

NEW MINERAL NAMES

Harkerite

C. E. TILLEY, The zoned contact-skarns of the Broadford area, Skye: a study of boron-fluorine metasomatism in dolomites: *Mineralog. Mag.*, **29**, 621-666 (1951).

CHEMICAL: Analysis by H. C. G. Vincent gave SiO₂ 14.17, B₂O₃ 7.77, Al₂O₃ 2.84, Fe₂O₃ 0.85, FeO 0.46, MnO 0.02, MgO 11.15, CaO 46.23, CO₂ 14.94, Cl 1.36, H₂O⁺ 0.81, H₂O⁻ 0.11; sum 100.71, less O = Cl 0.31, 100.40%. The formula is discussed; a rough fit with the unit cell is given by the following:

20CaCO₃ · Ca₂₈(Mg, Al, etc.)₂₀(B, Si)₂₄(O, OH, Cl)₉₆. The Mg group has Mg 15.65, Al 3.16, Fe^{'''} 0.60, Fe^{''} 0.36, the (B, Si) group has Si 13.35, B 12.63.

The mineral dissolves with effervescence in acetic or hydrochloric acids; gives a good flame test for boron. Heated to 850°, it decomposes to a turbid brown product.

CRYSTALLOGRAPHIC AND X-RAY DATA: X-ray study by N. F. M. Henry give the Laue group *m3m* and the tests for pyro- and piezo-electricity were negative. The crystal class is probably *m3m* (cubic holohedral). The cell has $a = 29.53 \pm .01$ Å., with a pseudo-cell at 14.76 Å. This pseudo-cell contains the formula given above. X-ray powder data are given: the strongest lines are (1) 2.61, (2) 1.84, (3) 2.13, (4) 1.51 Å.

PHYSICAL AND OPTICAL: Harkerite occurs typically as simple octahedra that are colorless with vitreous luster, but alter to white masses of calcite. Isotropic, with n 1.653, but some sections show anomalous birefringence, like that of some garnets from contact zones. $G = 2.959$. No cleavage.

OCCURRENCE: Occurs in a skarn containing monticellite, calcite, and accessory bornite, chalcocite, magnetite, and diopside, at the contact of dolomitic limestones with Tertiary granite, Isle of Skye.

NAME: For Alfred Harker, 1859-1939, British petrologist.

MICHAEL FLEISCHER

Eckrite

J. RAVIER, Sur une nouvelle variété d'amphibole: l'eckrite: *Bull. soc. franc. mineral. et crist.*, **74**, 10-19 (1951).

Amphibolite containing more than 80% amphibole, with quartz, biotite, sphene, apatite, and magnetite, fills a fault in migmatized gneiss in the Eque region on the west coast of Greenland, opposite Disko Island. Analysis of the amphibole (Patureau—analyst) gave SiO₂ 54.40, Al₂O₃ 0.80, Fe₂O₃ 11.80, FeO 4.35, MgO 16.00, CaO 6.20, Na₂O 3.45, K₂O 0.95, MnO 0.16, TiO₂ 0.80, P₂O₅ 0.22, H₂O⁻ (100°) 0.15, H₂O⁺ 1.70; sum 100.98%. This corresponds to NaCaFe^{'''}(Mg_{3.5}Fe^{''}_{0.5})(Si₄O₁₁)₂(OH)₂. The mineral has n approx. 1.6, birefringence about 0.02, strong pleochroism with X violet-blue, Y sky-blue, Z pale yellow, 2V neg., variable 0 to 35°, X:c about 40°. These properties are compared with those of amphiboles such as glaucophane, arfvedsonite, riebeckite, etc., with the conclusion that none is exactly like this one. The name is for the Eque region.

DISCUSSION: Additional variety names such as this are not justified unless a thorough review of the whole group is made and the variety names are considered systematically.

M. F.

Magniotriplite

A. I. GINSBURG, N. A. KRUGLOVA, AND V. A. MOLEVA, Magniotriplite—a new mineral of the triplite group: *Doklady Akad. Nauk S.S.S.R.*, **77**, 97-100 (1951); from a translation kindly made by Mr. V. L. Skitsky.

