

## NEW MINERAL NAMES

### Abukumalite

SHIN HATA: Abukumalite, a new yttrium mineral. *Scientific Papers of the Institute of Physical and Chemical Research*, Tokyo. No. 822, vol. 34, pp. 1018-1023, 1938.

NAME: From the Abukuma Range, where the mineral was first discovered.

CHEMICAL PROPERTIES: A phosphate-silicate of calcium and yttrium;  $\text{CaY}(\text{Si,P})_2\text{O}_8$ . Analysis: MgO 0.22; CaO 13.53; MnO 1.13;  $\text{Fe}_2\text{O}_3$  2.10;  $\text{Al}_2\text{O}_3$  1.05; Cerium earths 6.45; Yttrium earths 45.98;  $\text{ThO}_2$  0.90;  $\text{SiO}_2$  20.84;  $\text{P}_2\text{O}_5$  5.84;  $\text{H}_2\text{O}(-)$  0.16;  $\text{H}_2\text{O}(+)$  0.57;  $\text{CO}_2$  0.08; F 0.45; Total 99.30. Soluble in cold dilute acids.

CRYSTALLOGRAPHICAL PROPERTIES: Probably hexagonal.  $c=0.7$  (from x-ray data).  $a_0=5.7 \text{ \AA}$ .

PHYSICAL AND OPTICAL PROPERTIES: Color dark reddish brown. Luster resinous to dull. Streak faint brown. Cleavage  $c$  and  $m$ , imperfect.

Fracture uneven to splintery. Brittle.  $H=6.0$ .  $G=4.35$ . Weak radioactivity. Uniaxial, positive.  $\omega=1.750$ ,  $\epsilon=1.752$ . Extinction parallel to cleavage.

OCCURRENCE: Found in massive forms in feldspar, intimately associated with yttrialite, thorogummite, tenerite and allanite in pegmatite dikes at Iisaka Village, Fukushima Prefecture, Japan.

DISCUSSION: Abukumalite appears to be related to britholite, being the yttrium member, and britholite the cerium member of this series.

W. F. FOSHAG

### Russellite

MAY H. HEY AND F. A. BANNISTER: Russellite, a new British mineral, with a note on the occurrence and accompanying minerals, by ARTHUR RUSSELL. *Min. Mag.*, vol. 25, no. 161, pp. 41-55, 1938, one figure and one plate.

NAME: In honor of Mr. Arthur Russell, in recognition of his contributions to British mineralogy.

CHEMICAL PROPERTIES: An oxide of bismuth and tungsten, near  $\text{Bi}_2\text{O}_3 \cdot \text{WO}_2$ . Analyses:  $\text{Bi}_2\text{O}_3$  68.26, 62.3;  $\text{WO}_3$  25.50, 32.1;  $\text{As}_2\text{O}_3$  0.26, 0.29; Insol. 1.60, 1.6; Ign. loss 4.86, n.d.; Total 100.48; Oxygen 13.13, 13.9.

CRYSTALLOGRAPHIC PROPERTIES: Tetragonal, space group  $D_{2d}^{12}$ , or possibly  $D_{4h}^{19}$ .  $a=5.42 \text{ \AA}$ ,  $c=11.3 \text{ \AA}$ . Natural crystals not found.

PHYSICAL AND OPTICAL PROPERTIES: Color pale yellow. Fine grained, compact.  $H=3\frac{1}{2}$ .  $G=7.35 \pm 0.2$ .

OCCURRENCE: Found as fragments in the jig concentrates of the Castle-an-Dinas wolfram mine, St. Columb Major, Cornwall, intimately associated with native bismuth, wolframite, limonite, quartz, topaz, lithia mica and tourmaline.

DISCUSSION: A comparison of russellite with artificial isomorphous  $\text{Bi}_2\text{O}_3 \cdot \text{WO}_3$  indicates that this mineral is a similar isomorphous mixture of bismuth and tungsten oxides.

W.F.F.

### Corrections

In the October 1938 issue, page 612, line 21 for "Calgoorie" read "Londonderry". (Dr. Edward S. Simpson has pointed out that there is no such place as "Calgoorie" in western Australia. Page 615 line 4 from Bottom, for "106°C" read "160°C".