MINERALOGICAL MAGAZINE, DECEMBER 1970, VOL. 37, NO. 292

Twenty-sixth list of new mineral names

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THE present list includes 145 names, of which 11 are errors, one a spelling variant, 3 new and unnecessary synonyms for known minerals, and one an accepted new name to replace a somewhat unsatisfactory older one. Names for inadequately characterized minerals (21) and unnecessary new names for minor varieties (13) remain as frequent as for some years past, and there are an increased number (10) of mineral names allotted to synthetic products or hypothetical end-members not known in nature, and two group names.

Many of the 83 new named species or varieties have been approved by the Commission on New Minerals and Mineral Names of the International Mineralogical Association, but there is still room for improvement in this respect. So long as some journals continue to accept for publication names that have not been submitted to the Commission mineralogy will carry an increasing burden of ill-defined species and superfluous names.

To save space, references to other valuable periodical lists of new minerals are given in shortened form: A.M. *Amer. Min.*; Bull., *Bull. Soc. franç. Min. Crist.*; Zap., Зап. Всесоюз. мин. общ. (*Mem. All-Union Min. Soc.*). References to *Min. Abstr.* (M.A.), formerly by volume and page, are now given by year (last two figures only) and serial number of the abstract.

Agardite. J. E. Dietrich, M. Orliac, and F. Permingeat, 1969. *Bull. Soc. franç. Min. Crist.* **92,** 420. Greenish-blue hexagonal crystals from the Bou-Skour copper mine, Jebel Sarho, Ourzazate, Morocco, have the composition $(Yt,CaH)Cu_6(AsO_4)_3(OH)_6.3H_2O$, and are the rare-earth analogue of mixite. Named for J. Agard. [M.A. 70–1649]. The proposal by K. Walenta (*Chemie der Erde*, **29,** 36, 1970) to transfer the name chlorotile (Frenzel, 1875), of uncertain connotation, to this mineral was rejected before publication by the Commission on New Minerals and Mineral Names of the International Mineralogical Association.

Aktashite. V. I. Vasilev, 1968. [Вопрос. металлогении ртути. Изд. 'Наука']; abstr. *Zap.* **99,** 64 (1970). (Акташит). Sulpharsenite of Cu and Hg, with Cu around 24 %, Hg 33 %, As (+Sb) 20 %, and S 23 %, occurring at Aktash in the high Altai. The description is incomplete, and the name was published against the recommendation of the New Minerals Commission of the All-Union Mineralogical Society.

Aluminohydrocalcite, error for alumohydrocalcite (*Canad. Min.* **10,** 88).

Anilite. N. Morimoto, K. Koto, and Y. Shimazaki, 1969. *Amer. Min.* **54,** 1256. Orthorhombic Cu_7S_4, occurring as an intergrowth with djurleïte at the Ani mine, Akita, Japan, in prismatic or platy crystals closely resembling chalcosine; has also been

obtained synthetically. Inverts to a digenite-type structure on grinding. Named for the locality. [M.A. 70–1640.]

Aromite. G. Mueller, 1964. *Rept. 22nd Internat. Geol. Congr., India*, pt. 1, 46. An insoluble, infusible bitumen yielding aromatic hydrocarbons on pyrolysis. Not to be confused with aromite of Darapsky, 1900, a doubtful sulphate of Mg and Al.

Arsendestinezite. J. Kratochvíl, 1958. *Topograf. Min. Čech.* **2**, 136. $Fe_2^{3+}AsO_4SO_4(OH).nH_2O$, from Kaňk, Kutná Hora, Czechoslovakia, regarded as the arsenic analogue of destinezite; now renamed bukovskýite (q.v.). [A.M. **54**, 994.]

Azoproite. A. A. Konev, V. S. Lebedeva, A. A. Kashaev, and Z. F. Ushchapovskaya, 1970. Зап. Всесоюз. Мин. Общ. (*Mem. All-Union Min. Soc.*), **99**, 225. (Азопроит). $(Mg_{7\cdot27}Fe^{2+}_{0\cdot53}Mn_{0\cdot01})(Fe^{3+}_{1\cdot49}Ti^{2+}_{1\cdot43}Mg^{2+}_{1\cdot00})B_{4\cdot06}O_{19\cdot99}$, orthorhombic, from Tazheran; a highly titanian member of the ludwigite group. The ideal formula is written $4MgO.(TiO_2,MgO).B_2O_3$. [M.A. 70–3432.]

Balavinskite. Ya. Ya. Yarzhemski, 1966. [Акад. наук СССР, Сибир. отдел. Всес. науч.-иссл. инст. Галургии. Изд. 'Наука']; abstr. *Amer. Min.* **54**, 575 (1969). Only a formula, $Sr_2B_6O_{11}.4H_2O$, and refractive indices are cited. [Bull. **92**, 517.]

Barringerite. P. R. Buseck, 1969. *Science*, **165**, 169. Hexagonal $(Fe,Ni)_2P$ occurs along the contacts of schreibersite and troilite in the Ollague meteorite. [A.M. **55**, 317; M.A. 70–1647.]

Behoite. A. J. Ehlmann and R. S. Mitchell, 1970. *Amer. Min.* **55**, 1. β-$Be(OH)_2$ occurs as colourless orthorhombic crystals in alteration zones round gadolinite in the Rode Ranch pegmatite, Llano County, Texas. Named from the composition.

Bernalite. G. Mueller, 1964. *Rept. 22nd Internat. Geol. Congr., India*, pt. 1, 47. An olefinic bitumen, named for Professor J. D. Bernal.

Betecktinite, error for Betechtinite. (*Min. Depos.* **5**, 33 (1970).)

Beusite. C. S. Hurlbut Jr. and L. F. Aristarain, 1968. *Amer. Min.* **53**, 1799. $(Mn,Fe)_3(PO_4)_2$, the manganese analogue of graftonite, as red-brown crystals from San Luis Province, Argentina, at Los Aleros, Amanda, and San Salvador. Named for Professor A. Beus. [M.A. 69–2395; Bull. **92**, 511; Zap. **99**, 79.]

Bideauxite. S. A. Williams, 1970. *Min. Mag.* **37**, 637. Well-formed cubic crystals of $Pb_2AgCl_3(F,OH)_2$ occur on and replacing boléite on a few specimens from the Mammoth-St. Anthony mine, Tiger, Pinal County, Arizona. Named for its discoverer, Richard A. Bideaux. [M.A. 70–2610.]

Billingsleyite. C. Frondel and R. M. Honea, 1968. *Amer. Min.* **53**, 1791. $Ag_7(As,Sb)S_6$, as fine-grained lead-grey aggregates from the North Lily mine, East Tintic district, Utah; orthorhombic. Named for P. Billingsley. [M.A. 69–2383; Bull. **92**, 511; Zap. **99**, 73.]

Binghamite. Author and date ? 'A beautiful gemstone unique to Minnesota is the crystalline quartz replacement of fibrous goethite locally named binghamite in honor of William J. Bingham of St. Paul, who, with his son, discovered this attractive material in 1936' (J. Sinkankas, *Gemstones of North America*, 1959, 346).