The mineral occurs as crystals and as masses up to 0.5×8 cm. in pegmatites of the

Turkestan Ridge. It is reddish-brown, luster vitreous, one cleavage observed under the microscope, fracture uneven, hardness 4, $G = 3.57$. Analysis FeO 25.90, MnO 13.00, MgO 17.12, CaO none, Al_2O_3 0.70, alkalis none, P_2O_5 36.52, SiO_2 (quartz) 2.40, TiO_2 0.92, H_2O^+ 0.64, H_2O^- 0.10, F 6.00; sum 103.30 minus O = 2F 2.52, 100.78%. This leads to the formula $(Mg, Fe, Mn)_{15}(PO_4)_8F_6$ with Mg:Fe:Mn = 0.425:0.360:0.183. (The usual formula is $R_2(PO_4)F$). Optically the mineral has $nX = 1.641$, $nY = 1.649$, $nZ = 1.661$, $X:a = 18^\circ$, $Z=b$, pleochroic with X = light yellow, nearly colorless, Y = light yellow, Z = wine-yellow, $2V$ 60° , pos.

DISCUSSION: This is outside the range of composition plotted for triplite by Heinrich, *Am. Mineral.*, **36**, 256–271 (1951). Previous analyses of triplite with high MgO have all been high in Fe and low in Mn.

M. F.

Magnalumoxide

N. A. BOBKOV AND YU. V. KAZITSYN, The new mineral magnalumoxide: *Vses. Mineral. Obshch. Zapiski (Mém. soc. russe mineral.)* **80**, 108–121 (1951); from a translation kindly made by Mr. V. Skitsky.

The mineral occurs in octahedral crystals up to 15 cm. in diameter, showing the forms {111}, {110}, and {113} only. The crystals are black with vitreous luster, streak gray-green. Sp. gr. 3.76, hardness $7\frac{1}{2}$ –8. Optically isotropic with n 1.745. X-ray powder photographs gave a $8.086 \pm .002 \text{ \AA}$; some lines are not accounted for by this cell size and a superstructure may be present. Analysis gave SiO_2 0.75, Al_2O_3 68.56, Fe_2O_3 11.37, Cr_2O_3 0.05, FeO 0.99, MgO 15.55, MnO 0.41, CaO 0.93, TiO_2 0.30, P_2O_5 0.02, Na_2O 1.34; sum 100.27%. This corresponds to 53.3 mol % $Mg(Al, Fe)_2O_4$, 46.7 mol % $(Al, Fe)_2O_3$, or nearly $Mg_5(Al, Fe)_{16}O_{32}$. Solid solutions of alumina (as gamma-alumina?) in spinel were long ago reported in synthetic studies, but had not previously been reported as naturally occurring minerals. The crystal structure was investigated in great detail; it differs from the spinel structure and the space group is probably T_d^1 . The mineral occurs in a metasomatic vein which also contains diopside, phlogopite, and calcite, and which cuts a marble-diopside rock in the area of the Gon River, within the Dzheltulinsk metamorphic section of the Aldan shield, southeastern Siberia.

The name is from the composition.

M. F.

Taaffeite

B. W. ANDERSON AND G. F. CLARINGBULL, Taaffeite, a new beryllium mineral, found as a cut gem-stone: *Mineralog. Mag.*, **29**, 765–772 (1951).

A small (1.419 carats) mauve gem-stone, supposedly spinel, was noted by Taaffe to show double refraction. Microchemical analysis by M. H. Hey gave Al_2O_3 70.0, Fe_2O_3 5.9, MgO 13.4, BeO 11.0, corresponding to $BeMgAl_4O_8$, intermediate between spinel and chrysoberyl. X-ray powder data are given; the strongest lines are 2.43, 2.05, 1.05 \AA . Laue and oscillation photographs gave space group $D_6^h-C6_2$, $a = 5.72$, $c = 18.38 \text{ \AA}$, c/a 3.21. Sp. gr. = $3.613 \pm .002$. The unit cell contains $Be_4Mg_4Al_{16}O_{32}$. The mineral is optically negative, with nE 1.7182, nO 1.7230; a second sample had nE 1.7167, nO 1.7208. Measurements of dispersion gave for nO :

| | | | |
|-----------|--------|--------|--------------------|
| λ | 6708 | 5893 | 4226 \AA |
| nO | 1.7191 | 1.7230 | 1.7390 |

(The locality is unknown, but the shape suggested that the stone had been cut in Ceylon.)

