NEW MINERAL NAMES

Nenadkevichite

M. V. Kuz'menko and M. E. Kazakova, Nenadkevichite—a new mineral. *Doklady Akad. Nauk S.S.S.R.*, **100,** 1159–1160 (1955).

The mineral was found as foliated segregations measuring from a few millimeters to 4×2.5×0.4 cm. Rough faces, taken to be (100), are cut by narrow faces at angles of approximately 41½° and 46½°. Probably orthorhombic, from the optics. Poorly developed cleavage, (001), was noted under the microscope. The color is dark brown, brown, to rose; it is due in part to impurities of hydrous manganese oxides. Streak pale rose. Luster dull. Hardness about 5. Specific gravity (pycnometer) 2.838 (brown), 2.885 (rose).

Nenadkevichite is optically biaxial, positive, with $\alpha=1.659$, $\beta=1.686$, $\gamma=1.785$, all ±0.002 (immersion method), $2V=46°$ (Federov stage). The optic axial plane is (001), $X=x$, $Y=z$, $Z=y$. Pleochroism slight, X colorless, Y pale yellow, Z pale rose. Extinction parallel.

Analyses by M. E. Kazakova gave for the brown and rose varieties, respectively: SiO_2 36.72, 37.15; Al_2O_3 0.62, 1.15; TiO_2 9.69, 12.12; ZrO_2—, —; Nb_2O_5 24.05, 24.61; Fe_2O_3 1.40, 0.80; rare earths 0.25, 0.30; MnO 1.08, 2.90; MgO 0.45, 0.52; BaO 2.75, 1.39; CaO 4.30, 1.75; Na_2O 3.34, 4.16; K_2O 2.68, 2.24; H_2O^+ 8.98, 8.84; H_2O^- 2.36, 2.00; sum 98.67 (given as 99.67 in original M.F.), 99.93%. Spectrographic analysis showed the presence of Be, Zn (medium lines), Cu. Ta, Pb (very weak lines), Ag (traces). The analysis corresponds to $ABSi_2O_7 \cdot 2H_2O$, where A= Na,K, Ca, Ba, Mn, Mg; B=Nb, Ti, Fe, and both H_2O^+ and H_2O^- are calculated in the formula. The major constituents give (Na, K, Ca) (Nb, Ti) $Si_2O_7 \cdot 2H_2O$. The mineral is fusible with difficulty to a brownish-black glass. The borax bead is transparent wine-yellow in the oxidizing flame, violet in the reducing flame. The mineral is easily dissolved by sulfuric acid, with difficulty in HNO_3 and HCl.

X-ray powder data by N. N. Sludsko are given. The strongest lines (spacings and intensities) are 3.20 10, 3.10 10, 1.427 10, 1.289 9, 2.49 8, 6.82 7, 2.58 7, 1.705 7.

The mineral occurs between crystals of microcline in a natrolite-albite pegmatite vein in aegirine lujavrite and genetically associated with poikilitic (hackmanitic) syenite. The locality is not stated (Kola Peninsula? M.F.)

The name is for Konstantin A. Nenadkevich, Russian mineralogist and geochemist.

Discussion: Murmanite has a composition rather similar to that of nenadkevichite, but with Ti>Nb (TiO_2 29.51, Nb_2O_5 7.71, Ta_2O_5 0.50%). It is stated to be monoclinic and has *n*s 0.05 to 0.08 higher than those of nenadkevichite.

Michael Fleischer

Doverite

William Lee Smith, Jerome Stone, Daphne D. Riska and Harry Levine, Doverite, a new yttrium mineral. *Science,* **122,** No. 3157, p. 31 (1955).

The mineral occurs as brownish-red, irregular aggregates, some as large as one inch in diameter. The aggregates contain very fine-grained doverite, hematite, xenotime, and quartz, and some have rims of bastnaesite. They have non-metallic luster and brownish streak, are brittle with uneven to subconchoidal fracture, and have hardness=6½, G.=3.89. The aggregate is anisotropic with *n*s in the range from 1.685 to 1.700.

