NEW MINERAL NAMES

**Biilibinite**


Analysis by E. A. Isaeva of material selected under the binoculars gave soluble silica 14.80, UO$_2$ 5.07, UO$_3$ 45.89, ThO$_2$ 1.48, rare earth oxides 3.19, CaO 1.70, BaO 0.25, PbO 3.60, H$_2$O$^+$ 3.23, H$_2$O$^-$ 4.90, insol. (quartz and feldspar) 16.33, sum 100.44%, corresponding to the formula

$$3(Ca, Pb, TR)O \cdot (U, Th)O_2 \cdot 7UO_3 \cdot 10SiO_2 \cdot 19H_2O.$$ 

Spectrographic analysis by L. I. Denisenko showed also Al 0.1–0.03, Mg less than 0.003, Fe and Mn about 0.001, Ti 0.01–0.001, V 0.01–0.1%.

The mineral is black, streak gray, opaque, but translucent bottle-green on thin edges. Isotropic with $n$ above 1.782, less than 1.820. Shows transitions to greenish-brown, brown, and amber-yellow isotropic material with $n$ lower, down to 1.683 for amber-yellow. Decomposed by HCl or HNO$_3$ with separation of gelatinous silica. Infusible. Sp. gr. of impure material 3.5.

Biilibinite is amorphous to x-rays. Material heated at 980° gives a sharp x-ray pattern of U$_3$O$_8$. A D.T.A. curve shows a large endothermal break at 80–160° and a very small endothermal break at 550–600°.

The mineral is considered to be the amorphous analogue of the crystalline mineral coffinite and the U analogue of thorogummite. It occurs as a cement in sandstones, associated with the secondary U minerals kasolite, B-uranotile, sklodol'skite, autunite, and uranocircite. No locality is given, as usual.

The name is for Yu. A. Bilibin, Russian geologist.

**Discussion.**—Data insufficient to prove homogeneity.

**M. Fleischer**

**Mangan-uralite**


The name mangan-uralite is given to a pink amphibole formed by the alteration of the manganese pyroxene blanfordite in a pegmatite containing microcline, albite, and apatite. Analysis by A. S. D. gave SiO$_2$ 55.35, Al$_2$O$_3$ 3.52, FeO$_2$ 12.21, MgO 14.54, MnO 3.08, CaO 2.17, Na$_2$O 7.44, K$_2$O trace, H$_2$O 2.90, total 101.21% (given as 99.85%). (Nothing is said as to whether FeO was determined. M.F.) This gives the formula

$$Na_{1.27}Ca_{0.29}Mn_{0.38}Mg_{3.24}Fe_{1.24}Al_{0.04}(Si_{2.23}Al_{0.47})O_{22}(OH)_2.$$ 

The mineral occurs as radiating aggregates of needles and fibers projecting out from embayed pyroxene. Monoclinic, cleavage prismatic, color pink to pinkish violet (?), pale pink in thin-section. Optically negative, $\alpha$ 1.65–1.66, $\beta$ 1.66–1.67, $\gamma$ 1.66–1.67, 2 V large, birefringence variable, = 0.014. Pleochroic, X light pink, Y pale brown to yellow, Z faint blue; absorption $X > Y = Z$.

**Discussion.**—An unnecessary name. The composition is close to that of a manganese magnesioarfvedsonite in the classification of Miyashiro (see *Am. Mineral.*, 43, 797–798 (1958)). The name is also somewhat inappropriate, because uralite is generally understood to be an amphibole of the actinolite group, low in alkali, that has been formed from pyroxene. The described transformation of the pyroxene blanfordite to this amphibole is somewhat surprising in the chemical changes involved; analysis of the blanfordite shows a composition close to that of the amphibole except for FeO$_2$ 18.29, CaO 8.41, MgO 4.74, which implies a large loss of Fe and Ca and a large gain in Mg.

M. F.