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NEW MINERAL NAMES

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Insizwaite

L. J. CABRI, AND D. C. HARRIS (1972) The new mineral insizwaite ($PtBi_2$) and new data on niggliite (PtSn). *Mineral. Mag.* **38,** 794–800.

Five microprobe analyses of insizwaite gave Pt 35.6–36.4, av. 36.0; Bi 49.6–54.6, av. 52.0; Sb 10.7–14.8, av. 12.9 percent, corresponding to $Pt(Bi, Sb)_2$, with the ratio Bi/Sb ranging from 2.75 to 2.0, average $Pt\ Bi_{1.35}Sb_{0.57}$.

X-ray data show the mineral to be cubic, space group probably $Pa\ 3$, a 6.625Å. Synthetic $PbBi_2$ had a 6.691Å., synthetic $Pt(Bi_{1.4}Sb_{0.60})$ had a 6.614Å. The strongest lines for the mineral (37 given) are 2.96 (8) (210), 2.70 (8) (211), 1.998 (10)(311), 1.774 (7)(321), 1.277 (6)(333, 511), 1.171 (6)(440), 0.862 (7)(731, 553).

The mineral is white in reflected light, both in air and in oil. Isotropic. Reflectances are 470 nm, 61.1 percent; 546, 60.0; 589, 60.6; 650, 61.7 percent. Hardness (microindentation with 25 g load) 488–540, av. 519 kg/sq mm.

The mineral occurs as rounded grains up to 70 × 120 microns in a vein cutting massive pyrrhotite ore from the Insizwa deposit, South Africa. It is associated with pentlandite, chalcopyrite, niggliite, and parkerite.

The name is for the locality. Type material is in the National Mineral Collection, Ottawa (no. 10,400). The mineral and name were approved before publication by the Commission on New Minerals and Mineral Names, IMA.

Bambollaite

D. C. HARRIS, AND E. W. NUFFIELD (1972) Bambollaite, a new copper telluro-selenide. *Can. Mineral.* **11,** 738–742.

Qualitative spectrographic analysis showed major elements present to be Cu, Se, and Te. Electron probe analysis by J. C. Rucklidge of material synthesized by fusing the elements in evacuated silica tubes gave: Cu 25.1, Te 31.0, Se 44.5, sum 100.6 percent, corresponding to $Cu(Se,Te)_2$ with Se:Te = 7:3. Attempts to synthesize the compound from Cu + Se or Cu + Te failed.

The X-ray pattern was indexed on an F tetragonal cell with a 5.466, c 5.632Å. The conventional I cell has a 3.865, c 5.632Å., space group $I4_1/amd$. The unit cell content (I cell), with G 5.64 (measured on synthetic) is $Cu_{1.1}Te_{0.7}Se_{1.6}$, which is incompatible with the space group, so that either the space group is incorrect or the I cell is a submultiple of the true cell. The strongest lines (indexed on F cell) are 3.19 (100)(111), 1.961 (70)(022), 1.931 (40)(220), 1.689 (30)(113), 1.653 (50)(131).

The mineral was found at the Mina La Moctezuma, also known as Mina LaBambolla, near Moctezuma, Sonora, Mexico; associated with klockmannite (which it resembles in color and luster), native Te, chalcomenite, tellurite, and paratellurite.

The name is for the mine. The mineral and name were approved in advance of publication by the Commission on New Minerals and Mineral Names, IMA. Type material is at the Royal Ontario Museum, Toronto.

Rameauite, Agrinierite

F. CESBRON, W. L. BROWN, P. BARIAND, AND J. GEFFROY (1972) Rameauite and agrinierite, two new hydrated complex uranyl oxides from Margnac, France. *Mineral. Mag.* **38,** 781–789.

Microprobe analysis of rameauite gave UO_3 84, K_2O 5.0, CaO 2.4, Sr, Ba none, H_2O (thermogravimetry) 8.2, total 99.6 percent, corresponding to $K_2CaU_6O_{20}\cdot 9H_2O$. The DTA curve shows endothermic peaks at 95, 130, and 170° (loss of H_2O) and 1050°C (loss of O_2). Precession photographs show rameauite to be monoclinic, pseudohexagonal, space group $C2/c$ or Cc, a 13.97, b 14.26, c 14.22Å., β 121°1′ ± 5′, $Z = 4$, G calc 5.55, G obs 5.60. The strongest lines (34 given) are 7/p2 (vvs)(020), 3.566 (vs)(040), 3.495 (vvs) $(40\bar{2})$, 3.473 (vs)(202), 3.185 (vs)$(22\bar{4})$, 3.139 (vvs)$(42\bar{2})$, 3.124 (vvs)(222).

Rameauite occurs as crystals up to 1 mm long, all twinned on {100}. Observed forms are {010}, {100}, {001}, and {110}. Cleavage {010} good. Color orange. Optically biaxial, neg., $2V$ 32°, $Z \wedge c$ on (010) is 4–6, $x = b$. Reflectances are given at 400–700 nm; at 580 nm, $\beta = 1.95$, $\gamma = 1.97$.