Analysis of the aggregates gave rare-earth oxides 44.36 (including Ce_2O_3 7.40), ThO_2 1.62, SiO_2 9.70, Fe_2O_3 8.90, CaO 9.80, P_2O_5 8.75, Al_2O_3 0.54, UO_3 0.22, TiO_2 0.75, MgO 0.53; total H_2O 1.35, CO_2 11.75, F 2.87; total 101.14 less ($O=F_2$) 1.21, 99.93%. Spectrographic analysis by K. E. Valentine showed Y major, Ce, La, Gd minor, and Dy, Er, Yb, Nd, Pr, Lu, Ho, Tm, and Eu traces. The analysis after deduction of quartz, hematite, and xenotime

corresponds to $YFCO_3 \cdot CaCO_3$, the Y analogue of synchisite. Treatment with concentrated HCl leaves a residue of quartz and xenotime. The *x*-ray pattern is very similar to that of synchisite; the strongest lines are 9.7, 3.53, and 2.78 Å.

The mineral occurs at the Scrub Oaks iron mine at Dover, Morris County, New Jersey. The name is for the locality.

M. F.

Chiklite

S. A. Bilgrami, Manganese amphiboles from Chikla, Bhandara district, India. *Mineralog. Mag.*, **30,** 633–644 (1955).

The name chiklite is given to an amphibole whose "optical and chemical properties do not resemble closely any known amphibole." Analysis by R. K. Phillips on material air-dried at 105° gave SiO_2 52.66, Al_2O_3 1.75, TiO_2 0.60, Fe_2O_3 18.44, FeO 0.86, MgO 6.29, MnO 2.55, CeO 7.80, Na_2O 7.29, K_2O none, H_2O^+ 1.88; sum 100.12%. Spectrographic analysis shows 0.1% Ba, 0.03% Sr, and small amounts of Cr, Co, Ni, Cu, Zr, and Pb. The analysis gives a formula of the $X_2Y_5\,Si_8$ type, provided that the calcium is put into the Y position. This is close to an arfvedsonite in composition but the latter has $X+Y=8$.

The mineral has sp. gr. = 3.44, $\alpha = 1.685$, $\beta = 1.700$, $\gamma = 1.712$, $\gamma : c = 8°$, $2V = 82°$. It is deep violet in color, with well developed (100) and (110) forms. Pleochroic from carmine to red. It occurs in pegmatite that cuts Mn ore and muscovite schist at the 60-foot level of the Sitasaongi mine, Chikla area, Bhandara district, India. The rare amphiboles winchite, tirodite, and juddite are associated minerals, along with blanfordite, piedmontite, rhodonite, quartz, oligoclase, and microcline.

The name is for the locality.

Discussion: What ambitious mineralogist will earn the gratitude of the profession by compiling, calculating, and classifying all amphibole analyses so that we may have the basis for a rational nomenclature?

M. F.

NEW DATA

Falkmanite

J. E. Hiller, Über den Falkmanit und seine Unterscheidung von Boulangerit. *Neues Jahrb. Mineral., Monatsh.* **1955,** 1–10.

Falkmanite was described by Ramdohr and Ödman in 1939, but was considered by S. C. Robinson in 1948 to be identical with boulangerite (*Am. Mineral.*, **33,** 716 (1948)). Hiller on material from the type locality finds differences from boulangerite in *D.T.A.* curves, thermoelectric effect, and *x*-ray constants; he reports for falkmanite $a = 15.67$, $b = 19.06$, $c = 4.02$ Å., $\beta = 91° 50'$, probable space group C^5_{2h}–$P2_1/a$. However, Professor Hiller (letter of April 26, 1955) now states that these data have been found to have been obtained on a sample of jamesonite (the *x*-ray data agree with those of Berry on jamesonite) and he concludes—"da ich nunmehr der Ansicht von S. C. Robinson anschliessen muss, dass der Falkmanit tatsächlich ein Phantom ist."

M. F.