Twenty-fifth list of new mineral names

By M. H. Hey, M.A., D.Sc.

Department of Mineralogy, British Museum (Natural History)

[Taken as read 7 November 1968]

THE present list includes 151 new names, a welcome decrease on the last. It includes 6 errors and 27 other spelling variants, including alternative transliterations of Russian names; there is one named mixture and 9 synonyms, new and unnecessary names for known minerals. A further 19 names are for inadequately characterized minerals, and 17 are unnecessary names for varieties. There remain 2 names for artificial compounds not known in nature, and 71 new named species or varieties worthy of distinctive names.

As in the 24th list, many minor spelling variants and minor errors have been omitted, and no attempt has been made to trace the origin of spelling variants.

I. Kostov ('Mineralogy', Oliver and Boyd, 1968) unfortunately includes the following minerals prior to publication of their descriptions by their authors: argentomelane, chalcothallite, cliffordite, ericsonite, eveite, julgoldite, manjiroite, nuffieldite, orpheite, parwelite, poughite, sakuraiite, stenhuggarite, venaite. These minerals will be included in a subsequent list of new mineral names after proper publication.

Adandit, error for Anandit. (C. Hintze, Handb. Min., Erg. III, p. 517).

Afghanite. P. Bariand, F. Cesbron, and R. Giraud, 1968. Bull. Soc. franç. Min. Crist., vol. 91, p. 34. A hexagonal aluminosilicate of calcium and alkalis, near $(Na,Ca,K)_{12}(Si,Al)_{16}O_{34}(Cl,SO_4,CO_3)_4.0{\cdot}6H_2O$, from a lapis-lazuli mine, Sar-e-Sang, Badakshan province, Afghanistan. The powder diagram is near that of cancrinite and the unit cells appear to be related. Named from the locality.

Ajatit, German transliteration of Аятит, Ayatite (24th list) (C. Hintze, Handb. Min. Erg. III, p. 517).

Aluminiumglauconite. H. Borchert and H. Braun, 1963. Chem. Erde, vol. 23, p. 82 (Aluminiumglaukonit). An unnecessary name for highly aluminian glauconite.

Alumoludwigite. N. N. Pertsev and S. M. Aleksandrov, 1964. Зап. всесоюз. мин. общ. (Mem. All-Union Min. Soc.), vol. 93, p. 13 (Алюмолюдвигит). An unnecessary name for aluminian ludwigite.

Alumomaghaemite, alumomaghemite. S. I. Beneslavskii, 1957. Доклады акад. наук СССР (Compt. Rend. Acad. Sci. URSS), vol. 113, p. 1130 (Алюмомаггемит). An unnecessary name for aluminian maghemite.

Al-saponite, variant of Aluminium-saponite (22nd List) (I. Kostov, Mineralogy, 1968, p. 373).

Ameghinite. L. F. Aristarain and C. S. Hurlbut, Jr., 1967. Amer. Min., 1967, vol. 52, p. 935. Colourless monoclinic crystals from the Tincalayu borax deposit, Salta, Argentina, have the composition $Na_2B_6O_{10}.4H_2O$. Named for F. and C. Ameghino. [Bull. **91**–97.][1]

Anandite. D. B. Pattiaratchi, E. Saari, and Th. G. Sahama, 1967. Min. Mag., vol. 36, p. 1; J. F. Lovering and J. R. Widdowson, *ibid.*, 1968, vol. 36, p. 871. A black pseudohexagonal monoclinic mineral from the Wilagedera iron ore body, North-Western Province, Ceylon, is related to the brittle micas, but contains S^{2-}, having a composition near $Ba_2(Fe^{2+},Mg)_6(Si,Fe^{3+})_8(O,OH,S)_{24}$. Named for Ananda Coomaraswamy. [A.M. **52**–1586; Зап. **97**–77; Bull. **90**–603.]

Ankoleite, syn. of Meta-ankoleïte (24th List) (I. Kostov, Mineralogy, 1968, p. 476).

Antarkticite, variant of Antarcticite (24th List) (C. Hintze, Handb. Min., Erg. III, p. 520).

Asbecasite. S. Graeser, 1966. Schweiz. Min. Petr. Mitt., vol. 46, p. 367; see also Urner Mineralien Freund, 1966, Jahrb. 4, heft 4. Yellow rhombohedral crystals in clefts of orthogneisses of Monte Leone, Binnental, Switzerland, have a composition near $Ca_3Be(Ti,Sn)Si_2As_6O_{19}$ [the formula given in the publications cited does not agree well with the cell-dimensions and density M.H.H.]. [A.M. **52**–1584; Зап. **97**–75.]

Aurorite. A. S. Radtke, C. M. Taylor, and D. F. Hewett, 1967. Econ. Geol., vol. 62, p. 186. Minute grains in calcite from the Aurora mine, Hamilton, Nevada, give X-ray powder data near that of chalcophanite. Their composition is close to $(Mn,Ag,Ca)Mn_3O_7.3H_2O$; the name aurorite, from the locality, is proposed for the Mn^{2+} analogue of chalcophanite, the natural material being an argentian aurorite. [A.M. **52**–1581; Зап. **97**–70; Bull. **91**–97.]

Babeffit, a misleading though exact transliteration of Бабеффит, Babefphite (= Ba-Be-F-Phosphate) (C. Hintze, Handb. Min., Erg. III, p. 524).

Babefphite. A. S. Nazarova, N. N. Kuznetsova, and D. P. Shaskin, 1966. Доклады акад. наук СССР (Compt. Rend. Acad. Sci. URSS),

[1] Cross-references to certain other compilations on new minerals are given in the form: A.M. for M. Fleischer's lists in Amer. Min.; Зап. for E. M. Bonshtedt-Kupletskaya's in Зап. всесоюз мин. общ. (Mem. All-Union Min. Soc.), and Bull. for R. Pierrot's in Bull. Soc. franç. Min. Crist.

vol. 167, p. 895 (Бабеффит). Tetragonal $Ba_4Be_5(PO_4)_4OF_4$.0·3 to 0·4 H_2O, occurring in an unnamed rare-metal-fluorite deposit in Siberia. Named from the composition (BaBeFPh[osphorus]). [M.A. **18**–48; A.M. **51**–1547; Зап. **97**–72; Bull. **90**–115.]

Bannisterite. M. L. Smith and C. Frondel, 1968. Min. Mag., vol. 36, p. 893. The 'ganophyllite' from Benallt, Carnarvonshire (Campbell Smith, 1948) and from Franklin, New Jersey, includes two distinct minerals: ganophyllite, identical with the original material from the Harstig mine, Pajsberg, Sweden, and a very similar mineral with a smaller unit cell, different optical orientation, and composition near $(Na,K,Ca)(Mn,Fe^{2+},Zn,Mg)_8(Si,Al)_{14}O_{28}(OH)_{16}$. Named for F. A. Bannister. [M.A. **19**–314.]

Barium-alumopharmacosiderite. K. Walenta, 1966. Tschermaks Min. Petr. Mitt., ser. 3, vol. 11, p. 121. Pale yellow cubes from Neubulach, Schwarzwald, Germany, gave Al, Fe, Ba, and As on qualitative analysis, and an X-ray powder pattern near that of synthetic $BaAl_4(AsO_4)_3(OH)_5.5H_2O$. The mineral is assumed to be $Ba(Al,Fe)_4(AsO_4)_3(OH)_5.5H_2O$ and an analogue of pharmacosiderite (which, however, has 6 or 7 H_2O). [M.A. **18**–285; A.M. **52**–1584; Зап. **97**–74.]