Braitschite. O. B. Raup, A. J. Gude 3rd, E. J. Dwornik, F. Cuttitta, and H. J. Rose Jr., 1968. *Amer. Min.* **53**, 1081. White, microcrystalline, hexagonal, in nodules in anhydrite rock in the Cane Creek potash mine, Moab, Grand County, Utah;

formula given as $(Ca,Na_2)_7Ln_2B_{22}O_{43}.7H_2O$, but the observed density does not fit. [Empirical cell contents $Ca_{6.4}Na_{0.9}Ln_{2.1}B_{22.9}O_{44.3}.7{\cdot}1H_2O$ *M.H.H.*] Named for Professor Otto Braitsch. [M.A. 69–615; Bull. **92,** 511; Zap. **98,** 325.]

Brezinaite. T. E. Bunch and L. H. Fuchs, 1969. *Amer. Min.* **54,** 1509. Cr_3S_4, monoclinic, occurs as dull grey grains in the metal of the Tucson meteorite, adjacent to the silicate inclusions. Named for Aristides Brezina. [M.A. 70–2612.]

Bukovskyite. F. Novak, P. Povondra, and J. Vtělenský, 1967. *Acta Univ. Carolinae,* Geol. no. 4, 297. The mineral from Kaňk, Kutná Hora, formerly known as arsendestinezite (this List) is distinct from both destinezite and sarmientite, and is accordingly renamed in honour of Professor Antonin Bukovsky. Composition $Fe_2^{3+}AsO_4SO_4(OH).7H_2O$. [A.M. **54,** 576 and 991; Zap. **97,** 617; Bull. **92,** 512.]

Carbonite. G. Mueller, 1964. *Rept. 22nd Internat. geol. Congr., India,* pt. 1, 46. An insoluble, infusible bitumen. Not to be confused with carbonite of Heinrich, 1875, a natural coke.

Carnevallite. B. H. Geier and J. Ottemann, 1970. *Min. Depos.* **5,** 29. Sulphide of Cu and Ga, near Cu_3GaS_4, with some Fe and Zn, in small (40 μm) grains in the Tsumeb ores. Only optical data and an electron-probe analysis given.

Chalcothallite. E. I. Semenov, H. Sørensen, M. S. Bessmertnaya, and L. E. Novorossova, 1967. *Medd. Grønland,* **181,** no. 5, 13. Metallic grey lamellar aggregates from Nakalaq, Ilimaussaq, Greenland; Cu_3TlS_2. Named for the composition. [A.M. **53,** 1775; M.A. 69–1528; Bull. **92,** 316; Zap. **97,** 612.]

Chrominium. D. Adib and J. Ottemann, 1970. *Min. Depos.* **5,** 86. Deep red monoclinic crystals from the T. Khuni mine, Anarak, Iran, have the composition Pb_2CrO_5. The description is seriously inadequate; no X-ray powder data are given, and the material has not been compared with synthetic Pb_2CrO_5. The name 'refers to the chemical composition' [it may also allude to minium, but is objectionable, as it suggests a new element. It also appears as 'chromium'. Almost certainly identical with phoenicochroite. *M.H.H.*]

Cliffordite. R. V. Gaines, 1969. *Amer. Min.* **54,** 697. Bright yellow octahedra from the San Miguel mine, Moctezuma, Sonora, Mexico, agree in all respects with synthetic $U^{iv}Te_3O_8$. Named for Dr. Clifford Frondel. [M.A. 70–750.]

Costibite. L. J. Cabri, D. C. Harris, and J. M. Stewart, 1970. *Amer. Min.* **55,** 10. Type willyamite (cubic (Co,Ni)SbS, with Co > Ni) from the Consols Lode, Broken Hill, New South Wales, also carries lamellae of CoSbS, orthorhombic with space group $P2_1mn$ and distinct from paracostibite. [M.A. 70–2607.]

Cuprostibite. C. Sørensen, E. I. Semenov, M. S. Bessmertnaya, and E. B. Khalezova, 1969. Зап. Всесоюз. мин. общ. (*Mem. All-Union Min. Soc.*), **98,** 716 (Купростибит). The intermetallic compound Cu_3Sb_2 occurs at Ilimaussaq, West Greenland. Named from the composition. [M.A. 70–3427.]

Curiénite. F. Cesbron and N. Morin, 1968. *Bull. Soc. franç. Min. Crist.* **91,** 453. The lead analogue of francevillite, $Pb(UO_2)_2(VO_4)_2.5H_2O$, occurs as a microcrystalline powder on crystals of francevillite at the Mounana mine, Gabon, and has been obtained synthetically. Named for Professor Hubert Curien. [A.M. **54,** 1220; M.A. 69–1537; Bull. **92,** 316; Zap. **99,** 80.]

Cyclite. G. Mueller, 1964. *Rept. 22nd Internat. Geol. Congr., India*, pt. 1, 46. A fusible, partly soluble bitumen, believed to have a purely polycyclic structure. Subdivided into bernalite, elaterite, and mutabilite.

Dadsonite. J. L. Jambor, 1969. *Min. Mag.* **37,** 437. The mineral formerly described as Mineral Q, from Yellowknife, North West Territories, and that described as Mineral QM, from Madoc, Ontario, and from Pershing County, Nevada, are identical; monoclinic, composition $Pb_{11}Sb_{12}S_{22}$. Named for A. S. Dadson. [M.A. 70–752.]

Donathite. E. Seeliger and A. Mücke, 1969. *Neues Jahrb. Min., Monatsh.* 49. A 'chromite' from Hestmandö Island, Norway, is distinctly anisotropic and splitting of X-ray diffractions shows that it is tetragonal; composition near $Fe^{2+}_{0.8}Mg_{0.2}Cr_{1.3}Fe^{3+}_{0.7}O_4$, with a little Zn. Named for M. Donath, who described the material in 1930. [A.M. **54,** 1218; M.A. 70–2615; Zap. **99,** 75.]

Dresserite. J. L. Jambor, D. G. Fong, and Ann P. Sabina, 1970. *Canad. Min.* **10,** 84. $Ba_2Al_4(CO_3)_4(OH)_8.3H_2O$, the barium analogue of dundasite, occurs as spherical aggregates of orthorhombic fibres at St.-Michel, Montreal Island, Quebec, in cavities in an alkalic sill. Named for J. A. Dresser.

Ericssonite. P. B. Moore, 1967. *Canad. Min.* **9,** 301. Orthorhombic '$BaMn_3Fe^{3+}Si_2O_7OH$', perhaps in error for $BaMn_2Fe^{3+}(Si_2O_7)O.OH$, related to lamprophyllite, from Långban, Sweden. [A.M. **53,** 1426; Bull. **91,** 305; Zap. **98,** 330.]

Eveite. P. B. Moore, 1967. *Canad. Min.* **9,** 301; *Arkiv Min. Geol.* **4,** 473 (1969); *Amer. Min.* **53,** 1841 (1968). Green orthorhombic crystals of Mn_2AsO_4OH, from Långban, Sweden, are isostructural with adamite. Named in allusion to this relation. [A.M. **53,** 1426; **55,** 319; M.A. 69–2397, 2398; Bull. **91,** 305; Zap. **98,** 328; **99,** 79.]

Ferri-annite. D. R. Wones, 1963. *Amer. Journ. Sci.* **261,** 581 (Ferriannite); G. Donnay *et al.*, *Acta Cryst.* **17,** 1369 (1964), Ferri-annite. *Artificial* $KFe^{2+}_3Fe^{3+}Si_3O_{12}(OH)_2$, the ferric analogue of annite.

Ferri-diopside. H. G. Huckenholz, J. F. Schairer, and H. S. Yoder, Jr., 1969. *Min. Soc. Amer. Spec. Paper* no. 2, 163. In *synthetic* preparations, diopside can contain in solid solution up to 33 wt % of $CaFe^{3+}_2SiO_6$. The exact connotation intended for the name ferri-diopside, whether for this end-member or for the stable ferrian diopsides, is not clear.

