MINERAL SPECIES FROM CANADIAN TYPE LOCALITIES, AN ANNOTATED LIST

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ABSTRACT

The annotated list of mineral species from Canadian type localities contains one hundred and six entries to date. Information on the current whereabouts of the type specimens is provided, and the originally published data on many of the localities have been revised and expanded. Only minerals currently considered as valid species are listed (Fleischer 1980, 1981, 1982). Where possible the type specimens have been classified according to Embrey & Hey (1970).

Keywords: Canada, type specimens, type localities.

INTRODUCTION

Name and locality

The 106 species from Canadian type-localities are listed alphabetically with a separate entry for each that provides references to the original description and other selected papers. Each entry includes data on the type localities and information on the current repositories of the type specimens. In those instances where the mineral is originally described from two or more localities, all the localities are given for completeness. Where possible, data for the Canadian localities have been updated and given in more detail. Care was taken to avoid unwarranted assumptions regarding details of the localities. Inevitably, ambiguous situations exist and the author welcomes additional information, corrections and criticisms, so that a more accurate and complete list can be published at a later date. Only minerals currently considered as valid species are listed (Fleischer 1980, 1981, 1982).

References

In most instances, only the reference to the full original description is given. However, additional references are used where necessary to elucidate the first appearance of the species name in print (i.e., earlier abstracts and proceedings of annual meetings) or to give a source of new data.

Additional references consulted for this compilation were: Embrey & Fuller (1980), Hey (1955, 1963), Hey & Embrey (1974), Mitchell (1979), Roe & White (1976) and Satterly (1977).

Type material

The institutions where the type material is housed have each been given an abbreviation and in each entry these are listed in alphabetical order. Where known, a catalogue number is also given. An attempt has been made to classify the type according to Embrey & Hey (1970), and the source of that designation is given where possible. The latter may be a personal communication from one of the authors of the original description, in which case it is acknowledged. Where a type is designated but not acknowledged, the source is either in the records of the collection in which it is located or the designations were given in the original description. All entries that have not been classified are “undesignated” types. In a few instances, this author has taken the responsibility for the designation of the type.

The following are brief definitions of the type classification used in this paper. They are very similar to the definitions of Embrey & Hey (1970), the main difference being in the definition of the cotypes.

Holotype: This refers to a single specimen, the only one involved in the full original description of species.
Cotypes: The term cotype is used when more than one specimen was used for the original description. In this paper, the existence of the cotypes precludes the existence of a holotype for that species.

Metatype(s): One or more specimens compared to the type by the author and determined to be the same.

Ideotype(s): Metatype(s) from a different locality. For example: tetranatrolite was described from Mont St-Hilaire, Quebec by Chen & Chao in 1980; however, "a tetragonal natrolite" was described from Greenland in 1969. Chen & Chao (1980) examined the original Greenland material and have shown it to be tetranatrolite. Therefore, the original Greenland material is an ideotype.

Plesiotype(s): Specimen(s) upon which subsequent significant additional data are based, for example, in a redefinition of the species. In some instances a plesiotype may be a neotype.

Neotype(s): Specimen(s) selected to represent either the holotype or the cotypes when it is reasonably certain that the actual holotype or cotypes are lost or destroyed.

Topotypes(s): Specimen(s) from the original locality.

The principal designations used are holotype and cotype; metatype has been used if neither holotype nor cotype are known, or where only minute quantities of the holotype or cotype are known. No attempt has been made to locate or list topotypes. Where appropriate, the terms ideotype, neotype and plesiotype have been used.

**ABBREVIATIONS**

AMNH American Museum of Natural History, New York, New York, U.S.A.

BM British Museum (Natural History), London, England.

BRGM Bureau de Recherches Géologiques et Minières, Orléans, France.

CANMET Canada Centre for Mineral and Energy Technology, Ottawa, Ontario, Canada.

CU Carleton University, Ottawa, Ontario, Canada.


EP Ecole Polytechnique de Montréal, Montréal, Québec, Canada.


GSC Geological Survey of Canada, Ottawa, Ontario, Canada.

GSWA Geological Survey of Western Australia, Perth, Western Australia.