Barium-pharmacosiderite. K. Walenta, 1966. Tschermaks Min. Petr. Mitt., ser. 3, vol. 11, p. 121. Yellow-brown cubic crystals with limonite and baryte from the Clara mine, Schwarzwald, Germany, contain Fe, As, and Ba, and give an X-ray pattern near that of pharmacosiderite, but with lower symmetry, probably tetragonal. The material is assumed to be $BaFe_4(AsO_4)_3(OH)_5.5H_2O$ and an analogue of pharmacosiderite, which is $R.Fe_4(AsO_4)_3(OH)_4$.6 or 7 H_2O. [M.A. **18**–285; A.M. **52**–1585; Зап. **97**–74.]

Barium-vanadium muscovite. K. G. Snetsinger, 1966. Amer. Min., vol. 51, p. 1623. A barian muscovite, the state of oxidation of which suggests the presence of both V^{4+} and V^{3+} in addition to Fe^{2+} and Ti^{4+}, occurs in a quartz–graphite schist at Silver Knob, near Yosemite Valley, California.

Barytolamprophyllite. Tze-chung Peng and Chien-hung Chang, 1965. [Scientia Sinica, vol. 14, p. 1827]; abstr. in Amer. Min., 1966, vol. 51, p. 1549. Monoclinic $(Na,K)_6(Ba,Ca,Sr,Mn)_3(Ti,Fe,Mg)_7(Si,Al)_8O_{32}(F,OH,O,Cl)_4$, the barium analogue of lamprophyllite, occurring in ijolite in the Lovozero intrusive, Kola Peninsula, U.S.S.R. [Bull. **90**–116.]

Berborite. E. I. Nefedov, 1967. Доклады акад. наук СССР (Compt. Rend. Acad. Sci. URSS), vol. 174, p. 189 (Берборит). Small trigonal crystals from an unnamed skarn deposit have the composition $Be_2BO_3(OH,F).H_2O$. Named from the composition. [A.M. **83**–348; Зап. **97**–71.]

Bertossaite. O. von Knorring and M. E. Mrose, 1966. Canad. Min., vol. 8, p. 668. A pale pink massive mineral from the Buranga lithium pegmatite, Rwanda, gives the formula $(Li,Na)_2(Ca,Fe,Mn)Al_4(PO_4)_4(OH,F)_4$; orthorhombic. It it the calcium analogue of palermoite. [A.M. **52**–1583; Зап. **97**–73; Bull. **91**–48.]

Bodhanowiczyte. M. Bonas and J. Ottemann, 1967. [Przegl. geol. Polska, vol. 5, p. 340], abstr. Bull. Soc. franç. Min. Crist., 1968, vol. 91, p. 101. An inadequately described bismutoselenide of silver from Kletna, Poland.

Borkarit, variant of Borcarite (24th List) (C. Hintze, Handb. Min., Erg. III, p. 531).

Bracewellite. C. Milton, D. Appleman, E. C. T. Chao, F. Cuttita, J. L. Dinnin, E. J. Duvornik, M. Hall, B. L. Ingram, and H. J. Rose, Jr., 1967. Geol. Soc. Amer., Progr. Ann. Meeting, p. 151. CrOOH, isostructural with goethite, a major constituent of the mixture of chromium oxides occurring in alluvial gravels of the Merume river, Mazaruni district, Guayana (Merumite, 18th List). Named for S. Bracewell.

Brianite. L. H. Fuchs, E. Olsen, and E. P. Henderson, 1966. Abstr. 29th Ann. Meeting Meteoritical Soc., p. 12. Geochimica Acta, 1967, vol. 31, p. 1711. Tiny grains with panethite, whitlockite, etc. in pockets in the Dayton meteorite (a siderite) prove to be orthorhombic $Na_2CaMg(PO_4)_2$; also obtained synthetically. Named for Brian Mason. [A.M. **52**–309; **53**–508; Bull. **91**–300.]

Buergerite. G. Donnay, C. O. Ingamells, and B. Mason, 1966. Amer. Min. vol. 51, p. 198. Tourmaline in which the end-member $NaFe^{3+}_3Al_6Si_6B_3O_{30}F$ is predominant. A tourmaline from Mezquitic, San Luis Potosi, Mexico, approaches this composition. Named for M. J. Buerger. [M.A. **17**–767; Зап. **96**–78.]

Cafarsite. S. Graeser, 1966. Schweiz. Min. Petr. Mitt., vol. 46, p. 367; see also Urner Mineralien Freund, Jahrg. 4, heft 4. Dark brown cubic crystals, from the Monte Leone, Binnatal, Switzerland, have a composition near $(Ca,Mn)_5Fe_2Ti_2(AsO_4)_8.2H_2O$. [The formula given in the publications cited does not agree well with the cell-dimensions and density. M.H.H.] [M.A. **18**–207; A.M. **52**–1584; Зап. **97**–75; Bull. **90**–604.]

Cassidyite. J. S. White, E. P. Henderson, and B. Mason, 1967. Amer. Min., vol. 52, p. 1190. $Ca_2(Ni,Mg)(PO_4)_2.2H_2O$, the nickel analogue of collinsite, occurring among the weathering products of the Wolf Creek sideritic meteorite. [Bull. **91**–98.]

Ca-ursilite, variant of Calcium-ursilite (22nd List) (I. Kostov, Mineralogy, p. 327).

Cavansite. L. W. Staales, H. T. Evans, Jr., and J. R. Lindsay, 1967. Progr. Ann. Meeting Geol. Soc. Amer., p. 211. Radiating greenish-blue needles from near Owyhee Dam, Malheur County, Oregon, and Goble, Columbia County, Oregon, are orthorhombic; composition $Ca(V^{4+}O)Si_4O_{10}.6H_2O$. Named from the composition (Ca,van[adium],Si). [A.M. **53**-510; Bull. **91**-300.]

Chakassit, German transliteration of Хакассит, Khakassite (12th List; = Alumohydrocalcite) (C. Hintze, Handb. Min., Erg. III, p. 537).

Chernovite. B. A. Goldin, N. P. Yuskin, and M. V. Fishman, 1967. Зап. всесоюз. мин. общ. (Mem. All-Union Min. Soc.), vol. 96, p. 699 (Черновит, chernovite). $YAsO_4$, the arsenate analogous of xenotime, in tetragonal crystals from the Urals. Named for A. A. Chernov.

Chlorhastingsite. G. A. Krutov and R. A. Vinogradova, 1966. Доклады акад. наук СССР (Compt. Rend. Acad. Sci. URSS), vol. 169, p. 204 (Хлоргастингсит). Hastingsite from eastern Sayan, containing 1–2 % Cl. [Зап. **97**–77.]

Choschiit (Germanized back-transliteration of Хошиит (= Hoshiite). Зап. всесоюз. мин. общ. (Mem. All-Union Min. Soc.), 1965, vol. 94, p. 672; C. Hintze, Handb. Min., Erg. III, p. 537.

Chromdisthene. V. S. Sobolev and N. V. Sobolev, 1967. [Геол. рудн. месторожд. (Geol. ore-deposits), no. 2, p. 10]; abstr. Amer. Min., 1968, vol. 52, p. 349. Synonym of Chrome-kyanite (15th List).

Cziklovaite, variant of Csiklovaite (18th List) (I. Kostov, Mineralogy, 1968, p. 163).

Despujolsite. C. Gaudefroy, M.-M. Granger, F. Permingeat, and J. Protas, 1968. Bull. Soc. franç. Min. Crist., vol. 91, p. 43. Lemon-yellow hexagonal crystals from Tachgagalt, Morocco, have the composition $Ca_3Mn^{4+}(SO_4)_2(OH)_6.3H_2O$, and are isomorphous with schaurteïte (24th List). Named for P. Despujols.

Dhanrasite. S. R. N. Murthy, 1967. Current Science, vol. 36, p. 295. A superfluous name for stannian garnets, and in particular for a stannian pyrope–almandine from the Dhanras hills, Gaya district, Bihar. Named from the locality. [A.M. **53**–509.]

