

NEW MINERAL NAMES

Stottite

H. STRUNZ, G. SÖHNGE, AND B. H. GEIER. Stottit, ein neues Germanium-Mineral, und seine Paragenese in Tsumeb. *Neues Jahrb. Mineral., Monatsh.* 1958, No. 4, 85-96.

The mineral occurs in crystals up to 1 cm. in size. The crystals are tetragonal, dipyramidal, pseudo-octahedral with $p\{111\}$ predominant and small faces of $a\{100\}$, $c\{001\}$, $m\{110\}$, $d\{011\}$, $e\{012\}$. Goniometric data are given; they give $a:c=1:0.989$. X-ray study gave a_0 7.55, c_0 7.47 Å, space group $C_{4h}^4-P4_2/n$ or possibly $C_{4h}^2-P4_2/m$. The indexed x-ray powder pattern is given; the strongest lines are 3.767 vs. 2.655 s, 1.687 ms, 2.171 m, 1.886 m, 1.672 m, 1.538 m, 1.254 m, 1.139 m, 20 other lines are given. Cleavages (100), (010) good, (001) slightly less so.

The mineral is brown with greasy luster like that of sphalerite, streak gray-white, H. 4½ (also given as 4-5), G. (pycnometer) 3.596, G (buoyancy method) 3.575; the former value is preferred. Optically anomalously biaxial, negative, 2V small, dispersion weak $r>v$; the n_s are α 1.728 ($=\epsilon$), β 1.737, γ 1.738 ($\omega=1.7375$). The crust is dark brown, the center is light olive-gray to nearly colorless under the microscope.

Analysis by the Fresenius Laboratory, Wiesbaden, gave GeO₂ 41.75, FeO 34.81, MgO 0.46, MnO 0.88, CaO 0.34, H₂O 21.84, sum 100.08%. This corresponds to a unit cell content of (Fe, Mg, Mn, Ca)_{4.89}H_{7.66}Ge_{3.80}O₁₆·8H₂O, or perhaps 4(FeH₂GeO₄·2H₂O) with part of the H replaced by Fe, or, if other types of bonding of H are assumed, FeGeO₃·3H₂O or FeGe(OH)₆.

The mineral contains by far the highest germanium content of any known and is the first known germanate. It is suggested that it be classed with the nesosilicates, in view of the well-known crystallochemical relation between germanates and silicates.

Stottite occurs in Level 30 of the Tsumeb Mine, S. W. Africa, at a depth of about 1000 meters. The well-known secondary minerals of this mine have come from the surface to about 300 meters down. Recently a second zone of secondary minerals has been found at depths of 800-1000 meters, formed by the action of circulating waters on renierite and germanite. A long list of other secondary minerals is given.

The name is for Charles E Stott, geologist, General Director of the Tsumeb Mine.

MICHAEL FLEISCHER

Reinerite and Unnamed Mineral

H. STRUNZ, G. SÖHNGE, AND B. H. GEIER, op. cit.

This paper mentions, without details, the mineral reinerite, Zn₃(AsO₃)₂ (zinc arsenite), occurring in the lower oxidation level, and "Mineral O," metallic, gray, probably tetragonal and structurally analogous to chalcopyrite, distinct basal cleavage, formula perhaps CuGaS₂, hence the first known gallium mineral, found in primary ore at Tsumeb.

M. F.

Kimzeyite

CHARLES MILTON AND LAWRENCE V. BLADE. Preliminary note on kimzeyite, a new zirconium garnet. *Science*, v. 127, No. 3310, p. 1343 (1958).

The mineral was found as dark brown crystals about 5 mm. in diameter in calcite rock at the Kimzey Calcite Quarry, Magnet Cove, Ark. Associated minerals are monticellite, magnetite, perovskite, and apatite, which occur also as inclusions in the garnet. The latter also contains minute inclusions of sharply euhedral anhydrite.

Spectrographic analysis by Harry Bastron on 35 mg. gave SiO₂ 21.4, TiO₂ 5.8, ZrO₂

20.25, SnO₂ 0.09, Al₂O₃ 11.4, Fe₂O₃ 16.45, Sc₂O₃ 0.09, CaO 16.8, MgO 0.5, MnO 0.13, Cu, Ba, Sr trace, H₂O, P₂O₅, F, S, CO₂ not tested for, sum 94%. The *x*-ray pattern is that of a garnet with *a*₀=12.46 Å. The mineral is isotropic, light brown in thin section, with *n* near 1.95.

The name is for the Kimzey family, "which has been actively associated with mineralogical developments in Magnet Cove for almost a century," notably W. J. Kimzey, his son Joe, and Lawton D. and John Kimzey.

DISCUSSION.—Apparently a garnet with Zr distributed among tetrahedral and octahedral positions.

M. F.

Thorutite (Smirnovite)

YA. D. GOTMAN AND I. A. KHAPAEV. Thorutite—a new mineral of the group of titanates of thorium. *Zapiski Vses. Mineral. Obshch.*, v. **87**, 201–202 (1958) (in Russian).

The mineral occurs in short prismatic crystals up to 2 cm. in length and 0.5–1.0 cm. in diameter. It is black, streak pale brown, luster resinous. Translucent, dark brown, on thin edges; isotropic with *n* above 2.1 G (pycnometer) 5.82. Fracture conchoidal.

