NEW MINERAL NAMES

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**Insizwaite**

L. J. Cabri, and D. C. Harris (1972) The new mineral insizwaite (PtBi₅) and new data on nigglite (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(Bi₂Sb)₃, with the ratio Bi/Sb ranging from 2.75 to 2.0, average Pt Bi₅Sb₀.₈₁.

X-ray data show the mineral to be cubic, space group probably Pa 3, a 6.625A. Synthetic PbBi₅ had a 6.691A., synthetic Pt(Bi₂Sb)₃ had a 6.614A. 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). The strongest lines for the mineral (37 given) are 7.02 (ws) (020), 3.566 (vs) (040), 3.495 (vs) (060), 3.473 (vs) (022), 3.158 (vs) (224), 3.139 (vs) (422), 3.124 (vs) (222).

The name is for the mine. 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. Type material is at the Royal Ontario Museum, Toronto.

**Rameauite, Agrinierite**


Microprobe analysis of rameauite gave UO₂ 84, K₂O 5.0, CaO 2.4, Sr, Ba none, H₂O (thermogravimetry) 8.2, total 99.6 percent, corresponding to K₂CaU₂O₆·9H₂O. The DTA curve shows endothermic peaks at 95, 130, and 170°C (loss of H₂O) and 1050°C (loss of O₂). Precession photographs show rameauite to be monoclinic, pseudohexagonal, space group C2/c or Cc, a 13.97, b 14.26, c 14.22A., β 121°1' ± 5', Z = 4, G calc 5.55, G obs 5.60. The strongest lines (34 given) are 7.02 (ws) (020), 3.566 (vs) (040), 3.495 (vs) (060), 3.473 (vs) (022), 3.158 (vs) (224), 3.139 (vs) (422), 3.124 (vs) (222).

Rameauite occurs as crystals up to 1 mm long, all twinned on {100}. Observed forms are (101), (100), (001), and (110). Cleavage (010) good. Color green. Optically biaxial, neg., 2V 32°, Z ∥ c on (100) is 4-6, x = b. Reflectances are given at 400-700 nm; at 580 nm, β = 1.95, γ = 1.97.

Analysis of agrinierite gave UO₂ 85.15, SrO 2.05, CaO 2.20, K₂O 3.35, H₂O 7.45, sum 100.20 percent, corresponding to 2(K₂Ca,Sr)O·6UO₂·9H₂O. The DTA curve shows a rapid loss of weight up to 130°C and then more gradual loss to 500°C. The DTA curve shows a large endothermic break at 163°C (loss of H₂O) and a smaller one at 1060°C (loss of O₂). X-ray study showed it to be orthorhombic, space group Cmcm, Cm2m, Cm21, or C222, a 14.04, b 24.07, c 14.13A., Z = 8, G calc 5.64, G obs 5.7. The strongest lines (37 given) are 7.08 (vs) (002), 6.05 (ms) (220), 0.40 (ms) (022), 3.516 (s) (400, 332), 3.485 (vs) (062, 260), 3.153 (vs) (204, 134), 3.128 (vs) (262), 2.023 (s) (660), 1.945 (ms) (730).

Agrinierite occurs as orange crystals, tabular on {010} and showing sector twinning. Cleavage (001) good. Optically biaxial, neg., 2V 55°, Z ∥ a on (010) is 4-6, x = b. Reflectances are given at 400-700 nm; at 580 nm, β = 2.01, γ = 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 discov-
cered 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**


Two microchemical analyses and 3 electron probe analyses gave an average PbO 74.4, CuO 1.70, CrO3 13.4, P2O5 9.09, H2O 0.91, ZnO 0.04, FeO 0.02, sum 99.56 percent, corresponding to Pb(3CrO3)2(PO4)2·H2O. The mineral does not dissolve readily in cold reagents.

Weissenberg photographs show the mineral to be monoclinic, space group probably P21/m, a 9.755, b 5.636, c 7.135 (all ± 0.003 A.), 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)(202), 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., 2V 0-11°, ns (Se-S melts) a 2.20, kling and resinous, streak primrose yellow. H. 3+, brittle.

The name is for Peter G. Embrey, mineralogist, at the University of Paris.

**Uduminelite**


Name given to a mineral, 3CaO·4Al2O3·P2O5·2H2O. Orth., acicular crystals 2 mm. long. White, ns 1.623, β 1.626, γ 1.621 2V 77°. Cleavage (110). Occurs as aggregates of crystals in cracks of perthite in a pegmatite, Udumine, Fukushima Pref., Japan.

**Pellyite**


Analysis gave SiO2 40.50, Al2O3 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·3Ca·1Mn·5Fe·6Mg·15·5Zn·4·Al·3·Si·9·O·38, or 4{(Ba·Ca·Fe·Mg)·Si·O4}3. S, Sr, Na, B, Ce, 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, Cmc21, or C2cm, a 15.677, b 7.151, c 14.209, Z = 4, G 3.48 calc 3.51 meas. The strongest X-ray lines (38 given) are 3.91 (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), 2V47°, dispersion ρ > γ 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, chalcopyrite, 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**


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 (Fe0.54Zn0.38Mn0.08)S. Discussion. X-ray data are needed. Perhaps a member of the alabandite group.

**Biphosphammite**


Biphosphammite (NH4H2PO4) 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 P2O5 51.1, K2O 14.2, (NH4)2O 12.3, SO3 5.9, Na2O 0.16, insol. in H2O 0.81 percent; CaO and H2O were present as syngenite. This is recalculated to (NH4, K)H2PO4 with NH4:K = 62:38.

X-ray data show the mineral to be tetragonal, space group I42d, a 7.4935, c 7.340A. 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. nD 1.525, nE 1.480. Synthetic NH4H2PO4 had nD 1.525, nE 1.480; synthetic KH2PO4 had nD 1.510, nE 1.468.
DISCREDITED MINERALS

Calciotantalite = a mixture

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

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.