Djerfisherite. L. H. Fuchs, 1966. Science, vol. 153, p. 166. $K_3(Cu,Na)(Fe,Ni)_{12}S_{14}$, cubic, occurring in the Kota-Kota and St. Mark's meteorites; identified with the 'Mineral C' of Ramdohr (1963; M.A. **17**–57). Named for D. J. Fisher. [Зап. **97**–67.]

Dosulite. T. Yoshimura, 1967. [Sci. Rept. Fac. Sci. Kyushu Univ. ser. D, vol. 9, special issue no. 1], abstr. Min. Abstr. vol. 19, in press. An undesirable name for chocolate-coloured isotropic manganese oxide ore.

Eisenglaukonit. H. Borchert and H. Braun, 1963. Chem. Erde, vol. 23, p. 82. An unnecessary name for highly ferrian glauconite.

Eisenwagnerite, translation of Iron-wagnerite (23rd List) (C. Hintze, Handb. Min. Erg. III, p. 545).

Fedorite. A. A. Kukharenko *et al.*, 1968. [The Caledonian ultrabasic rocks and carbonatites of the Kola Peninsula and northern Karelia. Izd. 'Neda', Moscow. pp. 479–481]; abstr. Amer. Min., 1967, vol. 52, p. 561. Pseudo-hexagonal tablets from the Turii peninsula, Kola, near $Ca(Na,K)_{1\frac{1}{4}}(Si,Al)_4O_9OH.1\frac{1}{2}H_2O$. Named for S. E. Fedorov. [Зап. **96**–77, Bull. **90**–610.]

Ferri-Orthochamosit. F. Novák and Z. Valcha, 1964. [Sborn. geol. věd. Techn.-geochem., vol. 3, p. 7], abstr. M.A. **17**–183. Synonym. of Ferri-berthierine (22nd List).

Ferrorhodonite. I. Kostov, 1968. Kostov, Mineralogy, p. 350. An unnecessary name for ferroan rhodonite.

Finchenite, incorrect transliteration of **Фынченит**, Fynchenite (22nd List) (I. Kostov, Mineralogy, p. 458).

Fluor-chlor-oxy-apatite. E. J. Young and E. L. Munson, 1966. Amer. Min., vol. 51, p. 1476. A chlorian fluorapatite deficient in (F,Cl,OH) from Devils Canyon, Eagle, Colorado.

Gabrielsonite. P. B. Moore, 1967. Arkiv Min. Geol., vol. 4, p. 401. Black orthorhombic crystals from Langban, Sweden, (Flink's no. 35), are found to be $PbFeAsO_4OH$, a member of the descloizite family. Named for O. Gabrielson.

Gentnerite. Ahmed el Goresy and Joahim Ottemann, 1966. Zeits. Naturforsch., vol. 21*a*, p. 1160. An incompletely described copper iron chromium sulphide near $Cu_8Fe_3Cr_{11}S_{17}$ as veinlets in daubréelite in the Odessa meteorite. Named for W. Gentner. Species not accepted by the I.M.A. Commission on New Minerals and Mineral Names. [Amer. Min. **52**–559; Зап. **97**–67; Bull. **90**–608.]

Ghinzburgite, incorrect transliteration of Гинзбургит, Ginzburgite (21st List) (I. Kostov, Mineralogy, p. 379).

Grimaldiite. C. Milton, D. Appleman, E. C. T. Chao, F. Cuttita, J. L. Dinnin, E. J. Dwornik, M. Hall, B. L. Ingram, and H. J. Rose, Jr., 1967. Geol. Soc. Amer., Progr. Ann. Meeting, p. 151. CrOOH, isostructural with delafossite, a minor constituent of the mixture of chromium oxides occurring in alluvial gravels of the Merume river, Mazaruni district, Guayana (Merumite, 18th List). Named for F. Grimaldi.

Grosspydite. V. S. Sobolev, 1960. Internat. Geol. Congr. Rept. 21st Sess., pt. 14, p. 72. A grossular–pyroxene–kyanite (disthene) paragenesis—a rock, not a mineral.

Guayanaite. C. Milton, D. Appleman, E. C. T. Chao, F. Cuttita, J. L. Dinnin, E. J. Dwornik, M. Hall, B. L. Ingram, and H. J. Rose, Jr., 1967. Geol. Soc. Amer., Prog. Ann. Meet., p. 151. CrOOH, isostructural with InOOH, a major constituent of the mixture of chromium oxides occurring in alluvial gravels of the Merume river, Mazaruni district, Guayana (Merumite, 18th List). Named from the locality.

Guettardite. J. L. Jambor, 1967. Canad. Min., vol. 9, p. 191. A sulphosalt from Madoc, Ontario, very similar to twinnite and sartorite, but with composition $Pb_6(Sb,As)_{10}S_{21}$. Named for J. E. Guettard.

Hendricksite. C. Frondel and J. Ito, 1966. Amer. Min., vol. 51, p. 1107. The zinc analogue of phlogopite, occurring at Franklin, New Jersey. Named for S. B. Hendricks. [M.A. **18**–48; Зап. **97**–77.]

Humberstonite. G. E. Ericksen, J. J. Fahey, and M. E. Mrose, 1967. Progr. Ann. Meeting Geol. Soc. Amer., p. 59. Colourless hexagonal plates from the Atacama Desert, Chile, have a composition near $Na_7K_3Mg_2(SO_4)_6(NO_3)_2.6H_2O$. Named for J. T. Humberstone. [A.M. **53**–507; Bull. **91**–301.]

Hydrokassite. A. A. Kukharenko, 1965. [The Caledonian ultrabasic alkalic rocks and carbonatites of the Kola Peninsula and northern Karelia, Moscow], abstr. Amer. Min., 1967, vol. 52, p. 559. An incompletely described alteration product of kassite, q.v. Species not accepted by the I.M.A. Commission on New Minerals and Mineral Names. [Зап. **96**–70.]

Hydrosericite. E. V. Dimitriev, 1965. [Геол. рудн. месторож., vol. 7, p. 82]; abstr. Зап. всесоюз. мин. общ. (Mem. All-Union Min. Soc.), 1967, vol. 96, p. 79 (Гидросерицит, hydrosericite). A superfluous name for a hydrous mica (H_2O^+ 8·04 %) from Krivoi Rog.

Hydroserizit, literal transliteration of Гидросерицит, Hydrosericite (this List) (C. Hintze, Handb. Min., Erg. III, 567).

Hydroxylacharite, see Hydroxyl-ascharite.

Hydroxyl-ascharite. A. P. Grivoriev, A. A. Brovkin, and I. Ya. Nekrasov, 1966. Доклады акад. наук СССР (Compt. Rend. Acad. Sci. URSS), vol. 166, p. 937 (Гидроксилашарит). An artificial hydrothermal product near szájbelyite (ascharite) is formulated $Mg_2(B,H_3)_2O_5.H_2O$; it also occurs naturally in veins cutting ludwigite in a Siberian skarn deposit. [M. Fleischer, Amer. Min., 1966, vol. 51, p. 1819, considers the substitution $B \leftrightharpoons H_3$ improbable and the evidence inadequate.] [Зап. **96**–72; hydroxylacharite.]

Hydroxyl-szájbelyite, variant of Hydroxyl-ascharite (this List). Min. Abstr., 1967, vol. 18, p. 126.

Iowaite. D. W. Kohls and J. L. Rodda, 1967. Amer. Min., vol. 52, p. 1261. Bluish-green crystals in drill core, from a Precambrian serpentinite from Sioux County, Iowa, have a hexagonal unit cell containing $4Mg(OH)_2.FeOCl.4H_2O$; the water is zeolitic. Possibly related to the pyroaurite family. Named for the locality. [Bull. **91**–99.]