Ferripléonaste. J. Babkine, F. Conquéré, and J.-C. Vilminot, 1968. *Compt. Rend. Acad. Sci. Paris*, **266**D, 1455. An unnecessary name for a ferrian ceylonite (pleonaste) with 5–9 % Fe_2O_3. [M.A. 69–3306.]

Ferrobabingtonite. R. A. Vinogradova and I. N. Plyusinna, 1967. [Вест. Москов. унив., сер. 4, Геол. (*Rept. Moscow Univ.*, ser. 4, geol), 54]; abstr. *Amer. Min.* **53,** 1064 (1968). Superfluous synonym of babingtonite.

Fersilicite and **Ferdisilicite.** V. Kh. Gevorkyan, 1969. [Геол. журн. Украин (*Geol. Journ. Ukraine*), **29,** 62]; abstr. *Amer. Min.* **54,** 1737 (1969). Ferrosilicon found in drill cores from sandstones near Zachativsk, Donets region, Ukraine, is believed to be natural; it consists of intergrowths of cubic FeSi, fersilicite, and tetragonal $FeSi_2$, ferdisilicite. Named from the composition. [M.A. 70–747; Zap. **99,** 71.]

Fluor-pectolite. P. S. Rogers, 1970. *Min. Mag.* **37,** 741. $NaCa_2Si_3O_8F$, the fluorine analogue of pectolite; *artificial*, as a devitrification product in a glass.

Fukuchilite. Y. Kajiwara, 1969. *Min. Journ.* (*Japan*), **5,** 399. Cubic Cu_3FeS_8 occurs in the gypsum orebody at the Hanawa mine, Akita Prefecture, Japan. Named for Nobuyo Fukuchi. [M.A. 70–749.]

Godlevskite. E. A. Kulagov, T. L. Evstigneeva, and O. E. Yushko-Zakharova, 1969. Геол. рудн. месторожд. (Geol. Ore-deposits), **11,** 115 (Годлевскит). β-Ni_7S_6 occurs as grains and aggregates in the Norilsk and Talnakh ore deposits, in bornite+chalcopyrite veins. Named for M. N. Godlevskii. [A.M. **55,** 317; M.A. 70–1639; Zap. **99,** 72.]

Güggenite. F. Trojer, 1958. *Radex Rundschau,* 365. An *artificial* compound of CuO and MgO, of uncertain formula ($CuMgO_2$ or Cu_2MgO_3 or Cu_3MgO_4), characterized by optical and X-ray data (*Radex Rundschau,* 1963, 383; *Zeits. anorg. Chem.* 1964, **332,** 230; *Journ. inorg. Chem.* 1968, **30,** 747).

Hebergite. J. Barrington and P. F. Kerr, 1961. *Econ. Geol.* **56,** 241. Mentioned without a description among secondary uranium minerals from the Midnite mine, Spokane, Washington. [Zap. **97,** 79.] [Possibly an error for liebigite *M.H.H.*]

Hemihedrite. S. A. Williams and J. W. Anthony, 1967. *Canad. Min.* **9,** 310. Orange to almost black anorthic crystals from the Florence mine, Pinal County, Arizona, and the Pack Rat claim, Wickenburg, Maricopa County, Arizona, are near $Pb_5Zn(CrO_4)_3OF_4$. Named for the symmetry ($P\bar{1}$). [A.M. **53,** 1427; Bull. **91,** 517.]

Hemusite. G. Terziev, 1965. [Българ. геол. дружество, **3,** 375 (хемусит); Геол. рудн. месторожд. (*Geol. Ore-deposits*), no. 3, 37 (1966)]; quoted in *Zap.* **97,** 67 (1968). Cu_3SnS_4, mentioned without description as an accessory mineral in ore-deposits at Chelopech, Bulgaria. [A.M. **53,** 1775; Bull. **92,** 320.]

Henritermierite. C. Gaudefroy, M. Orliac, F. Permingeat, and A. Parfenoff, 1969. *Bull. Soc. franç. Min. Crist.* **92,** 185; ibid. 126. Small brown grains from the Tachgagalt mine, Morocco, are tetragonal, with a deformed hydrogarnet structure and composition $Ca_3(Mn^{3+}_{1.5}Al_{0.5})(SiO_4)_2(OH)_4$. [A.M. **54,** 1739; M.A. 69–3347; Zap. **99,** 81.]

Hocartite. R. Caye, Y. Laurent, P. Picot, R. Pierrot, and C. Lévy, 1968. *Bull. Soc. franç. Min. Crist.* **91,** 383. $Ag_2Sn(Fe,Zn)S_4$, the silver analogue of stannite, as inclusions in blende and wurtzite at the tin mines of Tacama, Hocaya, and Chocaya, Bolivia, and at Fournial, Cantal, France. Named for R. Hocart. [A.M. **54,** 573; M.A. 69–611; Zap. **99,** 73.]

Hodrushite. M. Koděra, V. Kupčik, and E. Makovický, 1970. *Min. Mag.* **37,** 641. Needle-shaped crystals or fine aggregates in the Rosalia vein, Banska Hodruša, near Banska Štiavnica, Czechoslovakia are monoclinic; composition $Cu_8Bi_{12}S_{22}$. Named for the locality. [M.A. 70–2609.]

Hydro-andradite. R. J. Ford, *Min. Mag.* **37,** 942. A hydrogarnet, related to andradite by $SiO_4 \rightarrow (OH)_4$ replacement.

Hydroglauberite. M. N. Slyusareva, 1963. Зап. всесоюз. мин. общ. (*Mem. All-Union Min. Soc.*), **98,** 59. (Гидроглауберит.) Snow-white masses in Tertiary sediments in the Karakalpakii ASSR as an alteration product of glauberite have the composition $Na_{10}Ca_3(SO_4)_8.6H_2O$. Named for the composition. [A.M. **55,** 321; M.A. 70–754; Zap. **99,** 78.]

Hydromelilite. E. M. Epshtein, L. I. Anikeeva, and A. F. Mikhailova, 1961. [Tr. НИИГА, **122,** 116 (Гидромелилит)]; abstr. Zap. **97,** 620. An unnecessary general term for the hydration products of melilite, cebollite, and juanite.

Hydronatrojarosite. M.-A. Kashkai, 1969. Зап. Всесоюз. мин. общ. (*Mem. All-Union Min. Soc.*), **98,** 153. (Гидронатроярозит.) A superfluous name for a natrojarosite high in water.

Hydro-naujakasite. O. V. Petersen, 1967. *Medd. Grønland,* **181,** no. 6, 1. An incompletely described alteration product of naujakasite. [A.M. **53,** 1778; Bull. **92,** 320; Zap. **99,** 85.]

Hydrophyllite, error for Hydrophilite (*Amer. Min.* **54,** 1021). The confusion of -philite and -phyllite is curiously common.

Hydrorinkite. E. I. Semenov, 1969. [Мин. щелочн. масс. Илимаусак. Изд. 'Наука', p. 49 (*Minerals of the Ilimaussaq alkalic massif*)]; abstr. *Zap.* **99,** 84 (1970) (Гидроринкит). $NaCa_4Ce_2(Ti,Nb)_2Si_5O_{21}(OH)_{12}F_2$, monoclinic; gives an X-ray pattern close to that of rinkite. Cf. Hydrorinkolite (24th List).