Analysis by R. L. Podval'ya and S. B. Federova gave ThO₂ 54.10 (av. of 53.65 and 54.55), UO₂ 1.43, UO₃ 0.14, CaO 1.07, TiO₂ 36.1, Fe₂O₃ 1.10, Al₂O₃, Nb₂O₅ 1.12, Ta₂O₅ 0.08, SiO₂ 0.44, H₂O 0.94, loss ignition 1.72, sum 99.74%, corresponding to 2(Th, U, Ca)O₂·4TiO₂·H₂O.

The mineral turns golden when heated in a closed tube and gives off water. It gave no *x*-ray lines (metamict). The pattern obtained by V. P. Butuzov when the mineral is heated at 1000° is given; 45 lines are listed of which the strongest are 3.17 (7), 1.728 (6), 1.695 (6), 1.632 (3).

The mineral occurs in a syenite massif in veins of microcline and sericitized nepheline. Associated minerals are thorite, zircon, calcite, and a little barite and galena. The locality is not given.

The name is for the composition.

NOTE: The same mineral is named thorutite or smirnovite (for S. S. Smirnov) by V. G. MELKOV AND L. CH. PUKHAL'SKII, *Gosgeollekhizdat*, 1957, 67, according to an abstract by E. M. Bonshtedt-Kupletskaya, *Zapiski Vses. Mineral. Obshch.*, **87**, 79 (1958). Not to be confused with smirnovskite.

M. F.

Lodochnikite

YA. A. GOTMAN. Lodochnikite—a new mineral of the group of titanates of uranium and thorium. *Zapiski Vses. Mineralog Obshch.*, **87**, 197–200 (1958) (in Russian).

The data given are those abstracted in *Am. Mineral.*, **43**, 380 (1958), except that PbO 0.13 there given should be Pb 0.13, and CO₂ 0.12 should be S 0.12%. Sp. gr. 5.88. The mineral is considered to be distinct from brannerite because (1) the content of UO₂+UO₃ (51.86%) is higher, and (2) the *x*-ray pattern shows different intensities.

DISCUSSION.—Chemically this is indistinguishable from brannerite. Although UO₂+UO₃ is higher than in most analyses, there is one analysis published by George (1949) which gave UO₂+UO₃ 51.76%. Furthermore, the other analyses contain CaO, Y₂O₃, etc., in amounts more than sufficient to balance the deficiency in U. The *x*-ray powder diagram differs somewhat in spacings and intensities from that given for brannerite, which checks those given in the literature. Further work, especially heating experiments under controlled conditions, is necessary to establish the validity of the mineral.

M. F.

Usigite (Usihyte)

V. G. MELKOV AND L. CH. PUKHAL'SKIĬ, *Gosgeoltekhizdat* 1957, 67, from an abstract by E. M. Bonshtedt-Kupletskaya, *Zapiski Vses. Mineral Obshch.*, **87**, 84 (1958).

All the data given are: Formula $R(UO_2)_2 Si_2O_7 \cdot nH_2O$. Radiating structure, color yellow, luster vitreous, does not luminesce.

DISCUSSION.—No excuse for this.

M. F.

DISCREDITED MINERALS

Batchelorite (= Muscovite)

D. I. BOTHWELL AND A. A. MOSS. The nature of batchelorite. *Mineralog. Mag.*, **31**, 700 (1957).

The name batchelorite was given in 1910 by Petterd (Dana's System, 6th Ed., App. III, p. 11), who gave the formula $Al_2O_3 \cdot 2SiO_2 \cdot H_2O$. A new analysis made on material from the type locality, though not a type specimen, corresponded to muscovite containing Cr_2O_3 0.3%. Optical and x -ray study also showed it to be muscovite.

M. F.

Barbierite (= Microcline). New Name Monalbite

TONI R. SCHNEIDER AND F. LAVES. Barbierit oder Monalbit? *Zeitschr. Krist.*, **109**, 241-244 (1957).

The name barbierite was given by Schaller in 1910 to monoclinic $NaAlSi_3O_8$, such as that described by Barbier and Prost (1908) (see Dana's System, App. III, p. 10). Re-examination by x -ray methods of the type material of Barbier and Prost from Kragero, Norway, shows it to be finely twinned microcline with about 20% of unmixed albite. The name *monalbite* is suggested for the high-temperature monoclinic modification of $NaAlSi_3O_8$, not yet found in nature.

M. F.

Hessenbergite (= Bertrandite)

ROBERT L. PARKER AND PETER INDERGAND. Ein neues schweizerisches Vorkommen von Bertrandit. *Schweiz. mineralog. petrog. Mitt.*, **37**, 554-558 (1957).

Crystals from St. Gotthard correspond closely to those named hessenbergite by Kenn-gott in 1863 (*Dana's System*, 6th Ed., p. 1037). The name hessenbergite has priority over bertrandite, but the description was inadequate (no analysis).

M. F.

Ranite = Gonnardite

BRIAN MASON. Gonnardite (ranite) from Langensundfjord. *Norsk Geol. Tidsskr.*, **37**, 435-437 (1957).

Ranite was described by Paijkull in 1874 as a zeolite near thomsonite in composition (*Dana*, 6th Ed., p. 609) from the island of Lamö (= Låven). It has been classed as a doubtful species. X -ray data on material from the type locality show its identity with gonnardite (Lacroix, 1896). New determinations of G . (= 2.32), and of optics (α' 1.513, γ' 1.515) are a little higher than the corresponding figures for gonnardite. The name ranite has priority, but Mason concludes that it would be best to retain the name gonnardite. I agree.

M. F.