Irarsite. A. D. Genkin, N. N. Zhuravlev, N. V. Troneva, and I. V. Muraveva, 1966. Зап. всесоюз. мин. общ. (Mem. All-Union Min. Soc.), vol. 95, p. 700 (Ирарсит, Irarcite). Cubic (Ir,Ru,Rh,Pt)AsS occurs in chromite in dunite from Onverwacht, South Africa. Named from the composition (Ir,ars[enic]). [M.A. **18**–283; A.M. **52**–1580; Зап. **97**–67; Bull. **90**–271.]

Jaroslawit, German transliteration of Ярославит, Yaroslavite (24th List) (C. Hintze, Handb. Min., Erg. III, 571).

Joesmithite. P. B. Moore, 1968, Min. Mag., vol. 36, p. 876. A monoclinic mineral, $(Pb,Mn,Ca,Ba)_2Ca_4Fe_2^{3+}(Mg,Fe)_8Si_8O_{24}[Si(O,OH)_4]_4(OH)_8$, from Långban, Sweden, related structurally to the amphiboles.

Kassite. A. A. Kukharenko, 1965. [The Caledonian ultrabasic alkalic rocks and carbonatites of the Kola Peninsula and northern Karelia, Moscow], abstr. Amer. Min., 1967, vol. 52, p. 559. Orthorhombic crystals near $CaTi_2O_4(OH)_2$ in cavities of alkali pegmatites of the Afrikanda massif, Kola peninsula. Not to be confused with kasoite. Named for N. G. Kassin. [Зап. **96**–70 (Кассит); Bull. **90**–609.]

Kenyaite. H. P. Eugster, 1967. Science, vol. 157, p. 1177. Nodular concretions from Lake Magadi, Kenya, approximate to $Na_2Si_{22}O_{41}(OH)_8$ $6H_2O$; tetragonal. Named from the locality. [A.M. **53**–510.]

Kȳshtȳmite, transliteration of Кыштымит, syn. of Kischtimite (= Bastnäsite), Min. Abstr., 1967, vol. **18**, p. 47.

Landauite. A. M. Portnov, L. E. Nikolaeva, and T. I. Stolyarova, 1966. Доклады акад. наук СССР (Compt. Rend. Acad. Sci. URSS), vol. 166, p. 1420 (Ландауит). Fine-grained aggregates in the Burpala massif, northern Baikal, approximate to $(Zn,Mn,Fe^{3+})(Ti,Fe^{3+})_3O_7$. Monoclinic, strongly pleochroic in green shades. Named for L. D. Landau. [M.A. **18**–46; A.M. **51**–1546; Зап. **96**–69; Bull. **90**–116.]

Launayite. J. L. Jambor, 1967. Canad. Min., vol. 9, pp. 7 and 191. A monoclinic mineral from Madoc, Ontario, with composition $Pb_{22}Sb_{26}S_{61}$. Named for L. de Launay. [A.M. **53**–1423; Bull. **91**–302.]

Lead-barylite. J. Ito and C. Frondel, 1968. Arkiv Min. Geol., vol. 4, p. 4, p. 391. $PbBe_2Si_2O_7$, the synthetic lead analogue of barylite.

Lonsdaleite. C. Frondel and U. B. Marvin, 1967. Nature, vol. 214, p. 587. A hexagonal polymorph of diamond, occurring in the Canyon Diablo and Goalpara meteorites. Named for K. Lonsdale. [A.M. **52**–1579; Зап. **97**–64; Bull. **90**–605.]

Mcconnellite. C. Milton, D. Appleman, E. C. T. Chao, F. Cuttita, J. L. Dinnin, E. J. Dwornik, M. Hall, B. L. Ingram, and H. J. Rose, Jr., 1967. Geol. Soc. Amer. Progr. Ann. Meeting, p. 151. $CuCrO_2$, isostructural with delafossite, a minor constituent of the mixture of chromium oxides occurring in alluvial gravels of the Merume river, Mazaruni district, Guayana (Merumite, 18th List). Named for D. McConnell.

Mackelveyite, variant of Mckelveyite (24th List) (I. Kostov, Mineralogy, 1968, p. 541).

Mackinstryite, spelling variant of Mckinstryite (Amer. Min., 1967, vol. 52, p. 1253); [M.A. **18**–283.]

Mckinstryite. B. J. Skinner, J. L. Jambor, and M. Ross, 1966. Econ. Geol. vol. 61, p. 1383. A mineral associated with chalcopyrite, stromeyerite, etc., on a specimen from the Foster mine, Cobalt, Ontario, proves to be identical with the synthetic orthorhombic phase $Cu_{1\cdot2}Ag_{0\cdot8}S$ (Djurle, 1958). Named for H. E. McKinstry. [A.M. **52**–1253; Зап. **97**–66; Bull. **90**–605.]

Madocite. J. L. Jambor, 1967. Canad. Min., vol. 9, p. 7. An orthorhombic mineral from Madoc, Ontario, has the composition $Pb_{17}Sb_{16}S_{41}$. Named from the locality. [A.M. **53**–1421; Bull. **91**–99.]

Magadiite. H. P. Eugster, 1967. Science, vol. 157, p. 1177. White massive material from Lake Magadi, Kenya, approximate to $NaSi_7O_{13}(OH)_3.3H_2O$; tetragonal. Named from the locality. [A.M. **53**–510.]

Maghemo-magnetite. E. A. Basta, 1959. Econ. Geol. vol. 54, p. 698. A name for intermediate oxides of iron between magnetite and γ-Fe_2O_3 with $Fe_3O_4 > \gamma$-Fe_2O_3.

Magnesomagnetite. E. Z. Basta, 1959. Econ. Geol., vol. 54, p. 698. Synonym of Magnesiomagnetite.

Magneso-titanomagnetite. E. Z. Basta, 1959. Econ. Geol., vol. 54, p. 698. An unnecessary name for magnesian titanomagnetite.

Magneto-maghemite. E. Z. Basta, 1959. Econ. Geol., vol. 54, p. 698. A name for intermediate oxides of iron between magnetite and γ-Fe_2O_3, with $Fe_3O_4 < \gamma$-Fe_2O_3.

Magnostilpnomelane. I. Mincheva-Stefanova and M. Gorova, 1965. [Тр. Върху геол. България, сер. геол., мин., петр., vol. 5, p. 139]; abstr. Зап. всесоюз. мин. общ. (Mem. All-Union Min. Soc.), 1968, vol. 97, p. 78. A magnesium-rich variety, with Mg > Fe.

Malayite, error for Malayaite (24th List). (Min. Abstr., vol. 17, p. 503).

Manganese berzeliite, variant of Mangan-berzeliite (2nd List). Amer. Min., 1968, vol. 53, p. 316.

Manganseverginite. L. D. Kurshakova, 1967. [Геол. и Геофиз., no. 1, p. 118]; abstr. Зап. всесоюз. мин. общ. (Mem. All-Union Min. Soc.), 1968, vol. 97, p. 77. Syn. of Manganaxinite.

Metaliebigite. J. Kiss, 1966. [Ann. Univ. Sci. Budapest Rolando Eötvös Naminat., Sec. Geol., vol. 9 (for 1965) p. 139]; abstr. Amer. Min., 1968, vol. 53, p. 509. A premature 'provisional' name for a uranium mineral occurring with liebigite on pitchblende in the Mecsek Mts., Hungary; contains Ca, Mg, and U.

Metazellerite. R. G. Coleman, D. R. Ross, and R. Meyrowitz, 1966. Amer. Min., vol. 51, p. 1567. Zellerite (23rd List) is shown to be $CaUO_2(CO_3)_2.5H_2O$; it readily loses water to give metazellerite

$CaUO_2(CO_3)_2$; $3H_2O$. Named for Howard D. Zeller. [зап. **97**–71; Bull. **90**–273.]