Ilimaussite. E. I. Semenov, M. E. Kazakova, and V. J. Bukin, 1968. *Medd. Grønland,* **181,** no. 6, 3. Lamellar aggregates of hexagonal crystals from Nakalaq, Ilimaussaq, South Greenland, near $Ba_2Na_4CeFeNb_2Si_8O_{28}.5H_2O$. Named for the locality. [A.M. **54,** 992; M.A. 69–3352; Zap. **99,** 82.]

Julgoldite. P. B. Moore, 1967. *Canad. Min.* **9,** 301. Monoclinic $Ca_2Fe^{2+}Fe^{3}_{2}+SiO_4Si_2O_7(OH)_2.H_2O$, from Långban, Sweden. The iron analogue of pumpellyite. [A.M. **53,** 1426 (Jugoldite); Bull. **91,** 305; Zap. **98,** 330.]

Kemmlitzite. J. Hak, Z. Johan, M. Kuacek, and W. Liebscher, 1969. *Neues Jahrb. Min. Monatsh.* 201. $(Sr,Ce,La)Al_3AsO_4(P,S)O_4(OH)_6$, the arsenate analogue of svanbergite, was found in the heavy fraction from kaolinized quartz porphyry from Kemmlitz, Saxony. Named for the locality. [A.M. **55,** 320; Bull. **92,** 512; Zap. **99,** 79.]

Khuniite. D. Adib and J. Ottemann, 1970. *Min. Depos.* **5,** 86. Brownish-yellow crystals from the T. Khuni mine, Anarak, Iran, have a composition near $Pb_{1.6}Zn_{0.2}Cu_{0.2}CrO_5$; they are stated to be monoclinic, with sp. gr. 5·9; no other data are given. Named for the locality. [This mineral is probably identical with iranite (23rd List), which probably contains Cu and Zn, but without a more adequate description, and in particular without X-ray powder data, this surmise cannot be tested. *M.H.H.*]

Knorringite. P. H. Nixon and G. Hornung, 1968. *Amer. Min.* **53,** 1833. A bluish-green garnet from the Kao kimberlite pipe, Lesotho, contains a major amount of the end-member $Mg_3Cr_2(SiO_4)_3$; named for Dr. Oleg von Knorring. [M.A. 69–2390; Bull. **92,** 512; Zap. **99,** 81.]

Krinovite. E. Olsen and L. Fuchs, 1968. *Science,* **161,** 786. Minute monoclinic grains of $NaMg_2CrSi_3O_{10}$ occur in graphite nodules in the meteoritic irons of Cañon Diablo, Wichita County, and Youndegin. Named for Dr. E. L. Krinov. [A.M. **54,** 578; M.A. 69–3351; Bull. **92,** 513; Zap. **99,** 81.]

Langisite. W. Petruk, D. C. Harris, and J. M. Stewart, 1969. *Canad. Min.* **9,** 597. Hexagonal (Co,Ni)As with Co:Ni = 5, isotypic with nickeline, occurs in the ores of the Langis mine, Cobalt–Gowganda area, Ontario. Named for the locality. [M.A. 70–1644; Zap. **99,** 71.]

Lemoynite. G. Perrault, E. I. Semenov, A. V. Bikova, and T. A. Capitonova, 1969. *Canad. Min.* **9,** 585. Colourless monoclinic crystals with elpidite and eudialyte in the St. Hilaire alkaline massif, Quebec; $(Na,Ca)_3Zr_2Si_8O_{22}.8H_2O$. Named for Charles Lemoyne. [M.A. 70–1654; Zap. **99,** 83.]

Lenoblite. F. Cesbron and H. Vachey, 1970. *Bull. Soc. franç. Min. Crist.* **93,** 235. A sky-blue oxide of vanadium, distinct from duttonite (21st List), with which it occurs at Mounana, Gabon; partially oxidized; the unaltered material is probably $V_2O_4.2H_2O$ (the same composition as duttonite). Named for André Lenoble. [M.A. 70–3426.]

Loewite, error for Löweïte (J. W. Mellor, *Treat. Inorg. Chem.* **4,** 1060).

Lörvite, error for Löweïte (J. W. Mellor, *Treat. Inorg. Chem.* **2,** 888).

Löwite, error for Löweïte (J. W. Mellor, *Treat. Inorg. Chem.* **2,** 430; **4,** 252).

Mckelvyite, error for Mckelveyite (24th List). *Amer. Min.* **52,** 860 (1967).

Magnesio-astrophyllite. Chih-chung Peng and Che-sheng Ma, 1964. [*Scientia Sinica,* **13,** 1180]; abst. *Zap.* **97,** 76. A superfluous name for magnesian astrophyllite.

Maigruen. B. H. Geier and J. Ottemann, 1970. *Min. Depos.* **5,** 29. Sulphide of Cu and Ga, near Cu_2GaS_3, with some Zn and V, in small (0·1 mm) grains with germanite and gallite in the Tsumeb ores. Only optical data and an electron-probe analysis given. (The publication of 'working names' is undesirable.)

Makatite. R. A. Sheppard, A. J. Gude, 3rd, and R. L. Hay, 1970. *Amer. Min.* **55,** 358. White spherulites from cavities in trona, from drill holes in the Evaporite Series of Lake Magadi, Kenya, have composition $NaSi_2O_3(OH)_3.H_2O$; orthorhombic. Named from the Masai word for soda, emakat, in allusion to its high sodium content. Regrettably close to Magadiite (25th List). [M.A. 70–3430.]

Manganbabingtonite. R. A. Vinogradova and I. N. Plyusinna, 1967. [Вестн. Москов. унив., сер. 4, Геол. (*Rept. Moscow Univ.*, ser. 4, geol.), 54]; abstr. *Amer. Min.* **53,** 1064 (1968). The manganese analogue of babingtonite, from the Rudnyi Kaskad deposit, eastern Sayan, U.S.S.R. Named for the composition. [*Zap.* **98,** 331 (Манганбабингтонит).]

Mangano-astrophyllite. Chih-chang Peng and Che-sheng Ma, 1964. [*Scientia Sinica,* **13,** 1180]; abstr. *Zap.* **97,** 76. A superfluous name for manganoan astrophyllite.

Manganotantalocolumbite. Ya. A. Kosals, 1967. [Геол. и геофис. no. 2, 116]; abstr. *Zap.* **98,** 324 (1969) (Манганотанталоколумбит). An unnecessary name for a manganocolumbite with Nb:Ta = 3:2.

Manjirōite. M. Nambu and K. Tanida, 1967. [*Journ. Japan. Ass. Min., Petrol. Econ. Geol.* **58,** 39]; abstr. *Amer. Min.* **53,** 2103 (1968). The sodium analogue of cryptomelane, from the Kohare mine, Iwate Prefecture, Japan; named for Professor Manjiro Watanabe. [M.A. 69–2387; Zap. **97,** 615; Bull. **92,** 513.]

Marthozite. F. Cesbron, R. Oosterbosch, and R. Pierrot, 1969. *Bull. Soc. franç. Min. Crist.* **92,** 278. Yellow-green orthorhomic crystals from the Cu-Co deposit at Musonoi, Katanga, have a composition near $Cu(UO_2)_3(SeO_3)_3(OH)_2.7H_2O$. Named for A. Marthoz. [M.A. 70–751; A.M. **55,** 533.]