Analysis of agrinierite gave UO_3 85.15, SrO 2.05, CaO 2.20, K_2O 3.35, H_2O 7.45, sum 100.20 percent, corresponding to $2(K_2,Ca,Sr)O\cdot 6UO_3\cdot 8H_2O$. The TGA curve shows a rapid loss of weight up to 130° and then more gradual loss to 500°. The DTA curve shows a large endothermic break at 163° (loss of H_2O) and a smaller one at 1060° (loss of O_2). X-ray study showed it to be orthorhombic, space group $Cmmm$, $Cm2m$, $Cmm2$, or $C222$, a 1404, b 24.07, c 14.13Å., $Z = 8$, G calc 5.64, G obs 5.7. The strongest lines (37 given) are 7.08 (vvs)(002), 6.05 (ms)(220, 040), 3.516 (s)(400, 332), 3.485 (vs)(062, 260), 3.153 (vs)(204, 134), 3.128 (vvs)(262), 2.023 (s)(660), 1.945 (ms)(730).

Agrinierite occurs as orange crystals, tabular on {001} and showing sector twinning. Cleavage {001} good. Optically biaxial, neg., $2v$ 55°, $X = a$, $Z = b$. Reflectances are given at 400–700 nm; at 580 nm, $\beta = 2.01$, $\gamma = 2.06$.

Both minerals occur at the Margnac U deposit, Massif Central, France, in the oxidation zone, rameauite with uranophane and calcite on pitchblende, agrinierite with uranophane in small cavities in "gummite." The names are for Jacques Rameau (died 1960), prospector, who discovered the Margnac deposit, and for Henri Agrinier (1928–1971), engineer in the mineralogy laboratory of the Comm. Energie Atomique. Both minerals and names were approved in advance of publication by the Commission on New Minerals and Mineral Names, IMA. Type material is preserved at the University of Paris.

Embreyite

S. A. WILLIAMS (1972) Embreyite, a new mineral from Berezov, Siberia. *Mineral. Mag.* **38**, 790–793.

Two microchemical analyses and 3 electron probe analyses gave an average PbO 74.4, CuO 1.70, CrO_3 13.4, P_2O_5 9.09, H_2O 0.91, ZnO 0.04, Fe_2O_3 0.02, sum 99.56 percent, corresponding to $Pb_5(CrO_4)_2(PO_4)_2 \cdot H_2O$. The mineral does not dissolve readily in cold reagents.

Weissenberg photographs show the mineral to be monoclinic, space group probably $P2_1/m$, *a* 9.755, *b* 5.636, *c* 7.135 (all ± 0.003Å.), β 103°5′ ± 2′, $Z = 1$, *G* calc 6.41, meas 6.45 ± 0.12 (Berman balance). The strongest X-ray lines of 24 are 4.751 (60)(200), 3.167 (100)(20$\bar{2}$, 300, 30$\bar{1}$), 2.818 (60)(020), 1.917 (45)(203).

The mineral is dull orange in color, luster dull to sparkling and resinous, streak primrose yellow. H. 3½, brittle. Optically biaxial, neg., 2*V* 0–11°, *ns* (S–Se melts) α 2.20, $\beta = \gamma = 2.36$ (all ± 0.04). $Y = b$, pleochroic, *X* honey yellow, *Y* and *Z* amber. Fracture irregular.

The mineral was found on old museum samples from Berezov, Siberia, with vauquelinite, crocoite, and phoenicochroite. The name is for Peter G. Embrey, mineralogist, British Museum of Natural History. The mineral and name were approved before publication by the Commission on New Minerals and Mineral Names, IMA.

Uduminelite

Introduction of Japanese Minerals (1970), p. 126.

Name given to a mineral, $3CaO \cdot 4Al_2O_3 \cdot P_2O_5 \cdot 2H_2O$. Orth., acicular crystals 2 mm. long. White, *ns* 1.623, β 1.626, γ 1.621 2*V* 77°. Cleavage {110}. Occurs as aggregates of crystals in cracks of perthite in a pegmatite, Udumine, Fukushima Pref., Japan.

Pellyite

J. H. MONTGOMERY, R. M. THOMPSON, AND E. P. MEAGHER (1972) Pellyite: a new barium silicate mineral from the Yukon Territory. *Can. Mineral.* **11**, 444–447.

Analysis gave SiO_2 40.50, Al_2O_3 3.53, ZnO 1.05, MgO 1.46, FeO 12.46, MnO 0.57, CaO 6.25, BaO 34.16, sum 99.98 percent, corresponding to $Ba_{7.53}Ca_{3.77}Mn_{0.27}Fe_{5.83}Mg_{1.23}Zn_{0.43}Al_{3.33}Si_{22.90}O_{68}$, or $4(Ba_2Ca(Fe,Mg)_2Si_6O_{17})$. S, Sr, Na, B, Be, Ti, and Zr were detected in traces spectrographically. The mineral is slowly decomposed by dilute HCl, leaving a white residue. Fuses at 3 to a weakly magnetic bead.