Mg–ursilite, variant of Magnesium-ursilite (22nd List). (I. Kostov, Mineralogy, 1968, p. 327.)

Monsmedite. V. Manilici, D. Giuscă, and V. Stiopol, 1965. [Mem. Com. Geol. Repub. Soc. Romània, vol. 7, p. 46]; abstr. Min. Abstr., 1967, vol. 18, pp. 246 and 285. Dark green to black orthorhombic crystals from the Rotmundi vein at Baia Sprie (= Felsobánya) have a composition given as $Tl_2O_3.K_2O.8SO_3.15H_2O$. Named for the Latin name (Mons Medius) of the locality. The cited composition seems highly improbable and needs confirmation.

Musgravite. D. R. Hudson, A. F. Wilson, and I. M. Threadgold, 1967. Min. Mag., vol. 36, p. 305. A provisional name, withdrawn before publication, for a polytype of taaffeite, but listed by I. Kostov, Mineralogy, 1968, p. 213.

Nickel. P. Ramdohr, 1967. [Геол. рудн. месторожд. (Geol. ore-deposits), no. 2, p. 32]; abstr. Amer. Min., vol. 53, p. 348. Native nickel (98 % Ni) occurs as cubic grains up to 0·1 mm enclosed in heazlewoodite from Bogota, Canala, New Caledonia.

Niningerite. K. Keil and K. G. Snetsinger, 1967. Science, vol. 155, p. 451. (Mg,Fe,Mn)S, cubic, occurs in six enstatite chondrites. Named for H. H. Nininger. [A.M. **52**–925; Зап. **97**–66; Bull. **90**–271.]

Niobotschewkinit, German transliteration of **Ниобочевкинит,** Niobochevkinite (24th List) (C. Hintze, Handb. Min., Erg. III, 605).

Nissonite. M. E. Mrose, R. Meyrowitz, J. T. Alfors, and C. W. Chesterman, 1966. Progr. Ann. Meeting Geol. Soc. Amer., p. 145. Blue-green monoclinic crystals of $CuMgPO_4(OH).2\frac{1}{2}H_2O$ occur in metamorphic rocks in Panoche Valley, California. Named for W. H. Nisson. [A.M. **52**–927; Bull. **91**–99.]

Northetit, error for Norsethit. (C. Hintze, Handb. Min., Erg. III, p. 232.)

Onoratoite. G. Belluomini, M. Fornaseri, and M. Nicoletti, 1968. Min. Mag., vol. 36, p. 1037. $Sb_8O_{11}Cl_2$, as anorthic crystals from Cetine di Cotorniano, Rosia, Siena, Italy, and synthetic. Named for E. Onorato.

Orthorhombic låvenite. A. M. Portnov, V. I. Simonov, and G. P. Sinyugina, 1966. Доклады акад. наук СССР (Compt. Rend. Acad. Sci. URSS), vol. 166, p. 1199 (Ромбический ловенит). Låvenite from the Burpala massif, northern Baikal, gave X-ray data indicating orthorhombic symmetry and is regarded as a distinct polymorph. E. H. Nickel (Amer. Min., 1966, vol. 51, p. 1549; orthorhombic Lavenite) considers the evidence inadequate, as the material is polysynthetically twinned. [M.A. **18**–48; Bull. **90**–117.]

Orthozoisite syn. of zoisite. K.-H. Nitsch and H. G. F. Winkler, Beitr. Min. Petr., 1964, vol. 11, p. 470. [M.A. **17**–671.]

Oxytourmaline. C. Frondel, A. Beidl, and J. Ito, 1966. Amer. Min., vol. 51, p. 1501. A term for tourmalines in which an excess cationic charge is balanced by replacement of some (OH,F) by O^{2-}.

Palladium bismuthide. O. E. Yushko-Zakharova and L. A. Cheryaev, 1966. Доклады акад. наук СССР (Compt. Rend. Acad. Sci. URSS), vol. 170, p. 183 (Визмутид палладия). A mineral in the Monchegorsk ores, Kola Peninsula, is distinct from michenerite and froodite, and has the composition $PdBi_3$. [M.A. **18**–125; Зап. **97**–65.]

Panethite. L. H. Fuchs, E. Olson, and E. P. Henderson, 1966. Abstr. 29th Ann. Meeting Meteoritical Soc., p. 12; Geochimica Acta, 1967, vol. 31, p. 1711. Tiny grains with brianite, whitlockite, etc. in pockets in the Dayton meteorite (a siderite) prove to be monoclinic, near $(Na,Ca,K)_{1-x}(Mg,Fe,Mn)PO_4$; also obtained synthetically. Named for F. A. Paneth. [M.A. **52**–309; **53**–509; Bull. **91**–302.]

Paraphane. G. A. Sidorenko, 1960. Рентген. опред. уран мин., Госгеолиздт., p. 46]; abstr. Зап. всесоюз. мин. общ. (Mem. All-Union Min. Soc.) 1967, vol. 96, p. 79. An inadequately characterized hydrous silicate of uranium. [Bull. **90**–610.]

Pendletonite J. Murdoch and T. A. Geissman, 1967. Amer. Min., vol. 52, p. 611. The aromatic hydrocarbon coronene, $C_{24}H_{12}$, has been found in monoclinic crystals in a small mercury deposit near the New Idria mine, San Benito county, California. Named for N. H. Pendleton. [Bull. **90**–605.]

Perryite. Kurt Fredriksson and E. P. Henderson, 1965. Trans. Amer. Geophys. Union, vol. 46, p. 121 (abstr.). A silicide of nickel, approximately $Ni_5(Si,P)_2$, occurring in the Horse Creek iron meteorite and the St. Mark's enstatite chondrite. Named for S. H. Perry. [Amer. Min. **52**–559; Зап. **97**–64; Bull. **99**–610; Min. Mag. **36**–850.]

Playfairite. J. L. Jambor, 1967. Canad. Min., vol. 9, pp. 7 and 191. A monoclinic mineral from Madoc, Ontario, with composition $Pb_{16}Sb_{18}S_{43}$. Named for J. Playfair. [A.M. **53**–1424; Bull. **91**–303.]

Plumalsite. G. Ya. Gornyi, M. G. Dyadchenko, and T. A. Kudykina, 1967. [Доповиди акад. наук Укр. ССР, сер. Б, геол. геофиз. хим., no. 6, p. 514]; abstr. Amer. Min., 1968, vol. 63, p. 349. Colourless, yellow, green, and black angular platy fragments in weathered crystalline rocks of the Ukrainian shield consist of a silicate of lead and aluminium, near $(Pb,Ca,Mg)_4(Al,Fe)_2(SiO_3)_7$; orthorhombic. Named from the composition (Plum[bum],Al,Si). The name is uncomfortably near the mineral plumosite and the rock plumasite.

Plumbopyrochlore. H. V. Skorobogatova, G. A. Sidorenko, K. A. Dorofeeva, and T. I. Stolyarova, 1966. [Геол. месторожд. редк. элем., no. 30, p. 84]; abstr. Зап. всесоюз. мин. общ. (Mem. All-Union Min. Soc.), 1968, vol. 97, p. 69 (Плюмбопирохлор, plumbopyrochlore). A variety with Pb predominant in the *A* cations.

Posnjakite. A. I. Komkov and E. I. Nefedov, 1967. Зап. всесоюз. мин. общ. (Mem. All-Union Min. Soc.), vol. 96, p. 58 (Posnjakite, Позняакит). Dark blue crystals, pseudomorphous after langite, from the Nura–Talinsk tungsten deposits, Kazakhstan, have a composition $Cu_4SO_4(OH)_6.H_2O$. Named for E. W. Posnjak. [M.A. **18**–285; A.M. **52**–1582; Зап. **97**–72; Bull. **91**–303.]