Matorolite. Anon., 1967. [*Chamber of Mines, Rhodesia, J.* 9, no. 7, 30]; abstr. *Amer. Min.* **54,** 992 (1969). An unnecessary name for an emerald-green chromian chalcedony; named for the locality. [Zap. **97,** 616; Bull. **92,** 517.]

Melanostibite. P. B. Moore, 1967. *Arkiv Min. Geol.* **4,** 449. An unnecessary renaming of melanostibian. [Zap. **99,** 75.]

Melkovite. B. L. Egorov, A. D. Dara, and V. M. Senderova, 1968. Зап. всесоюз. мин. общ. (*Mem. All-Union Min. Soc.*), **98,** 207 (Мелковит). Minutely crystalline films and veinlets in the oxidation zone of a molybdenite deposit in the Shunak Mts. Kazakhstan, have a composition near $CaFeH_6(MoO_4)_4PO_4.6H_2O$. Named for Vracheslav Gavrilovich Melkov. [A.M. **55,** 320; M.A. 70–1648; Bull. **92,** 516; Zap. **99,** 80.] (Compare the molybate-arsenate betpakdalite, 22nd List.) Not to be confused with Melnikovite.

Meta-aluminite. C. Frondel, 1968. *Amer. Min.* **53,** 717. White, microcrystalline, monoclinic, with basaluminite and gypsum in sandstone at the Fuemrole mine, Temple Mountain, Emery County, Utah; $Al_2(SO_4)(OH)_4.5H_2O$; formed when aluminite is heated in air to 55 °C. [M.A. 69–619; Bull. **92,** 317; Zap. **99,** 78.]

Meta-vanuralite. F. Cesbron, 1970. *Bull. Soc. franç. Min. Crist.* **93,** 242. A reversible dehydration product, $Al(UO_2)_2(VO_4)_2(OH).8H_2O$, of vanuralite (23rd List); anorthic; occurs with vanuralite at Mounana, Gabon. [M.A. 70–3425.]

Mirupolskite. G. A. Yurgenson, N. G. Smirnova, and L. A. Karenina, 1968. [Вестн. научн. информ. Забайкал. фил. Геогр. общ. СССР, no. 9, 3]; abstr. *Zap.* **99,** 78 (1970) (Мирупольскит). $2CaSO_4.H_2O$; synonym of bassanite (6th List).

Mounanaïte. F. Cesbron and J. Fritsche, 1969. *Bull. Soc. franç. Min. Crist.* **92,** 196. $PbFe_2^{3+}(VO_4)_2(OH)_2$ occurs in very small amounts at Mounana, Gabon; composition ascertained by synthesis. Anorthic. Named for the locality. [A.M. **54,** 1738; M.A. 69–3348; Zap. **99,** 80.]

Mukhinite. A. B. Shepel and M. V. Karpenko, 1969. Докл. Акад. наук СССР (*Compt. Rend. Acad. Sci. URSS*), **185,** 1342 (Мухинит). A vanadian clinozoisite (V_2O_3 11·29 %) occurring in marble from the roof of the Tashelginsk iron ore deposit, Gornaya Shoriya, western Siberia, is named for A. S. Mukhin. [A.M. **55,** 322; M.A. 70–746; Zap. **99,** 80.]

Muskoxite. J. L. Jambor, 1969. *Amer. Min.* **54,** 684. Hydrous oxide of Mg and Fe^{3+}, occurring as trigonal crystals, dark reddish-brown, in the Muskox Intrusion, Coppermine River, Canada. Named for the locality. [M.A. 70–748.]

Mutabilite. G. Mueller, 1964. *Rept. 22nd Internat. Geol. Congr., India,* pt. 1, 47. A highly oxygenated olefinic bitumen.

Neyite. A. D. Drummond, J. Trotter, R. M. Thompson, and J. A. Gower, 1970. *Canad. Min.* **10,** 90. $Pb_7(Cu,Ag)_2Bi_6S_{17}$ occurs as monoclinic needles with other sulphosalts in quartz veins of the Lime Creek molybdenum deposit, Kitsault, Alice Arm, British Columbia. Named for C. S. Ney.

Nimite. S. A. Hiemstra and S. A. de Waal, 1968. *Nat. Inst. Met.* (*South Africa*) *Res. Rept.* **344,** 1; *Amer. Min.* **55,** 18 (1970). $(Ni,Mg,Fe,Al)_{12}(Si,Al)_8O_{20}(OH)_{16}$, a chlorite with Ni as dominant cation; yellowish-green, monoclinic; from rocks near the Scotia talc mine, Barberton Mountain Land, Transvaal. Named from the initials of the Nat. Inst. Metallurgy. [A.M. **54,** 1740; M.A. 70–2605.]

Nuffieldite. P. W. Kingston, 1968. *Canad. Min.* **9,** 439. Steel-grey orthorhombic crystals of $Cu_4Pb_{10}Bi_{10}S_{27}$ occur in a quartz vein in the Lime Creek stock near Alice

Arm, British Columbia. Named for Professor E. W. Nuffield. [A.M. **54,** 574; Bull. **92,** 317; M.A. 70–1641; Zap. **98,** 321.]

Olefinite. G. Mueller, 1964. *Rept. 22nd Internat. Geol. Congr., India,* pt. 1, 46. A bitumen containing 'according to the results of fractionation, I.R., U.V. spectra, determination of I values, etc., mainly olefinic molecules'.

Olsacherite. C. S. Hurlbut, Jr., and L. F. Aristarain, 1969. *Amer. Min.* **54,** 1519. $Pb_2SO_4SeO_4$ occurs as an alteration product of penroseite at the Pacajake mine, Colquechaca, Bolivia; the crystals are isostructural with anglesite and $PbSeO_4$, but have a doubled *b*-axis, and hence probably an ordered structure. Named for Professor Juan A. Olsacher. [M.A. 70–2611.]

Olshanskyite. M. A. Bogomolov, I. B. Nikitina, and N. N. Pertsev, 1969. Докл. Акад. наук СССР (*Compt. Rend. Acad. Sci. URSS*), **184,** 1398 (Ольшанскит, olshanskyte). Veinlets in sakhaite from eastern Siberia contain fibrous, monoclinic or anorthic $3CaO.2B_2O_3.9H_2O$; as the infra-red spectrum shows OH bands but not H_2O bands, the formula is written $Ca_3[B(OH)_4]_4(OH)_2$. Named for Yakov Iosifovich Olshanskii. [A.M. **54,** 1737 (olshanskyite); M.A. 70–755 (olshanskyite); Zap. **99,** 77.]

Oxonio-alunite. M.-A. Kashkai, 1969. Зап. Всесоюз. мин. общ. (*Mem. All-Union Min. Soc.*), **98,** 153 (Оксониоалунит). A name for the end-member $(H_3O)Al_3(SO_4)_2(OH)_6$.

Paraffinite. G. Mueller, 1964. *Rept. 22nd Internat. Geol. Congr., India,* pt. 1, 47. A group term for ozocerite and petroleum.

Parweelite, error for Parwelite (*Bull. Soc. franç. Min. Crist.* **91,** 305).

Parwelite. P. B. Moore, 1967. *Canad. Min.* **9,** 301; *Arkiv Min. Geol.* **4,** 467 (1969). Yellowish-brown crystals in manganoan carbonate from Långban, Sweden, have the composition $(Mn,Mg)_2Sb(Si,As)_2O_{10-11}$; monoclinic. Named for Alexander Parwel, who analysed the mineral. [A.M. **53,** 1426; **55,** 323; M.A. 69–2393; Bull. **91,** 305; Zap. **98,** 320; **99,** 83.]