HMM Harvard Mineralogical Museum, Harvard University, Cambridge, Massachusetts, U.S.A.

IGEM Mineralogical Museum of the IGEM Institute, U.S.S.R. Academy of Sciences, Moscow, U.S.S.R.

IMGRE Institute for the Mineralogy, Geochemistry, and Crystal Chemistry of the Rare Elements, Moscow, U.S.S.R.

MNHN Musée National d'Histoire Naturelle, Paris, France.

MPM Mineralološko-Petrografska Musej, Zagreb, Yugoslavia.

NMNH National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A.

NMNS National Museum of Natural Sciences, Ottawa, Ontario, Canada.


QU Queen's University, Kingston, Ontario, Canada.

RM Redpath Museum, McGill University, Montreal, Quebec, Canada.

ROM Royal Ontario Museum, Toronto, Ontario, Canada.

SDSMT South Dakota School of Mines and Technology, Rapid City, South Dakota, U.S.A.

UBC University of British Columbia, Vancouver, British Columbia, Canada.


UCSB University of California, Santa Barbara, California, U.S.A.

UM University of Manitoba, Winnipeg, Manitoba, Canada.

UO University of Ottawa, Ottawa, Ontario, Canada.

UP University of Paris, Paris, France.

US University of Saskatchewan, Saskatoon, Saskatchewan, Canada.

UT University of Toronto, Toronto, Ontario, Canada.

**TYPE MINERALS**

Agrellite NaCa₂Si₅O₁₆F (Gittins et al. 1976): Sheffield Lake (Kipawa River) Villedieu Tp., Témiscamingue Co., Quebec. BM 1976, 431; IMGRE; NMNH #127007; ROM M34496; UC; UT. Presumably all are cotypes.
Allargentum Ag$_{1.6}$Sb$_{0.4}$ (Ramdohr 1949, 1950, 1960): Cobalt, Ontario. BM 1952, 204. Possible metatype.

Allargentum (redefined) Ag$_{1.6}$Sb$_{0.4}$ (Petruk et al. 1970): (1) Patricia vein, (2) Cadesky vein, both from the Hi-Ho mine (Cleopatra mine), Claim A25, N shore of Giroux Lake, Gillies Limit Tp., Timiskaming Dist., Ontario. (3) No. 2 vein, Silverfields mine (Alexandra mine), Claim 395, NW of SE$rac{1}{4}$, NW$rac{1}{4}$ Lot 5, Con. IV, Coleman Tp., Timiskaming Dist., Ontario. GSC #61343, 61344 (both Patricia vein), 61345 (Cadesky vein), 61519 (Silverfields); NMNH #135409 (Cadesky vein). All plesiotypes designated by Petruk.

Aplowite (Co,Mn,Ni)SO$_4$·4H$_2$O (Jambor & Boyle 1965): Magnet Cove Barium Corp. mine, 4 km S of Walton, Hants Co., Nova Scotia. ENSM; cSC #12145. Both cotypes designated by Jambor.


Athabascite Cu$_{3}$Se$_4$ (Harris et al. 1970): Martin Lake mine, Beaverlodge Lake, Saskatchewan. GSC #61581, 61582, 62052; ROM #M29432. All cotypes designated by Harris.

Aurostibite Au$_2$Sb$_2$ (Graham & Kaiman 1951a, b): (1) Giant Yellowknife mine, W side of Yellowknife Bay, N shore of Great Slave Lake, Northwest Territories. (2) Chesterville mine, about 1½ km NE of Virginiatown, McGarry Tp., Timiskaming Dist., Ontario. CANMET #2094-21 ("type material" of Berry & Thompson (1962)); GSC #61458 (cotype), 12127 (metatype); ROM #M37248 (R685) (metatype). All from Northwest Territories.

Bariètite (Mg,Fe$^{2+}$)$_n$(PO$_4$)$_n$·8H$_2$O (Sturman & Mandarino 1976): Rapid Creek (Cross-cut Creek), Big Fish River–Blow River area, Yukon Territory. MPM; NMNH #135698, 137303, 145736; ROM #M35430. All cotypes designated by Sturman.

