

NEW MINERAL NAMES

Lodochnikovite

E. I. NEFEDOV, Report on new minerals discovered by him p. 317 in V. A. MOKIEVSKY. The scientific session of the Federov Institute together with the All-Union Mineralogical Society. *Zapiski Vses. Mineral. Obshch. (Mem. Soc. russe mineral.)* Vol. **82**, No. 4, 311-317 (1953), through *Mineralog. Abs.*, **12**, 352-353 (1954).

A complex oxide of Al, Mg, Ca, and F. Insol. in acids. Monoclinic, optically neg., 2 V small, *Ns*, alpha 1.732, beta 1.744, gamma 1.746, X bluish-green, Y light yellowish-green, Z almost colorless, Z perpendicular to (010), *r* less than *v*. H. 7½. Found in skarn with calcite, spinel, titanomagnetite, idocrase, and corundum.

MICHAEL FLEISCHER

Mikheevite

E. I. NEFEDOV, *op. cit.* Composition $K_2Ca_4(SO_3)_6 \cdot H_2O$. Triclinic with a $6.70 \pm .001$, b $9.12 \pm .02$, c $16.63 \pm .06$, alpha $100^\circ 30'$, beta $75^\circ 18'$, gamma $110^\circ 44'$, $a:b:c$ 0.734:1:1.825. Habit prismatic, fragile, cleavage imperfect. H. 3½, G. 2.93, colorless to white, m.p. $1000^\circ C$.; *Ns*, alpha 1.557, beta 1.568, gamma 1.580. Found among salts.

DISCUSSION: Despite differences in composition, crystal system, and G., this is almost certainly identical with görgeyite, see *Am. Mineral.*, **39**, 403-404 (1954). The name görgeyite seems to have priority by a few months.

M. F.

Knipovichite

E. I. NEFEDOV, *op. cit.* A hydrous carbonate of Ca, Al and Cr, containing CaO, 15.00; Al_2O_3 , 21.8; Cr_2O_3 , 8.8; ignition loss ($H_2O + CO_2$) 45; insol. 2.9%.

Infusible, soluble in acids with effervescence. H. 2-3, G. 2.229. Optically neg., 2V small, *Ns*, alpha 1.540, gamma 1.592, X yellowish-pink, Z pink, parallel to elongation. Occurs in pink fibrous radial aggregates in dolomite and quartz veins.

M. F.

Stepanovite

E. I. NEFEDOV, *op. cit.* Composition $Na Mg Fe^{+3} (C_2O_4)_3 \cdot 8-9 H_2O$. Trigonal, with a 9.82, c 36.67 kX. H.3, G. 1.61. Optically neg., *Ns*, omega 1.515, epsilon 1.417, E colorless, O yellowish-green. Fuses with difficulty; soluble in water. Occurs in yellowish-green granular aggregates in coal.

M. F.

Vladimirite

E. I. NEFEDOV, *op. cit.* Composition $Ca_3(AsO_4)_2 \cdot 4H_2O$. Monoclinic (?), in acicular radial aggregates with good cleavage. H. 3½, G. 3.21, sol. in acids, fusible with difficulty. Optically neg., *Ns*, alpha 1.560, beta 1.656, gamma 1.661, 2 V 70° . Found in the zone of oxidation of ore deposits.

DISCUSSION: If the figure for 2V is correct, that for alpha is wrong. Perhaps a misprint for 1.650?

M. F.

Volkovite

E. I. NEFEDOV, *op. cit.* A hydrous borate of Sr and K. Monoclinic, in colorless cruciform intergrowth twins; a 12.90, b 14.37, c 12.76 kX, beta $100^\circ 27'$, cleavage (010) good. Fragile,

H. 3-4. Optically neg., *Ns*, alpha 1.513, beta 1.524, gamma 1.580, $2V$ 44° , *Y* perpendicular to (010). Sol. in HCl, easily fusible. Found in salts of Inder borate deposits.

M. F.

Belovite

E. I. NEFEDOV, *op. cit.* Composition given as $\text{Ca}_3(\text{Ca}, \text{Mg})(\text{AsO}_4)_2 \cdot 2\text{H}_2\text{O}$ (this does not balance. MF). Belongs to the roselite group. In colorless or white druses and fine crystalline aggregates. H.5, G. 3.50, sol. in acids, fusible to a white enamel, *Ns*, alpha 1.670, beta 1.688, gamma 1.704, $2V$ 90° . Found in the zone of oxidation.