Pecoraite. G. T. Faust, J. J. Fahey, B. Mason, and E. J. Dwornik, 1969. *Science,* **165,** 59. The nickel analogue of clinochrysotile occurs filling cracks in the oxidized Wolf Creek meteoritic iron. Named for William T. Pecora. [M.A. 70–1653.]

Phosphothorogummite. V. S. Karpenko, N. G. Nazarenko, and O. V. Sochipanova, 1957. [Сборн. вопрос. прик. радио. Атомиздат, 100; M. S. Filippov and L. V. Komlev, Труды Радиев. инст. Акад. наук СССР, **8** (1958)]; abstr. *Bull.* **92,** 517 (1969) and *Zap.* **98,** 330 (1967) (Фосфоторогумит); in the latter the date is given as 1967. Unnecessary name for a phosphatian thorogummite.

Pierrotite. C. Guillemin, Z. Johan, C. Laforêt, and P. Picot, 1970. *Bull. Soc. franç. Min. Crist.* **93,** 66. $Tl_2(Sb,As)_{10}S_{17}$, grey-black, metallic lustre, massive, in quartz veins from Jas-Roux, Hautes Alpes. Orthorhombic. Named for R. Pierrot. [M.A. 70–3428.]

Plumangite. D. Adib and J. Ottemann, 1970. *Min. Depos.* **5,** 86. A greyish mineral replacing murdochite along fractures, from the T. Khuni mine, Anarak, Iran, is formulated $Cu_{0.85}Zn_{0.15}PbMn_4O_{11}$ on the basis of electron-probe analysis. Some optical but no X-ray data are given. Named for the composition. [It is difficult to see how the cited formula, with some Mn in a valency state higher than 4, is arrived

at; if it is assumed that the manganese is all Mn^{4+}, the composition is close to that of an analogue of coronadite with the Mn^{2+} replaced by Cu. The name is unfortunate in suggesting relation to plumosite or umangite. *M.H.H.*]

Plumboalunite. M.-A. Kashkai, 1969. Зап. Всесоюз. мин. общ. (*Mem. All-Union Min. Soc.*), **98,** 153 (свинцовый алунит). A name for the end-member $PbAl_6(SO_4)_4(OH)_{12}$.

Plumbozincocalcite. M. Z. Kantor, 1964. [Изв. высш. учебн. завед., геол. разв. no. 3, 61]; abstr. *Zap.* **97,** 70 (1968) (Плюмбоцинкокальцит). An unnecessary name for a plumbian zincian calcite. [A.M. **53,** 1776; Bull. **92,** 321.]

Polarite. A. D. Genkin, T. L. Evstigneeva, N. V. Troneva, and L. N. Vyaltsov, 1969. Зап. Всесоюз. мин. общ. (*Mem. All-Union Min. Soc.*), **98,** 708. The mineral described by L. J. Cabri (*Canad. Min.* **8,** 5, 1966) from Norilsk, western Siberia, has also been found in the Talnakh deposits; further study confirms its species status, and it is named polarite (Полярит).

Poughite. R. V. Gaines, 1968. *Amer. Min.* **53,** 1075. Yellow orthorhombic crystals of $Fe_2(TeO_3)_2SO_4.3H_2O$ from the Moctezuma mine, Sonora, Mexico. Named for Dr. Frederick H. Pough. [M.A. 69–620; Bull. **92,** 317; Zap. **98,** 325.]

Pregibbsite. M.-C. Gastuche and A. Herbillon, 1962. *Bull. Soc. Chim. France,* 1404. An aluminium hydroxide gel giving a diffuse X-ray pattern related to that of gibbsite, and crystallizing to gibbsite; *artificial.*

Raguinite. Y. Laurent, P. Picot, F. Permingeat, and T. Ivanov, 1969. *Bull. Soc. franç. Min. Crist.* **92,** 38; ibid. 237. Hexagonal plates from Allchar, Macedonia, are pseudomorphs consisting of fibres of $TlFeS_2$; brilliant bronze, orthorhombic. Named for Professor E. Raguin. [A.M. **54,** 1495 and 1741; M.A. 69-2382; Zap. **99,** 73.]

Rankamaite. O. von Knorring, A. Vorma, and P. H. Nixon, 1969. *Bull. Geol. Soc. Finland,* **41,** 47. Water-worn pebbles in alluvial deposits from the Mumba area, Kivu, Congo, are probably an alteration product of simpsonite. Composition near $(Na,K,Pb,Li)_6(Ta,Nb,Al)_{22}(O,OH)_{60}$. Probably orthorhombic and related to $K_2Nb_8O_{21}$, $PbNb_2O_6$, $SrTa_4O_{11}$, and the tungsten bronzes. Named for Professor Kalervo Rankama. [M.A. 70–758.]

Rhodostannite. G. Springer, 1968. *Min. Mag.* **36,** 1045. $Cu_2FeSn_3S_8$, hexagonal, with stannite, in comparison with which it is reddish, from Vila Apacheta, Bolivia. Named from its reddish colour. [A.M. **54,** 1218; M.A. 69–1530.]

Ringwoodite. R. A. Binns, R. J. Davis, and S. J. B. Reed, 1969. *Nature,* **221,** 943. Rounded grains and pseudomorphs after olivine in the Tenham meteorite have the composition of olivines with Fa 26–34 %, but with the structure of spinel. The name, for Professor A. E. Ringwood, is applied to the whole range of $(Mg,Fe)_2SiO_4$ spinels. [A.M. **54,** 1219; M.A. 70–745.]

Roggianite. E. Passaglia, 1969. *Rend. Soc. Ital. Min. Petr.* **25,** 105; *Clay Min.* **8,** 107 and 112. Fibrous aggregates of composition $(Na,K)_2Ca_{12}Al_{16}(Si,Al)_{28}O_{52}(OH)_{80}$ occur at Alpe Rosso, Val Vigezzo, Novare, Italy; tetragonal. Named for Aldo G. Roggiani. [A.M. **54,** 1741; **55,** 322; M.A. 69–3345, 3346; Zap. **99,** 83.]

Sakuraiite. A. Kato, 1965. [*Chigaku Kenkyu* (*Earth Science Studies*), Sakurai vol.,

1]; abstr. *Amer. Min.* **53,** 1421. Metallic grey, tetragonal $(Cu,Zn,Fe)_3(In,Sn)S_4$, the indium analogue of kësterite, with stannite, etc., in a vein of the Ikuno mine, Hyogo Prefecture, Japan. Named for Dr. Kin-ichi Sakurai. [Zap. **98,** 321.]

Santite. S. Milano and F. Satori, 1970. *Contr. Min. Petr.* **27,** 159. Small grains intergrown with larderellite and sassolite, from Larderello, Italy, agree closely in X-ray and other physical data with synthetic orthorhombic $KB_5O_8.4H_2O$. Named for Giorgio Santi.