Weissenberg and precession photographs show the mineral to be orthorhombic, space group *Cmcm*, $CmC2_1$, or *C2cm*, *a* 15.677, *b* 7.151, *c* 14.209Å., $Z = 4$, *G* 3.48 calc 3.51 meas. The strongest X-ray lines (38 given) are 5.91 (40)(111), 4.22 (40)(310), 3.83 (50)(113), 3.46 (55)(021), 3.43 (100)(402), 3.19 (65)(022), 3.17 (45)(221), 3.15 (45)(313), 2.643 (40)(420), 2.308 (60)(432), 2.117 (50)(424).

The mineral is colorless to pale yellow, luster vitreous. H. 6. Fracture conchoidal; in thin section a poorly developed prismatic cleavage was noted. Optically biaxial, positive, *ns* (Na) α 1.643, β 1.645, γ 1.649 (all ± 0.003), 2*V*47°, dispersion $r > v$ very strong.

The mineral occurs in a contact metasomatic skarn deposit in limestones adjacent to a stock of porphyritic quartz monzonite near the headwaters of the Pelly and Ross Rivers, Yukon Territory. Associated minerals are barite, hedenbergite, quartz, andradite, taramellite, gillespite, sanbornite, chaclopyrite, and witherite. Pellyite also occurs in Fresno County, California. The name is for the Pelly river. Type material is at the Dept. of Geology, University of British Columbia, Vancouver. The mineral and name were approved in advance of publication by the Commission on New Minerals and Mineral Names, IMA.

Unnamed (Fe,Zn,Mn)S

PETER R. BUSECK, AND EDWARD F. HOLDSWORTH (1972) Mineralogy and petrology of the Yilmia enstatite chondrite. *Meteoritics,* **7**, 429–447.

The Yilmia meteorite, W. Australia, contains sparse very small grains of a new sulfide mineral; probe analysis of one grain gave S 35.8, Fe 33.5, Zn 18.0, Mn 9.8, Mg 0.11, sum 97.21 percent, ratio metals:S = 0.948, formula $(Fe_{0.54}Zn_{0.25}Mn_{0.16})S$.

Discussion. X-ray data are needed. Perhaps a member of the alabandite group.

NEW DATA

Biphosphammite

M. W. PRYCE (1972) Biphosphammite: A second occurrence. *Mineralog. Mag.* **38**, 965–967.

Biphosphammite ($NH_4H_2PO_4$) was described by C. U. Shepard (1870) (*Dana's System,* 6th ed., p. 807) as powdery crusts on phosphammite from guano. It is now recorded as crusts occurring with bat guano in Murra-el-elevyn cave, W. Australia. A partial analysis by P. Hewson gave P_2O_5 51.1, K_2O 14.2, $(NH_4)_2O$ 12.3, SO_3 5.59, Na_2O 0.16, insol. in H_2O 0.81 percent; CaO and H_2O were present as syngenite. This is recalculated to $(NH_4, K)H_2PO_4$ with NH_4: K = 62:38.

X-ray data show the mineral to be tetragonal, space group $I\bar{4}2d$, *a* 7.4935, *c* 7.340Å. The strongest lines are 5.24 (9)(101), 3.75 (10)(200), 3.02 (9b)(112), 2.650 (7)(220), 2.368 (7)(310, 301), 1.993 (8)(312, 213), 1.593 (6)(332).

The mineral is white to deep brown, luster dull, earthy. *G* 2.04 ± 0.02. Optically uniaxial, neg. nO 1.525, nE 1.480. Synthetic $NH_4H_2PO_4$ had nO 1.525, nE 1.48; synthetic KH_2PO_4 had nO 1.510, nE 1.468.

DISCREDITED MINERALS

Calciotantalite = a mixture

A. M. Clark (1972) Calciotantalite confirmed as a mixture. *Mineral. Mag.* **38,** 765–767.

Calciotantalite (Simpson, 1907) from the type locality was found by optical and electron microprobe analyses to consist of a microlite phase and a tantalite-like phase, part of which was rich in tin. As suggested in *Dana's System,* 7th ed., **1,** 787, calciotantalite is a mixture and the name is to be discarded.

Kyanophyllite = mixture

A. S. Janardhanan, and C. V. Itigatti (1970) Paragonite from Mavinahalli, Mysore State. *Indian Mineral.* **11,** 91–94 (publ. 1972).

Kyanophyllite was described in 1946 (*Amer. Mineral.* **32,** 255, 701). X-ray data and two new chemical analyses of material from the type locality show it to be a mixture of paragonite and muscovite.