DISCUSSION: This is not the same as belovite (a member of the apatite group), recently described. See *Am. Mineral*, **40**, 367 (1955).

M. F.

Ivanovite

E. I. NEFEDOV, *op. cit.* A hydrous chloro-borate of Ca (and K?). Monoclinic (pseudo-hexagonal), with *a* 8.60, *b* 8.02, *c* 14.72 kX, beta $91^\circ 08'$, short prismatic or tabular, cleavage (010) good. Optically neg., $2V$ $58-72^\circ$, *Ns*, alpha 1.504, beta 1.523, gamma 1.531, $r < v$. Soluble in water and acids. Found in salts of the Inder borate deposits.

M. F.

Shubnikovite

E. I. NEFEDOV, *op. cit.* Composition—a hydrous chloro-arsenate of Cu, Ca, and K, contains CuO 37.32, CaO 7.33, Cl 2.7, As_2O_5 41.43; insol. 1.66%. Orthorhombic (?), platy, light blue. Easily fusible, sol. in acids. H. 2. Optically neg., *Ns*, alpha 1.640, beta = gamma 1.690, $2V$ small, $r < v$, X light blue, $Y = Z$ greenish-blue. Found in the zone of oxidation.

M. F.

Ammersooite

H. W. VAN DER MAREL, Potassium fixation in Dutch soils: Mineralogical analyses, *Soil Sci.*, **78**, 163-179 (1954).

The name ammersooite is given to the principal clay mineral separated from the less than 2 micron fraction of strongly potassium-fixing soils of the Netherlands, Belgium, France, and Surinam. It is apparently a variety of illite that has an open layer structure. It has a basal spacing d (001) of 15.6 Å in air, 17.9 Å when saturated with glycerol. It retains this 15.6 Å spacing when saturated with H^+ , Li^+ , Na^+ , Mg^{++} , Ca^{++} , Sr^{++} , or Ba^{++} . Saturation with K^+ , Li^+ , Cs^+ , or NH_4^+ reduces the basal spacing to 10.8 Å. Vermiculite shows a similar behavior, but is also partly contracted when saturated with Li^+ , Na^+ , Ca^{++} , Sr^{++} , or Ba^{++} . The x-ray and *D.T.A.* data clearly differentiate ammersooite from vermiculite. When heated to 500°C ., ammersooite gives the basal spacing of illite (10.6 Å).

Analyses of fractions less than 2 microns with strong power to fix K (about 80% ammersooite) give: SiO_2 50 to 52, Al_2O_3 19 to 22, Fe_2O_3 9 to 11, CaO 1.1 to 1.5, MgO 2.6 to 2.9, K_2O 2.1 to 2.3, Na_2O 0.3 to 0.6, Mn_2O_3 0.1 to 0.2, TiO_2 0.6 to 0.8, P_2O_5 0.2 to 0.4, H_2O 6.5 to 7.5%. Ammersooite is apparently formed from illite in environments with excess Ca^{++} , Mg^{++} , or H^+ and a deficiency in K^+ , conditions commonly found in Dutch river sediments or in peaty river and marine sediments.

The name is for "the potash experimental field near Ammerzoden, locally known as 'Ammersooien,' where the K-fixing phenomenon was first observed in Dutch agricultural practice."

DISCUSSION: There is urgent need for the attempt to be made to reach international agreement among soil scientists and mineralogists on the nomenclature of the clay minerals.

The present bad situation cannot be resolved by unilateral decisions by any one society or group; recent attempts of this nature have only made the situation worse. Re-definition is needed, not new names.

M. F.

Hagendorfite

H. STRUNZ, Hagendorfit, ein neues Mineral der Varulith-Hühnerkobelit-Reihe. *Neues Jahrb. Mineral., Monthsch.* (1954) 252-255.