Prawdit, German transliteration of Правдит, Pravdite (23rd List) (C. Hintze, Handb. Min., Erg. III, p. 501).

Priasowit, German transliteration of Приазовит, Priazovite (24th List) (C. Hintze, Handb. Min., Erg. III, p. 502).

Protopartzite. S. Koritnig, 1967. Mitt. blatt. Mus. Bergbau, Geol., Paleont. Landesmus. Joanneum, Abt. Min., no. 1–2, p. 51. A name for an ill-defined material from Veitsch, Styria, referred by Cornu (1908) to thrombolite. The electron-probe analyses vary widely, and both Schrauf's analysis (1880) of thrombolite from the type locality (Rezbanya) and Mason and Vitaliano's formula for partzite (1930) fall within their range. Because Californian partzite gives an X-ray powder pattern while the Styrian material is X-ray amorphous, the name protopartzite is proposed. The evidence for a new mineral, distinct from either thrombolite or partzite, is inadequate and the name is superfluous. [A.M. **52**–1581.]

Pseudo–aenigmatite. A. A. Kukharenko *et al.*, 1965. [The Caledonian ultrabasic alkalic rocks and carbonatites of the Kola Peninsula and northern Karelia. Izd. 'Neda', Moscow. pp. 501–502]; abstr. Amer. Min., 1967, vol. 52, p. 561. An incompletely characterized aluminosilicate of Fe,Ti, and alkalis near (Na,K,Ca)(Fe,Ti,Mg) $(Si,Al,Ti)_3O_8$, giving an X-ray pattern resembling that of aenigmatite. Probably a distinct species but needs further study. From the Turii peninsula, Kola. [Зап. **96**–76, Псевдоэнигматит; Bull. **90**–610.]

Reevesite. J. S. White, E. P. Henderson, and B. Mason, 1967. Amer. Min., vol. 52, p. 1190. $Ni_6Fe_2CO_3(OH)_{16}.4H_2O$, the nickel analogue of pyroaurite, occurring among the weathering products of the Wolf Creek sideritic meteorite. [Bull. **91**–100.]

Rivadavite. C. S. Hurlbut, Jr., and L. F. Aristarian, 1967, Amer. Min., vol. 52, p. 326. $Na_6MgB_{24}O_{40}.22H_2O$, monoclinic crystals in borax from Tincalayu, Salta, Argentina. Named for B. Rivadavia. [M.A. **18**–284; Зап. **97**–71; Bull. **90**–606.]

Rodalquilarite. J. Sierra Lopez, G. Leal, R. Pierrot, Y. Laurent, J. Protus, and Y. Dusausov, 1965. Bull. Soc. franç. Min. Crist., vol. 91, p. 28. Small emerald green anorthic crystals from Rodalquilar, Almeria, Spain, have the composition $Fe_2^{3+}TeO_3(TeO_3H)_3Cl.0{\cdot}5H_2O$. Named from the locality.

Roedderite. L. H. Fuchs, C. Frondel, and C. Klein, 1966. Amer. Min., vol. 51, p. 949. $(Na,K)_2(Mg,Fe)_5Si_{12}O_{30}$, hexagonal, the sodium magnesium analogue of merrihueite, occurs as an accessory mineral in the Indarch meteorite. Named for E. W. Roedder who synthesized $K_2Mg_5Si_{12}O_{30}$. [M.A. **18**–47; Зап. **97**–77.]

Roseite. J. Ottemann and S. S. Augustithis, 1967. Mineralium Deposita, vol. 1, p. 269. A platinum nugget from Ethiopia contains several possibly new minerals. One, containing Os, Ir, and S, and is formulated (Os,Ir)S though the sulphur content (15 %) is open to some doubt. It is named for Hermann Rose. The name roseite is pre-empted (Stubb, 1879), and in any case more data are needed to establish a new species. [A.M. **52**–1579; Bull. **90**–610.]

Rosenhahnite. A. Pabst, F. B. Gross, and J. T. Alfors, 1967. Amer. Min., vol. 52, p. 336. $CaSiO_3.\frac{1}{3}H_2O$, as anorthic crystals in veins in a metamorphosed sediment, found as boulders in Russian River, Cloverdale, Mendocino County, California. Named for the finder, L. Rosehahn. [M.A. **18**–284; Зап. **97**–76; Bull. **90**–606.]

Sachait, German transliteration of Сахаит, Sakhaite (24th List) (C. Hintze, Handb. Min., Erg. III, 625).

Sacharowait, German transliteration of Сахаровайт, Sakharovaite (22nd List) (C. Hintze, Handb. Min., Erg. III, 627).

Sanjuanite. M. E. J. de Abeledo, V. Angelelli, M. A. R. de Benyacar, and C. Gordillo, 1968. Amer. Min., vol. 53, p. 1. White compact masses in slates from the Sierra Chica de Zonda, Dept. Pocito, San Juan Province, Argentina, gave X-ray powder data resembling those of kribergite (17th List), but the ratios $Al:P:S:H_2O$ are quite different. The composition approximates to $Al_2PO_4SO_4(OH).9H_2O$. Named for the province. [M.A. **91**–314.]

Saukovite. V. I. Vasiliev, 1966. Доклады акад. наук СССР (Compt. Rend. Acad. Sci. URSS), vol. 168, p. 182 (Сауковит). An unnecessary name for cadmian metacinnabarite, found in the Altai and named for A. A. Saukov. [M.A. **18**–45; A.M. **51**–1818; Зап. **97**–65. Saukowit, *Germ.* Not to be confused with Sauconite (2nd and 21st Lists).]

Skupit, variant of Schoepite (H. von Philipsborn, Erzkunde, 1965, p. 65).

Sorbyite. J. L. Jambor, 1967. Canad. Min., vol. 9, pp. 7 and 191. A monoclinic mineral from Madoc, Ontario, with composition $Pb_{17}(Sb,As)_{22}S_{50}$. Named for H. C. Sorby. Not to be confused with Sorbite (of Osmond or of Howe; 8th List). [A.M. **53**–1425; Bull. **91**–303.]

Sørensenite. E. I. Semenov, N. V. Maksimova, and O. V. Petersen 1965. Medd. Grønland, vol. 181, no. 1. Colourless monoclinic crystals in hydrothermal veins at Nakalaq in the Ilinaussaq alkalic intrusive, south Greenland, have the composition $Na_4SnBe_2Si_6O_{16}(OH)_4$. Named for H. Sørensen. [M.A. **17**–766; A.M. **51**–1547, and **52**–928.]

Stanfieldite. L. H. Fuchs, 1967. Science, vol. 158, p. 190. A mineral occurring in the Estherville mesosiderite and several pallasites as irregular grains or veinlets is monoclinic, with composition $Ca_4(Mg,Fe,Mn)_5(PO_4)_6$. Named for Stanley Field. [A.M. **53**–508.]

Sterryite. J. L. Jambor, 1967. Canad. Min., vol. 9, pp. 7 and 191. An orthorhombic mineral from Madoc, Ontario, with composition $Pb_7(Sb,As)_8S_{19}$. Named for T. Sterry Hunt. [A.M. **53**–1423; Bull, **91**–304.]

Stibiobaumhauerite. W. Nowacki, 1964. Schweiz. Min. Petr. Mitt., vol. 44, p. 459. The antimony analogue of baumhauerite is stated to occur naturally but no details are given.