Carletonite KNa$_2$Ca$_5$Si$_6$O$_{24}$(OH,F)$_2$·H$_2$O (Chao 1971): Mont St-Hilaire, Rouville Co., Quebec. NMNS #37134, 37135, 37136. Cotypes designated by Chao.

Caysichite (Y,Ca)$_4$Si$_6$O$_{20}$(CO$_2$)$_2$·4H$_2$O (Hogarth et al. 1974): Evans–Lou mine, near St-Pierre-de-Wakefield, Lot 28, Range VI, Portland Tp., Papineau Co., Quebec. BM 1977, 278 (metatype); GSC #10402 (cotype); ROM #M33784 (metatype); UO (cotype). Designated by Hogarth.

Cerianite (Ce$^{4+}$,Th)O$_2$ (Graham 1955a, b): Firetower area, about 11 km NE of Nemegos, Lackner Lake, Lackner Tp, Sudbury Dist., Ontario. GSC #16588; ROM #M34491, M37257 (R724). All cotypes.

CERNYITE Cu$_2$CdSnS$_6$ (Kissin et al. 1978): (1) Tanco mine, Bernic Lake, Township 17, Range 15, 48 km ENE of Lac-du-Bonnet, Manitoba. (2) Hugo mine, Keystone, Pennington Co., South Dakota, U.S.A. CANMET (cotype S.D.); GSC #12119 (cotype, Man.), 12118 (metatype, S.D.), 12120 (metatype, Man.); NMNH #136924 (metatype, S.D.); ROM #M34728, M34729 (metatype, Man.), M34730 (metatype, S.D.); SDSVTT #5099 (cotype, S.D.), 5098 (metatype, Man.); UM #M5159 (metatype, S.D.), M5160 (metatype, Man.). Designated by Kissin. [Note: In Kissin et al. (1978), the GSC numbers are given as M1519 and M15160; these should read 12118 and 12119, respectively].

Chapmanite Sb$^{3+}$Fe$^{2+}$_2(SiO$_4$)$_2$(OH) (Walker 1924a, b): Keeley mine, Claims HR19 and HR21, South Lorrain Tp., Timiskaming Dist., Ontario. ROM #M35432; this is probably cotype material as it is labeled "original material" and consists of one vial of powdered material previously catalogued with many other specimens under ROM #M14075. Three other vials are registered as M33773 and are also probable cotypes. Some of the specimens from M14075 were exchanged with other institutions (BM 1950, 128; GSC #16589; HMM #91501) but their status as type material is uncertain.

Clinosafflorite (Co,Fe,Ni)$_3$As$_3$ (Radcliffe & Berry 1971): Cobalt, Ontario. QU #1B20 [sample number from Radcliffe & Berry (1971)].

Collinsite Ca$_2$(Mg,Fe$^{2+}$)$_n$(PO$_4$)$_n$·2H$_2$O (Poitevin & Connor 1924, Poitevin 1927): Francois Lake, S of Babine Lake, Ranges 4 & 5, Coast Dist., British Columbia. Type material may be in an extensive unsorted collection of collinsite at the GSC (G. Ansell, pers. comm.).

rior, Ariz.); UCSB #6720 (Goble, Ore.); 6721 (Superior, Ariz.). These are undesigned types and the deposition of the material from the other localities is not mentioned.

**Cupnosprnn** (Cu,Mg)Fe"+sOr (Nickel 1973): Consolidated Rambler mine, near Baie Verte, Newfoundland. NMNH #128673. Undesigned type material.


**Dewsontrr** NaAl(COs)(OH), (Harrington 1875): Foundations of the new Humanities Building, McGill University, Montreal, Quebec. BM 1964, 697-8 (possibly type material); RM #F2381A (collected by J.W. Dawson, 1874).

**Donayide** Sr,NaCaY(CO.)u'3HrO (Chao et al. 1978): Mont St-Hilaire, Rouville Co., Quebec. NMNH ft144522; NMNS #39395, 39396; ROM #M35222, M35544. All cotypes designated by Chao.