The name is for Count Taaffe, "a brilliant if unorthodox Dublin gemmologist," who first noted the unusual properties of the stone.

M. F.

Andersonite

J. M. AXELROD, F. S. GRIMALDI, CHARLES MILTON AND K. J. MURATA, *Am. Mineral.*, **36**, 1-22 (1951).

Bayleyite

J. M. AXELROD et al., *Am. Mineral.*, **36**, 1-22 (1951).

Swartzite

J. M. AXELROD et al., *Am. Mineral.*, **36**, 1-22 (1951).

Huttonite

ADOLF PABST AND C. O. HUTTON, *Am. Mineral.*, **36**, 60-69 (1951).

Sabugalite

CLIFFORD FRONDEL, *Am. Mineral.*, **36**, 671-679 (1951).

Novacekite

CLIFFORD FRONDEL, *Am. Mineral.*, **36**, 680-686 (1951).

Ferrocapholite

W. P. DE ROEVER, *Am. Mineral.*, **36**, 736-745 (1951).

M. F.

The following new names are used in *Dana's System of Mineralogy*, 7th Edition, Vol. 2 (1951).

Bararite (p. 106)

Name given to the hexagonal dimorph of $(\text{NH}_4)_2\text{SiF}_6$, formerly included with the isometric modification under the name cryptohalite. The name is for the locality, Barari, India.

Cobaltocalcite (p. 175)

Name given to CoCO_3 , formerly called sphaerocobaltite. The latter is considered unsatisfactory "because of the suggested relation to cobaltite and the use of the mode of aggregation as a species rather than as a varietal designation."

Chalcocyanite (p. 429)

Name given to anhydrous CuSO_4 , formerly called hydrocyanite. Named for the Greek for copper and azure-blue. "The original name is objectionable for an anhydrous substance."

Pentahydrate (p. 492)

Name given to $\text{MgSO}_4 \cdot 5\text{H}_2\text{O}$, not previously named (see *Am. Mineral.*, **36**, 641 (1951)). Cuprian varieties are known.

Davisonite (p. 939)

Name given to $\text{Ca}_3\text{Al}(\text{PO}_4)_2(\text{OH})_3 \cdot \text{H}_2\text{O}$ described by Larsen and Shannon, *Am. Mineral.*, **15**, 322 (1930), as dennisonite. Named for J. M. Davison (1840-1915) of the University of Rochester whose name was erroneously written as Dennison.

Meta-uranopilite (p. 582)

Name given to $(\text{UO}_2)_6(\text{SO}_4)(\text{OH})_{10} \cdot 5\text{H}_2\text{O}$, formerly called beta-uranopilite. Presumably changed because it is less hydrated than uranopilite, not a dimorph of it.

Metastrengite (p. 769)

Name given to $\text{FePO}_4 \cdot 2\text{H}_2\text{O}$, called phosphosiderite since 1890. Name changed to parallel the nomenclature variscite-metavariscite.

Hydroxyl-herderite (p. 820)

Name used to replace hydro-herderite.

Changes in Hitherto Usually Accepted Nomenclature in *Dana's System of Mineralogy*, 7th Edition, Vol. 2

Natromontebrasite (in place of Fremontite) (p. 823)

Ammonia Alum (in place of the Tschermigite) (p. 475)

Devillite (in place of Herrengrundite) (p. 590). See discussion, *Am. Mineral.*, **26**, 293 (1941)

M. F.

DISCREDITED MINERALS

Nuevite (= Samarskite)

JOSEPH MURDOCH, *Am. Mineral.*, **36**, 358-359 (1951).

Stuetzite (= Empressite)

R. M. THOMPSON, M. A. PEACOCK, J. F. ROWLAND, AND L. G. BERRY, *Am. Mineral.*, **36**, 458-470 (1951).

Erinite (= Cornwallite)

L. G. BERRY, *Am. Mineral.*, **36**, 484-503 (1951).

Leucochalcite (= Olivenite)

L. G. BERRY, *Am. Mineral.*, **36**, 484-503 (1951).

Stylotypite (a mixture, mainly tetrahedrite)

CHARLES MILTON AND J. M. AXELROD, *Am. Mineral.*, **36**, 696-703 (1951).

M. F.

NEW DATA

Jordisite (Amorphous molybdenum sulfide)

L. W. STAPLES, *Am. Mineral.*, **36**, 609-614 (1951).

M. F.