Scheibeite. A. Mücke, 1970. *Neues Jahrb. Min., Monatsh.* 276. A deep red basic lead chromate from the Santa Ana mine, Sierra Gorda, Caracoles, Chile, gives an identical powder pattern to those of a synthetic product formulated $Pb_8(CrO_4)_3O_5$ [but which may be contaminated by lead hydroxide] and of a specimen from Berezovsk labelled phoenicochroite; the author accepts Hermann's very doubtful 1833 analysis and density as adequate evidence that this specimen was not phoenicochroite, and assigns the pre-empted name Scheibeite for Dr. R. Scheibe (the name was given, in honour of the same person, by O. von Linstow, *Neues Jahrb. Min.* Beil.-Bd. **33,** 814 (1912), to a resin). [It seems probable that Mücke's mineral is a new occurrence of phoenicochroite. Further study is needed. *M.H.H.*]

Sodium-mordenite. I. M. King, W. J. King, and R. Wallis, 1968. *Nature,* **217,** 1968. A *synthetic* preparation having the composition of the sodium end-member of the mordenite series. [M.A. 69–314.]

Sogdianite. V. D. Dumatov, A. F. Efimov, Z. T. Kataeva, L. A. Khoroshilova, and K. P. Yanulov, 1968. Докл. Акад. наук СССР (*Compt. Rend. Acad. Sci. URSS*), **182,** 1176 (Согдианит). Violet platy masses occur in an alkalic intrusive in the Alai range, Tadzhik S.S.R.; hexagonal, composition $(K,Na)_2Li_2(Li,Fe,Al,Ti)_{1.8}(Zr,Ti)(Si_2O_5)_6$. Named for the ancient Central Asian state of Sogdiana. [A.M. **54,** 1221, where a contradiction in the optical data is noted; M.A. 69–1539; Zap. **99,** 83.]

Sonoraite. R. V. Gaines, G. Donnay, and M. H. Hey, 1968. Amer. Min. **53,** 1828. Yellowish-green monoclinic crystals of $Fe_2^{3+}Te_2^{4+}O_6(OH)_2.2H_2O$ from the Moctezuma mine, Sonora, Mexico. Named from the locality. [M.A. 69–2396; Bull. **92,** 514; Zap. **99,** 76.]

Stannoidite. A. Kato, 1969; *Bull. Nat. Sci. Mus.* (Tokyo), **12,** 165; *Min. Journ. (Japan),* **5,** 417. A stannite-like mineral from the Konjo mine, Okayama Prefecture, Japan, has the composition $Cu_5(Fe,Zn)_2SnS_8$; orthorhombic, and distinct from hexastannite. [A.M. **54,** 1495; M.A. 70–1642; Bull. **92,** 514; Zap. **99,** 73.]

Staringite. E. A. J. Burke, C. Kieft, R. O. Felius, and M. S. Adusumilli, 1969. *Min. Mag.* **37,** 447. Small inclusions of $Fe_{0.5}Sn_{4.5}TaO_{12}$, with some Mn, Ti, and Nb, occur as inclusions in tapiolite from Seridózinho and Pedra Lavreda, Paraiba State, Brazil; tetragonal, probably with a trirutile structure. Named for Dr. W. C. H. Staring. [M.A. 70–759.]

Stellarite, error for Stellerite (*Bull. Soc. franç. Min. Crist.* **91,** 307) (not the Stellarite of How, 1869).

Stenhuggarite. P. B. Moore, 1967. *Canad. Min.* **9,** 301. Orange tetragonal crystals of $CaFe^{3+}SbO(AsO_3)_2$ from Långban, Sweden, are named for Brian Mason (Swedish *stenhuggar,* stonemason). [A.M. **53,** 1427; Bull. **81,** 305; Zap. **98,** 329.]

Strashimirite. I. Mincheva-Stefanova, 1968. Зап. Всесоюз. мин. общ. (*Mem. All-Union Min. Soc.*), **97,** 470 (Страшимирит). Pale green spherulites in the Zapachitsa copper deposit, Stara-Planina, Bulgaria, are monoclinic, composition near $Cu_2AsO_4OH.1{\cdot}25H_2O$, with some Zn replacing Cu. Named for Strashimir Dimitrov of Bulgaria. [A.M. **54,** 1221; M.A. 69–1541; Bull. **92,** 318; Zap. **98,** 328.]

Strashmirite, error for Strashimirite (M.A. 69–1541).

Strontio-gehlenite. P. S. Dear, 1969. *Lithos*, **3,** 13. $Sr_2Al_2SiO_7$, the *synthetic* strontium analogue of gehlenite.

Sukulaite. Atso Vorma and J. Siivola, 1967. *Bull. Comm. Géol. Finlande*, **229,** 173. Probably $Sn_2Ta_2O_7$, isostructural with microlite, as yellowish-brown inclusions in cassiterite from Sukula, Tammela, Finland; named from the locality. [A.M. **53,** 2103; Zap. **98,** 325.]

Tantalotitanocolumbite. Ya. A. Kosals, 1967. [Геол. и геофис. no. 2, 116]; abstr. *Zap.* **98,** 324 (1969) (Танталотитаноколумбит). An unnecessary name for a titanian columbite with Nb:Ti:Ta = 1·05:0·57:0·35.

Tanzanite. H. B. Platt, 1967. *Wall Street Journal*, 14 Oct. See also *Lapidary Journ.* **22,** 636, 736, 738, 740 (1968); *Rocks and Minerals*, **43,** 332 (1968); *Zeits. Deut. Gesell. Edelsteinkunde*, **61,** 27 (1967); *Amer. Min.* **54,** 702 (1969). Deep violet-blue vanadiferous zoisite, highly pleochroic, from the Gerevi Hills, Tanzania, has been named from the locality. [M.A. 69–320 and 321.]

Tarasovite. E. K. Lazarenko and Yu. M. Korolev, 1970. Зап. Всесоюз. мин. общ. (*Mem. All-Union Min. Soc.*), **99,** 214 (Тарасовит). A disordered dioctahedral phyllosilicate, $Na_{1{\cdot}00}K_{1{\cdot}18}(H_3O)_{0{\cdot}61}(Ca_{0{\cdot}18}Na_{0{\cdot}24})_{exch.}(Si_{12{\cdot}65}Al_{3{\cdot}35})O_{40}Al_8(OH)_8.2H_2O$; X-ray photographs show basal spacings only, with d_{001} 44 Å. Occurs in the Tarasov region. Named from the locality.

Tazheranite. A. A. Konev, Z. F. Ushchapovskaya, A. A. Kashaev, and V. S. Lebedeva, 1969. Докл. Акад. наук СССР (*Compt. Rend. Acad. Sci. URSS*), **186,** 917 (Тажеранит). Irregular grains and cubic crystals in calciphyres from the Tazheran massif, west of Lake Baikal, Siberia, have a unit-cell content $Zr_{2{\cdot}36}Ca_{0{\cdot}77}Ti^{3+}_{0{\cdot}7}Ti^{4+}_{0{\cdot}13}Al_{0{\cdot}06}Fe_{0{\cdot}06}O_{6{\cdot}07}$; they are essentially the cubic modification of ZrO_2, stabilized by foreign cations. Named from the locality. [The name is unfortunately close to tacharanite (22nd List).] [A.M. **55,** 318; M.A. 70–1638; Zap. **99,** 75.]

Teremkovite. D. A. Timofeevskii, 1967. Зап. Всесоюз. мин. общ. (*Mem. All-Union Min. Soc.*), **96,** 30 (Теремковит). Sulphantimonite of lead and silver, very near owyheeite, occurring in the Ust-Terenki deposit of eastern Transbaikal. Named for the locality. The distinction from owyheeite is very slight, and the name seems unnecessary. [A.M. **54,** 990; Zap. **97,** 613; M.A. 69–1533.]