Stibiodufrenoysite. W. Nowacki, 1964. Schweiz. Min. Petr. Mitt., vol. 44, p. 459; I. Burkart-Baumann, J. Ottemann, and G. C. Amstutz, Neues Jahrb. Min., 1966, Monatsh., 353. Crystalline inclusions in amorphous Pb–As–Sb sulphides from Cerro de Pasco, Peru, gave an X-ray diagram corresponding to dufrenoysite; electron-probe analysis gave a composition $Pb_2(Sb,As)_2S_5$ with Sb > As. Similar material had been stated by Nowacki to occur naturally, but no details were given. Named from the composition. Probably identical with veenite (this List).

Stibioskleroklas. W. Nowacki, 1964. Schweiz. Min. Petr. Mitt., vol. 44, p. 459. The antimony analogue of sartorite, $Pb(Sb,As)_2S_4$, with Sb:As $\approx$ 2, is stated to occur naturally, but no details are given. Probably identical with twinnite (this List).

Strontium-barylite. J. Ito and C. Frondel, 1968. Arkiv. Min. Geol., vol. 4, p. 391. $SrBe_2Si_2O_7$, the synthetic strontium analogue of barylite.

Svidneïte. V. Mincheva-Stefanova, 1951. [Izv. Geol. Inst. Bulg. Akad. Nauk, 1951, pp. 41–62]; abstr. Amer. Min., 1967, vol. 52, p. 562. An oxyamphibole near magnesioriebeckite (Miyashiro, 1957; 22nd List) from Svidnya, near Sofia; named from the locality. [Зап. **96**–79; Swidneit, *Germ.*]

Swjaginzewit, German transliteration of Звягинцевит, Zvyagintsevite (this List) (C. Hintze, Handb. Min., Erg. III, 634).

Switzerite. P. B. Leavens and J. S. White, Jr., 1967. Amer. Min., vol. 52, p. 1595. Pale pink to brown monoclinic crystals from the Foote Mineral Company's spodumene mine, King's Mountain, North Carolina, have the composition $(Mn,Fe)_3(PO_4)_2.4H_2O$. Named for G. Switzer.

Syntagmatite (of Tröger). W. E. Tröger, 1952. A name given by A. Breihaupt (Berg.-Hütten. Zeitung, 1865, vol. 24, p. 428) to a hornblende from Vesuvius analysed by C. F. Rammelsberg (Ann. Phys. Chem. (Pogg.), 1858, vol. 103, p. 451) because the crystals occurred in stellate groups ('συνταγμα, d. i. das Gruppirte'). Relegated to the synonymy by J. D. Dana (Syst. Min., 5th edn, 1868, p. 235), was revived by R. Scharizer (Neues Jahrb. Min., 1884, vol. 2, p. 147) as a name for the hornblende end-member $(R_2^+,R^{2+})_3R_2^{3+}Si_3O_{12}$, the other end-member being actinolite, $Ca(Mg,Fe)_3Si_4O_{12}$. It was revived by Tröger (Tab. opt. Best. gesteinsbild. Min., 1952, pp. 65 and 76) as the $MgFe^{3+}$ end-member of a series of titaniferous hornblendes, $NaCa_2(Mg,Fe,Ti)_4(Al,Fe)_3Si_6O_{22}$, the other (MgAl) end-member being kaersutite. Tröger later came to regard the name as superfluous (Opt. Best. gesteinsbild. Min., Teil 2, 1967, p. 465), but it has had some usage in this third sense.

Talnakhite. I. A. Buko and E. A. Kulagov, 1968. Зап. всесоюз. мин. общ. (Mem. All-Union Min. Soc.) vol. 97, p. 63 (Талнахит, talnakhite; p. 63, talnachite). A cubic polymorph of chalcopyrite, from the Norilsk- and Talnakh ores (cf. Доклады акад. наук СССР (Compt. Rend. Acad. Sci. URSS), 1963, vol. 152).

Tetrahydrite. I. Kostov, 1968. Mineralogy, p. 494. Syn. of Leonhardtite (19th List).

Thorolite, error for Thoreaulite, due to back-transliteration of. Торолит (Soviet Physics—Crystallography, 1967, vol. 12, p. 105; transl. of Кристаллография, 1967, vol. 92, p. 133.)

Tintinaite. D. C. Harris, J. L. Jambor, G. R. Lachance, and R. I. Thorpe, 1968. Canad. Min., vol. 9, p. 371. A mineral from the Tintina silver mines, Yukon, proves to be essentially $Pb_5Sb_8S_{17}$, and to be the antimony analogue of kobellite.

Titano-Euxenite. Chan Pei-Shan, 1963. [Scientia Sinica, vol. 12, p. 237], quoted in C. Hintze, Handb. Min., Erg. III, p. 641. Syn. of Euxenite.

Tosalite. T. Yoshimura, 1967. [Sci. Rept. Fac. Sci. Kyushu Univ., ser. D, **9**, special issue no. 1], abstr. Min. Abstr. An intermediate member of the bementite–greenalite series, having Mn:Fe $\approx$ 1, from mines in the Tosa province, Kochi prefecture, Japan. Serpentine group. Named for the locality.

Tungusite. V. I. Kudryashova, 1966. Доклады акад. наук СССР (Compt. Rend. Acad. Sci. URSS), vol. 171, p. 1167 (Тунгуст). Platy green aggregates from amygdales in lavas on the Lower Tunguska river, Siberia, are near $Ca_4Fe_2^{2+}Si_6O_{15}(OH)_6$ in composition. Named for the locality. [A.M. **52**–927; Зап. **97**–77.]

Turite. A. A. Kukharenko *et al.*, 1965. [The Caledonian ultrabasic alkalic rocks and carbonatites of the Kola Peninsula and northern Karelia. Izd. 'Neda', Moscow, pp. 418–423]; abstr. Amer. Min., 1967, vol. 52, p. 561. An unnecessary name for a cerian götzenite. The name (from the locality, Turii Peninsula, Kola) has previously been used for hydrohematite (see 8th List). [Зап. **96**–76; Турит.]

Twinnite. J. L. Jambor, 1967. Canad. Min., vol. 9, pp. 4, 7, and 191. A lead sulphosalt from Madoc, Ontario, proves to have the composition $Pb(Sb,As)_2S_4$, analogous to sartorite. The name twinnite, in honour of R. M. Thompson, is proposed for all members of the series with Sb > As.

Uranoanatase. Y. Vuorelainen, A. Huhma, A. Häkli, 1964. Bull. Comm. Géol. Finlande, vol. 33, no. 215, 116. Mentioned without description among the uranium minerals from Kuusamo, NE. Finland. Presumably a uranian anatase. [Зап. **96**–71.]

Usovite. A. D. Nozhkin, V. A. Gavrilenko, and V. A. Moleva, 1967. Зап. всесоюз. мин. общ. (Mem. All-Union Min. Soc.), vol. 96, p. 63 (Усовит, Usovite). A brown mineral occurring in a fluorite vein in the Upper Noiby river area, Yenisei region, Siberia, is probably orthorhombic. Composition, after deduction of Ca as fluorite (11·7 %), $Ba_2MgAl_2F_{12}$. Named for M. A. Usov. [A.M. **52**–1582; Зап. **97**–67.]

Vanuranylite, variant of Vanuranilite (Вануранилит; 24th List) presumably to recognize the presence of UO_2 groups. Amer. Min., 1968, vol. 51, p. 1548.

Veenite, J. L. Jambor, 1967. Canad. Min., vol. 9, p. 7. A lead sulphantimonate giving X-ray data near those of dufrenoysite, but with Sb > As, composition $Pb_2(Sb,As)_2S_5$, occurs at Madoc, Ontario. It is probably identical with stibiodufrenoysite of Burkart-Baumann, Ottemann, and Amstutz (this List), but as it has not been shown to be isostructural with dufrenoysite, a new name is assigned, in honour of R. W. van der Veen. [A.M. **53**–1422.]

