kemi, Mineral. Geol.*, **20A**, No. 4, 17 pp. (1945).

The mineral stiepelmannite was first described by Ramdohr and Thilo (see *Am. Mineral.*, **25**, 626 (1940)) as a member of the alunite group analogous to the cerium mineral florencite, but with yttrium and ytterbium predominant. Ygberg states (p. 13), "According to a personal communication from Professor Ramdohr, it has later been found that stiepelmannite is a variety of florencite containing Ce, La, and Pr."

M.F.

## Berthonite = Bournonite

R. M. THOMPSON, Berthonite identical with bournonite. *Univ. Toronto Studies, Geol. Ser. No.* **51**, 81–83 (1947).

X-ray powder photographs of berthonite from the type locality Slatá Mine, Tunisia, are identical with that of bournonite. This agrees with the work of Harcourt, *Am. Mineral.*, **27**, 109 (1942).

M.F.