**Donssenttr** BarAl4(co3) 4(oH) s'3HrO (Jambor et al. '1969): Francon Lt6e. quarry, Pie IX Blvd. & Jarry St., St-Michel district, Montreal, Quebec. No type material was designated (Jambor, pers. comm.).

**Frnntr,nrre** (Na,K)rMgAlsSirsO'o(OH)'9HzO (Graham 1918): N shore of Kamloops Lake, Kamloops Dist., British Columbia. BM 1919, 147-8; 1930, 1008-9 (metatypes); GSC #60325 (metatype); RM #F3909 (undesignated type, collected by W.F. Ferrier, 1917).

**Gurlrinptrs** Pb(Sb,As)'Sa (Jambor r967b): Taylor pit, Lot 13 [Jambor (1967b) gives Lot 12], Con. XIV, Huntingdon Tp., Hastings Co., Ontario. GSC #12167, 12173; ROM #M35890, M34804. Coatypes designated by Chao.

**Glsp6tra** (Ni,Mg,Fe"+)CO, (Kohls & Rodda 1966): Lemieux Tp., Gaspé-ouest Co. (formerly Gaspé-nord Co.), Gaspé peninsula, Quebec. NMNH #119544; UBC #S–75–4222. Undesigned types.

**Gittinsite** CaZrSiO, (Ansell et al. 1980): Sheffield Lake (Kipawa River), Villedieu Tp., Témiscamingue Co., Quebec. GSC #19558 (part of holotype), 19560 (metatype); ROM #M37321 (part of holotype), M36265, M36266, M37322 (metatypes).

**Gormanite** Fe3+,Al(PO)4(OH)2*H2O (Sturman et al. 1981a): Rapid Creek, Big Fish River – Rapid Creek area, Yukon Territory. NMNH #137494, 137495, 145741 (undesigned); ROM #M35123, M35124, M37368 (cotypes designated by Sturman).

**GuNNrNcn** (Zn,Mn)SOr*2HrO (Jambor & Boyle 1962): Comstock–Keno property, 650-ft. level, Calumet mine, Keno Hill – Galena Hill area, Yukon Territory. GSC #12139 (holotype); ROM #M25441; UBC #S–75–4063. Both metatypes designated by Jambor.

**Hastingsit** NaCa(Fe"+,Mg)Fe3+,Si4Al,Os(OH)2 (Adams & Harrington 1896a, b, Adams & Barlow 1910, p. 243-247): Dungan-Non Tp., Hastings Co., Ontario. MNHN 110.459, possible metatype presented by Adams.

**Hawleyite** Cds (Trail & Boyle 1955a, b): Hector–Kamloops Dist., British Columbia. BM 1954, 420-421 (holotype); ROM #M35123, M35124, M37368 (cotypes designated by Sturman).
Hedley, Similkameen Dist., British Columbia. ROM #M37250 (R131), M37251 (R223), M37252 (R228), M37253 (R563). Probable cotypes.

HILAIRITE Na2ZrSi3O9*3H2O (Chao et al. 1974): Mont St-Hilaire, Rouville Co., Quebec. NMNS #37125, 37126; ROM #M34803, M34804, M34805. All cotypes designated by Chao.

HOLSLITE Ca2H2Si2O5 (How 1868, Dana 1868): near Windsor, Hants Co., Nova Scotia. Many specimens, presumably metatypes, were acquired by How and some of these are in the following institutions: BM; GSC; NSM.

HYDROBRENORITE BaAl2(PO4)2(OH)3*3H2O (Jambor et al. 1977): Francon Lt6e, quarry, Pie IX Blvd. & Jarry St., St-Michel district, Montreal, Quebec. GSC #13936; ROM #M34547. Cotypes designated by Jambor.


JAGOWERITE BaAl2(PO4)2(OH)3 (Meagher et al. 1973): 25 km N of the Hess River, Yukon Territory. NMNH #128337 (undesignated); UBC #S-75-4220 (cotype designated by J. Nagel, UBC).

KULANITE Ba(Fe3+,Mn,Mg)2Al2(PO4)3(OH)3 (Mandarino & Sturman 1976): Rapid Creek (Cross-cut Creek), Big Fish River – Blow River area, Yukon Territory. ROM #M34170. Holotype designated by Mandarino.