Welinite. P. B. Moore, 1967. Arkiv Min. Geol., vol. 4, p. 407. A deep red-brown uniaxial mineral from Långban, Sweden, (Flink's no. 100) has a composition near $(Mn^{2+},Mg)_2(Mn^{3+},Fe)_3(Si,Sb)_2(O,OH)_{14}$. Named for E. Welin.

Wickmanite. P. B. Moore, 1967. Arkiv Min. Geol., vol. 4, p. 395. Yellow octahedra from Långban, Sweden (Flink's nos. 161, 234, 374) prove to be $MnSn(OH)_6$. Named for F. E. Wickman.

Zvyagintsevite. A. D. Genkin, I. V. Muraveva, and N. V. Troneva, 1966. [Геол. рудн. месторожд. (Geol. ore-deposits), no. 8, p. 94]; abstr. in Amer. Min., 1967, vol. 52, p. 299. 'Mineral 5' of Borovskii, Deev, and Marchukova (abstr. A.M. **46**–464) is shown to be near $(Pd,Pt)_{5\cdot5}PbSn$ or $Pd_3(Pb,Sn)$ and is named for O. E. Zvyagintsev. See also Canad. Min., 1966, vol. 8, p. 541. [Зап. **97**–64; Звягинцевит.]

CLASSIFIED LIST OF NEW MINERALS

Artificial products in italics

Elements, and Sulphides, etc.

Djerfisherite, $K_3(Cu,Na)(Fe,Ni)_{12}S_{14}$.
Guettardite, $Pb_6(Sb,As)_{10}S_{21}$.
Irarsite, (Ir,Ru,Rh,Pt)AsS.
Launayite, $Pb_{22}Sb_{26}S_{61}$.
Lonsdaleite, C.
Mckinstryite, $Cu_{1.2}Ag_{0.8}S$.
Madocite, $Pb_{17}Sb_{16}S_{41}$.
Nickel, Ni.
Niningerite, (Mg,Fe,Mn)S.
Palladium bismuthide, $PdBi_3$.
Perryite, $Ni_5(Si,P)_2$.
Playfairite, $Pb_{16}Sb_{18}S_{43}$.
Sorbyite, $Pb_{17}(Sb,As)_{22}S_{50}$.
Sterryite, $Pb_7(Sb,As)_8S_{19}$.
Talnakhite, $CuFeS_2$ (cubic).
Tintinaite, $Pb_5Sb_8S_{17}$.
Twinnite, $Pb(Sb,As)_2S_4$.
Veenite, $Pb_2(Sb,As)_2S_5$.
Zvyagintsevite, $Pd_3(Pb,Sn)$.

Oxides and Hydroxides

Aurorite, $(Mn,Ag,Ca)Mn_3O_7.3H_2O$.
Landauite, $(Zn,Mn,Fe^{3+})(Ti,Fe^{3+})_3O_7$.
Wickmanite, $MnSn(OH)_6$.

Halides

Iowaite, $4Mg(OH)_2.FeOCl.4H_2O$.
Onoratoite, $Sb_8O_{11}Cl_2$.
Usovite, $Ba_2MgAl_2F_{12}$.

Borates

Ameghinite, $Na_2B_6O_{10}.4H_2O$.
Babefphite, $Ba_4Be_5(PO_4)_4OF_4.0{\cdot}3$ to $0{\cdot}4$ H_2O
Berborite, $Be_2BO_3(OH,F).H_2O$.
Rivadavite, $Na_6MgB_{24}O_{40}.22H_2O$.

Carbonates

Metazellerite, $CaUO_2(CO_3)_2.3H_2O$.
Reevesite, $Ni_6Fe_2CO_3(OH)_{16}.4H_2O$.

Silicates, etc.

Afghanite, $(Na,Ca,K)_{12}(Si,Al)_{16}O_{34}(Cl,SO_4,CO_3)_4.0{\cdot}6H_2O$.
Anandite, $Ba_2(Fe^{2+},Mg)_6(Si,Fe^{3+})_8(O,OH,S)_{24}$.
Asbecasite, $Ca_3Be(Ti,Sn)Si_2As_6O_{19}$.
Bannisterite, $(Na,K,Ca)(Mn,Fe^{2+},Zn,Mg)_8(Si,Al)_{14}O_{28}(OH)_{16}$.
Barytolamprophyllite, $(Na,K)_6(Ba,Ca,Sr,Mn)_3(Ti,Fe,Mg)_7(Si,Al)_8O_{32}(F,OH,O,Cl)_4$.
Buergerite, $NaFe^{3+}_3Al_6Si_6B_3O_{30}F$.
Cavansite, $Ca(V^{4+}O)Si_4O_{10}.6H_2O$.
Fedorite, $Ca(Na,K)_{1\frac{1}{4}}(Si,Al)_4O_9.1\frac{1}{2}H_2O$.
Hendricksite, $KZn_3AlSi_3O_{10}(OH)_2$.
Joesmithite, $(Pb,Mn,Ca,Ba)_2Ca_4Fe^{3+}_2(Mg,Fe)_8Si_8O_{24}[Si(O,OH)_4]_4(OH)_8$.
Kenyaite, $Na_2Si_{22}O_{41}(OH)_8.6H_2O$.
Lead-barylite, $PbBe_2Si_2O_7$, *artificial.*
Magadiite, $NaSi_7O_{13}(OH)_3.3H_2O$.
Plumalsite, $(Pb,Ca,Mg)_4(Al,Fe)_{23}(SiO_3)_7$.
Roedderite, $(Na,K)_2(Mg,Fe)_5Si_{12}O_{30}$.
Rosenhahnite, $CaSiO_3.\frac{1}{3}H_2O$.
Sørensenite, $Na_4Be_2SnSi_6O_{16}(OH)_4$.
Strontium-barylite, $SrBe_2Si_2O_7$, *artificial.*
Tosalite, a manganese–iron serpentine.
Tungusite, $Ca_4Fe^{2+}_2Si_6O_{15}(OH)_6$.
Welinite, $(Mn^{2+},Mg)_2(Mn^{3+},Fe)_3(Si,W,Sb)_2(O,OH)_{14}$.

Tantalates and Niobates

Plumbopyrochlore, near $Pb_{2-x}Nb_2(O,OH)_7$.

Phosphates

Bertossaite, $(Li,Na)_2(Ca,Fe,Mn)Al_4(PO_4)_4(OH,F)_4$.
Brianite, $Na_2CaMg(PO_4)_2$.
Cassidyite, $Ca_2(Ni,Mg)(PO_4)_2.2H_2O$.
Fluor-chlor-oxyapatite, $Ca_5(PO_4)_3(F,Cl,OH,O)_{1-x}$.
Nissonite, $CuMgPO_4OH.2\frac{1}{2}H_2O$.
Panethite, $(Na,Ca,K)_{1-x}(Mg,Fe,Mn)PO_4$.
Stanfieldite, $Ca_4(Mg,Fe,Mn)_5(PO_4)_6$.
Switzerite, $(Mn,Fe)_3(PO_4)_2.4H_2O$.

ARSENATES

Cafarsite, $(Ca,Mn)_5Fe_2Ti_2(AsO_4)_8.2H_2O$.
Chernovite, $YAsO_4$.
Gabrielsonite, $PbFe(AsO_4)OH$.

SULPHATES

Despujolskite, $Ca_3Mn^{4+}(SO_4)_2(OH)_6.3H_2O$.
Humberstonite, $Na_7K_3Mg_2(SO_4)_6(NO_3)_2.6H_2O$.
Posnjakite, $Cu_4SO_4(OH)_6.H_2O$.
Sanjuanite, $Al_2PO_4SO_4OH.9H_2O$.

TELLURITE

Rodalquilarite, $Fe_2^{3+}TeO_3(TeO_3H)_3Cl.0{\cdot}5H_2O$.

HYDROCARBON

Pendletonite, $C_{24}H_{12}$.