Teruggite. L. F. Aristarain and C. S. Hurlbut Jr., 1968. *Amer. Min.* **53,** 1815. Colourless well-formed monoclinic crystals of $Ca_4MgB_{12}O_{20}(AsO_4)_2.18H_2O$ from the Loma Blanca borate deposit, Jujuy Province, Argentina. Named for Professor Mario E. Teruggi. [M.A. 69–2394; Bull. **92,** 514; Zap. **99,** 77.]

Tienshanite. V. D. Dusmatov, A. F. Efimov, V. Yu. Alkhazov, M. E. Kazakova, and N. G. Mumyatskaya, 1967. Докл. Акад. наук СССР (*Compt. Rend. Acad. Sci. URSS*), **177,** 678. (Тяншанит.) Green, hexagonal $Na_2BaMnTiB_2Si_6O_{20}$, from a

pegmatitic vein of a massif of the Turkestan-Alai province, southern Tienshan. Named for the locality. [A.M. **53,** 1426; Zap. **97,** 618.]

Titanoludwigite. A. A. Konev, V. S. Lebedeva, A. A. Kashaev, and Z. F. Ushchapovskaya, 1970. Зап. Всесоюз. мин. общ. (*Mem. All-Union Min. Soc.*), **99,** 225 (Титанолюдвигит). A titanian ludwigite from Tazheran, $(Mg_{6\cdot55}Fe^{2+}_{1\cdot18}Mn_{0\cdot03}Ca_{0\cdot06}Na_{0\cdot16})(Fe^{3+}_{2\cdot28}Ti^{4+}_{0\cdot72}Mg^{2+}_{0\cdot72}Al_{0\cdot20})B_{4\cdot12}O_{19\cdot97}$. An unnecessary name. Cf. Azoproite (this List).

Tombarthite. H. Neumann and B. Nilssen, 1968. *Lithos*, **1,** 113. Brownish-black masses, partly metamict but giving measurable X-ray powder patterns similar to those of monazite, occur with thalenite at Høgetveit, Evje, Norway. A water-rich silicate of rare earths, principally Yt. Named for Professor Tom Barth. [M.A. 69–618; A.M. **54,** 327; Bull. **92,** 515; Zap. **98,** 330.]

Tunisite. Z. Johan, P. Povondra, and E. Slánsky, 1969. *Amer. Min.* **54,** 1. Tetragonal crystals and fine-grained aggregates found on the dumps of the Sakiet Sidi Tousseff ore deposit, Tunisia, have the composition $NaHCa_2Al_4(CO_3)_4(OH)_{10}$. Named for the country of origin. [M.A. 69–2389; Bull. **92,** 515; Zap. **99,** 76.]

Tyanshanite, standard English transliteration of Тяншанит (Tienshanite, this List).

Udokanite. G. A. Yurgenson, N. G. Smirnova, and L. A. Karemina, 1968. [Вестн. научн. информ. Забайкал. фил. Геогр. общ. СССР, 1968, no. 9,] 3; abstr. *Zap.* **99,** 78 (1970) (Удоканит). A basic copper sulphate from the Udokan Mts. in Transbaikal is formulated $Cu_8(SO_4)_3(OH)_{10}.H_2O$ and named from the locality. The description is inadequate, and the material is probably antlerite.

Vimsite. D. P. Shashkin, M. A. Simonov, N. I. Chernova, S. V. Malinko, T. I. Stolyarova, and N. V. Belov, 1968. Докл. Акад. наук СССР (*Compt. Rend. Acad. Sci. URSS*), **182,** 821 (Вимсит); ibid., 1402. Colourless transparent monoclinic crystals of composition $CaB_2O_2(OH)_4$ occur with uralborite in skarn from the Urals. Named from the initials of the All-Union Research Institute of Mineral Resources (Всесоюз. инст. мин. сырья) [A.M. **54,** 1220; M.A. 69–2388; Zap. **99,** 77].

Wakefieldite. D. D. Hogarth and N. Miles, 1969. *Ann. Meet. Geol. and Min. Ass. Canada*, 1969, abstr. 20. $YtVO_4$ occurs in a Precambrian pegmatite near Wakefield, Quebec; tetragonal. Named from the locality. [M.A. 70–1650.]

Wardsmithite. R. C. Erd, J. F. McAllister, and A. C. Vlisidis, 1970. *Amer. Min.* **55,** 349. Hexagonal plates of $5CaO.MgO.12B_2O_3.30H_2O$ occur in the Furnace Creek area, Death Valley, California. Named for Ward C. Smith. [M.A. 70–3429.]

Weloganite. A. P. Sabina, J. L. Jambor, and A. G. Plant, 1968. *Canad. Min.* **9,** 468. Yellow hexagonal (but optically biaxial) crystals from a sill in the Trenton limestone at St. Michel, Montreal Island, Quebec, have the composition $Sr_5Zr_2(CO_3)_9.4H_2O$. Named for Sir William E. Logan. [A.M. **54,** 576; Bull. **92,** 319; M.A. 70–1651; Zap. **98,** 325.]

Wickenburgite. S. A. Williams, 1968. *Amer. Min.* **53,** 1433; *Canad. Min.* **9,** 582. Colourless hexagonal crystals, $CaPb_3Al_2Si_{10}O_{24}(OH)_6$, from Wickenburg, Arizona. Named from the locality. [M.A. 69–1538; Bull. **92,** 319; Zap. **98,** 331.]

Willemseite. S. A. Hiemstra and S. A. de Waal, 1968. *Nat. Inst. Met.* (*South Africa*) *Res. Rept.* **352,** 1; *Amer. Min.* **55,** 31 (1970). $(Ni,Mg)_3Si_4O_{10}(OH)_2$, the nickel analogue

of talc, occurs near Barberton, Transvaal; light green, monoclinic. Named for Professor Johannes Willemse. [A.M. **54,** 1740; M.A. 70–2606.]

Wolframixiolite. A. L. Ginzburg, S. A. Gorzhevskaya, G. A. Sidorenko, and T. A. Ukhina, 1969. Зап. Всесоюз. мин. общ. (*Mem. All-Union Min. Soc.*), **98,** 63 (Вольфрамоиксиолит). Prismatic grains intergrown with microcline, quartz, ilmenite, and fluorite on a specimen from an unknown locality have a composition (Nb,W,Fe, Mn,Ta, etc.)$_{1\cdot97}O_4.O.84H_2O$, and are regarded as a variety of ixiolite. Named from its relation to both ixiolite and wolframite. [A.M. **55,** 318; M.A. 70–2614; Zap. **99,** 76.]

Yagiite. T. E. Bunch and L. H. Fuchs, 1969. *Amer. Min.* **54,** 14. The sodium–magnesium analogue of osumilite, occurring interstitially to pyroxene in silicate inclusions of the Colomera iron meteorite. Named for Dr. Kenzo Yagi. [M.A. 69–2392; Zap. **99,** 82.]

Yttroepidote. B. G. Lutta and D. A. Mineev, 1967. [Редкие элементы в породах различных метаморфических фаций, p. 93]; abstr. *Zap.* **97,** 620 (Иттроэпидот). An unnecessary name for an epidote with 1·36 % Ln_2O_3.

Zincalunite. M.-A. Kashkai, 1969. Зап. Всесоюз. мин. общ. (*Mem. All-Union Min. Soc.*), **98,** 153 (Цинкалунит). A name for the end-member $ZnAl_6(SO_4)_4(OH)_{12}$.

Zvyagintsivite, error for Zvyagintsevite (25th List). *Canad. Min.* **8,** 54, 1 (1966).