

NEW MINERAL NAMES

Kurnakovite

M. N. GODLEVSKY: Kurnakovite, a new borate. *Compt. Rend. (Doklady) Acad. Sci. U.R.S.S.*, **28**, no. 7, 638-640 (1940).

NAME: For N. S. Kurnakov, Russian physical chemist.

CRYSTALLOGRAPHIC PROPERTIES: Probably monoclinic. Cleavage (010) indistinct. Sections along (001) have pseudo-hexagonal outlines. Twinning was observed, but the law was not determined. X-ray photographs differ from those of other borates and indicate low symmetry.

CHEMICAL PROPERTIES: The composition is $Mg_2B_6O_{11} \cdot 13H_2O$, or $2MgO \cdot 3B_2O_3 \cdot 13H_2O$. Analysis by E. N. Egorova: B_2O_3 37.58, MgO 15.46, CaO 0.16, H_2O 47.09, R_2O_8 0.20, SiO_2 0.10, F 0.14; sum 100.73—(O=F₂) 0.06=100.67. This gives $MgO:B_2O_3:H_2O = 2:2.81:13.64$, but the figure for H_2O is known to be too high because B_2O_3 is lost during dehydration. The mineral is insoluble in water, soluble in warm acids. Before the blowpipe it fuses to an enamel.

PHYSICAL AND OPTICAL PROPERTIES: Found only in dense white aggregates. $H = 3$. Sp. gr. = 1.85. Optically biaxial, negative; $\alpha = 1.489$, $\beta = 1.510$, $\gamma = 1.525$; all $\pm .002$, $2V = 80^\circ$. One optic axis is almost normal to (001).

OCCURRENCE: Occurs as irregular lenses in szaibelyite (ascharite), at the Inder borate deposits.

RELATIONS: A member of the hexaborate group, and similar in composition to inyoite, $2CaO \cdot 3B_2O_3 \cdot 13H_2O$, and inderite, $2MgO \cdot 3B_2O_3 \cdot 15H_2O$.

MICHAEL FLEISCHER

NEW DATA

Penfieldite

SAMUEL G. GORDON: Penfieldite from Sierra Gorda, Chile. *Notulae Naturae Acad. Nat. Sci. Philadelphia*, no. 69, 8 pp. (1941).

A new analysis by A. Meier on crystals from Laurium gave Pb 76.55, Cl 19.82, H_2O 1.59, insol. 0.14; giving the formula $Pb(OH)_2 \cdot 3PbCl_2$, instead of $PbO \cdot 2PbCl_2$. Sp. gr. = 6.61. Crystallographic measurements are given on material from Sierra Gorda, a new locality, and the second one reported for this mineral.

Herregrundite Devilline

HEINZ MEIXNER: Die Identität von Herregrundit (=Urvölgylit) mit Devillin (=Lyellit). *Zentralbl. Min., Geol.*, 244-248 (1940A).

Devilline was described by Pisani (*Compt. Rend.*, **59**, 813-814 (1864)) as a copper, calcium sulfate from Lostwithiel, Cornwall. In the same year, Maskelyne (*Chem. News*, **10**, 263 (1864)) gave the name lyellite to material from the same locality, but an analysis was not published until the following year. This analysis by Church (*J. Chem. Soc.*, **18**, 83 (1865)) agrees well with that of Pisani. However, Tschermak (*Ber. Ak. Wien*, **51**, 127 (1865)) examined some of the material and pronounced it a mixture, apparently mostly because when treated with water it gave gypsum and a blue copper sulfate. Meixner has re-examined Tschermak's material, and finds that it is homogeneous and identical with herregrundite from Herregrund (or Urvölgyl), Slovakia, which was first described in 1879. The pure mineral is decomposed by water as Tschermak described. Meixner suggests that the name herregrundite be discarded in favor of devilline.

DISCUSSION: Dana (*System*, 6th Ed., **1892**, p. xliii) says, "A name having priority may properly be set aside if it has been lost sight of and has found no one to assert its claim for a period of more than fifty years." Devilline has clear priority, but since the name has not

been used for 75 years, and since the name herregrundite has been in constant use for over 60 years, it would seem inadvisable to discard herregrundite and resurrect the name devilline.

M. F.

Tellurobismuthite or Tellurbismuth

CLIFFORD FRONDEL, *Am. J. Sci.*, **238**, 880–888 (1940); preliminary note in *Am. Mineral.*, **24**, no. 12, part 2 (1939).

M. A. PEACOCK, *Univ. Toronto Studies, Geol. Ser.*, no. **44**, p. 67 (1940). Formerly regarded as a sulfur-free variety of tetradymite, $\text{Bi}_2\text{Te}_2\text{S}$, but now considered to be a separate species.

CRYSTALLOGRAPHIC PROPERTIES: Found only as foliated masses or irregular flattened plates. Hexagonal, rhombohedral. X-ray data are identical with those given by artificial Bi_2Te_3 .

$$a_0 = 4.38, \quad c_0 = 30.6, \quad a_{rh} = 10.51, \quad \alpha = 24^\circ 2' \quad (\text{Frondel})$$

$$a_0 = 4.375, \quad c_0 = 30.39, \quad a_{rh} = 10.44, \quad \alpha = 24^\circ 11\frac{1}{2}' \quad (\text{Peacock}).$$

The rhombohedral unit cell contains Bi_2Te_3 . Cleavage, basal perfect. Frondel has observed a distinct parting at about 62° to the base.

CHEMICAL PROPERTIES: Composition Bi_2Te_3 , with only very small amounts of selenium or sulfur.

PHYSICAL PROPERTIES: Laminae flexible, but not elastic. H. = $1\frac{1}{2}$ –2. Sp. gr. = 7.81–7.83 (Frondel), 7.80–7.82 (Peacock).

OCCURRENCE: Frondel gives eleven localities, and Peacock two additional. Frequently occurs in intimate intergrowth with tetradymite.

M. F.

DISCREDITED SPECIES

Vandiestite

CLIFFORD FRONDEL, *Am. J. Sci.*, **238**, 880–888 (1940).

Vandiestite (also written Von Diestite) was described by Pearce (*Proc. Colo. Sci. Soc.*, **6**, 163 (1902)), as a silver bismuth telluride. Frondel shows that the material is a mixture of tellurobismuthite (see above) and hessite.

Salvadorite

SAMUEL G. GORDON: The identity of salvadorite with kroehnkite. *Notulae Naturae Acad. Nat. Sci. Philadelphia*, no. **72**, 4 pp. (1941).

Salvadorite was described by Herz (*Zeits. Krist.*, **26**, 16–18 (1896)) as a new copper-iron vitriol from Quetena, Chile. Material from the same locality is found by Gordon to agree in crystallography and optical properties with kroehnkite, and to contain 16% Na_2O . Salvadorite had, therefore, the physical and crystallographic properties of kroehnkite. Herz's analyses gave $(\text{Cu}, \text{Fe})\text{SO}_4 \cdot 7\text{H}_2\text{O}$, like pisanite. Whether the analyses were erroneous, or made upon another mineral (perhaps pseudomorphs) is problematical.

M. F.