The name hagendorfite is given to the mineral of composition $(\text{Na}, \text{Ca}) (\text{Fe}, \text{Mn})_2 (\text{PO}_4)_2$ with $\text{Na} > \text{Ca}$ and $\text{Fe} > \text{Mn}$. Varulite and hühnerkobelite belong to the same group; varulite has $\text{Na} > \text{Ca}$ and $\text{Mn} > \text{Fe}$; hühnerkobelite has $\text{Ca} > \text{Na}$ and $\text{Fe} > \text{Mn}$. A new analysis from the Hagendorf-South pegmatite gave P_2O_5 42.26, FeO 15.44, Fe_2O_3 13.30, MnO 18.50, MgO 0.66, CaO 1.68, K_2O 0.17, Na_2O 8.47%. An analysis from Norrö, Sweden (Erikson, 1946) previously given as arrojadite is of hagendorfite. The mineral is probably triclinic, pseudo-orthorhombic. It has 3 cleavages, one good, one less good, and the third poor. G . 3.71. H . $3\frac{1}{2}$. Strongly pleochroic, X yellow-brown, Y green, Z blue-green; α 1.739, β and $\gamma > 1.74$. X -ray powder data are given. Hagendorfite occurs at the Hagendorf-South pegmatite, Bavaria, with triphylite, wolfeite, and hematite.

M. F.

ANNUAL MEETING OF THE MINERALOGICAL SOCIETY OF AMERICA

The thirty-sixth annual meeting of The Mineralogical Society of America will be held in New Orleans, Louisiana, Monday through Wednesday, November 7-9, 1955. A series of field trips is being planned, one to precede and several to follow the meeting.

Abstracts of papers to be presented at the annual meeting must be received by the Secretary on or before *July 15, 1955*. Abstract blanks may be obtained from the Secretary.

NOMINATIONS OF OFFICERS FOR 1956

President: Clifford Frondel, Harvard University, Cambridge, Massachusetts.

Vice-President: D. Jerome Fisher, University of Chicago, Chicago, Illinois.

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Alfred O. Woodford, U. S. Geological Survey, Menlo Park, California.

The above Fellows have been nominated by the Council as officers of The Mineralogical Society of America for 1956. They will be voted on at the election in October 1955.

On the ballot in 1954 the Fellows voted to change Article III, Section 1 of the Constitution so that two Councilors will be elected each year for a term of three years.

C. S. HURLBUT, JR., *Secretary*

Corrections

The norm was incorrectly given for three chemical analyses (Nos. 1, 3, and 5, page 722) in the paper on "Origin of dunites and of olivine-rich inclusions in basaltic rocks" in the September-October (1954) issue of this journal. The following table gives the analyses and their corrected norms.

Due to typographical errors involving misplaced decimal points, the second sentence, the third paragraph, page 720, should read as follows: "A comparison shows that the average ratio of NiO to MgO is 0.0063 in olivine, 0.0023 in enstatite, and 0.002 in diopside."

NODULE BEARING ROCKS*

	Chemical Analysis				Norms		
	1	3	5		1	3	5
SiO ₂	46.64	41.72	51.24	Q	—	—	—
Al ₂ O ₃	14.45	13.04	17.98				
Fe ₂ O ₃	3.18	2.68	3.30	or	5.57	5.01	12.24
FeO	9.77	10.00	6.61	ab	24.12	26.22	35.65
TiO ₂	2.35	2.73	1.51	an	23.92	16.69	18.64
Cr ₂ O ₃	—	0.06	—				
CaO	9.86	10.82	6.98	lc	—	—	—
MgO	9.33	9.00	4.62	ne	—	2.56	5.40
Na ₂ O	2.84	3.74	5.39				
K ₂ O	0.97	0.88	2.10	hl	—	0.12	—
MnO	0.19	0.18	—				
NiO	—	—	—	wo	9.64	5.46	6.74
BaO	—	0.07	—	en	3.71	—	—
ZrO ₂	—	0.03	—	fs	1.85	—	—
CO ₂	0.01	3.19	—				
P ₂ O ₅	0.34	0.58	—	fo	13.65	15.69	8.09
H ₂ O—	0.00	0.27	—	fa	7.74	9.27	5.30
H ₂ O+	0.06	0.92	0.35				
				mt	4.63	3.94	4.86
				il	4.40	5.16	2.88
				hm	—	—	—
				ap	0.67	1.35	—
				cc	—	7.31	—
Total	99.99	100.02†	100.08		99.90	98.78	99.80

* See *American Mineralogist*, Vol. 39, 722 (1954).

† Includes 0.11 per cent Cl.