LAROSITE (Cu,Ag)2(Sb,Bi)6S5 (Petruk et al. 1971, Petruk 1972): Foster mine, Lot 4, Con. IV, Coleman Tp., Timiskaming Dist., Ontario. GSC #12126. Holotype designated by Petruk.


LEMOYNETE (Na, K)2CaZrSi3O9*5-6H2O (Perrault et al. 1969): Mont St-Hilaire, Rouville Co., Quebec. ROM #M32124. Part of holotype designated by Perrault.

MACOCITE Pb7(Sb,As)10S4 (Jambor 1967a): Taylor pit, Lot 13 [Jambor (1967a) gives Lot 12], Con. XIV, Huntingdon Tp., Hastings Co., Ontario. GSC #12146, 12178; ROM #M35896. All are cotypes designated by Jambor.

MAROCITE NaFe3+PO4 (Sturman et al. 1977): Big Fish River, Big Fish River – Blow River area, Yukon Territory. NMNH #145745; ROM #M34241 (both part of holotype designated by Sturman); PM (metatype).

MATTAGAMITE CoTe2 (Thorpe & Harris 1973): Mattagami Lake Mines Ltd., Galinee Tp., Abitibi Co., Quebec. GSC #12151, 12152, 12153. All cotypes designated by Harris.

McGILLITE (Mn,Fe3+)2Si3O8(OH)2Cl (Donnay et al. 1980): Sullivan mine, raise 42135D, Kimberley, British Columbia. RM #NS 3100 (undesignated; collected by Arthur Morris, 1945); UBC #S-75-21123 (this is the original material labeled “friedelite” studied by R.M. Thompson in 1951).

McKINSTRYTE (Ag,Cu)2S (Skinner et al. 1966): Foster mine, SE1/4, N1/2, Lot 4, Con. IV, Coleman Tp., Timiskaming Dist., Ontario. GSC #12136; HMM #108804 (both part of holotype designated by Jambor); NMNH #120056 (undesignated).

MICHENERITE (Pd,Pt)BiTe (Hawley & Berry 1958): Frood mine, Lots 6 & 7, Con. VI, McKim Tp., Sudbury Dist., Ontario. No type material could be located.


MONTBRYATE (Al2Sb)2Te5 (Peacock & Thompson 1945, 1946a, b); Robb–Montbray mine, Lots 55 & 56, Range II, Montbray Tp., Abitibi Co., Quebec. HMM #97681 (cotype), 102067 (metatype). Designated by C.A. Francis, HMM; ROM #M19883, M37273 (R288, R494), M37276 (R288, R494), M37282 (R494), M37287 (R288). All cotypes. M37272 (R494), M37275 (R288, R494), M37286 (R494), M37288 (R288). Protable cotypes.

MONTREGANITE (Na,K)2(Y, Ca)2Si4O10*10H2O (Chao 1978): Mont St-Hilaire, Rouville Co.,
Quebec. NMNH #145548 (undesignated); NMNS #37130. Holotype designated by Chao.


Mordenite (Ca,Na₂,K₂)Al₂Si₃O₁₀·7H₂O (How 1864): 3–5 km E of Morden, King's Co., Nova Scotia. BM 52574a [labeled type-material, acquired from How (1879)], several other BM specimens are metatypes received from How in 1870 and 1879; NMNH #R4062 (undesignated).

Muskovite Mg₂Fe³⁺₄⁺Si₃O₁₀·10H₂O (Jambor 1969b): Muskox complex, Coppermine River area, Northwest Territories. GSC #12123 (metatype); ROM #M36526. Cotype designated by Jambor.


Neytite Pb₄(Cu,Ag)₄Bi₃S₇ (Drummond et al. 1969): Patsy Creek, Lime Creek stock, British Columbia Molybdenum Ltd., Kitsault, 8 km S of Alice Arm, Observatory Inlet, Cassiar Dist., British Columbia. UBC #S-75-4403. Metatype designated by J. Nagel, UBC.

Nickelbischophite NiCl₂·6H₂O (Crook & Jambor 1979): Dumont ultramafic body, 27 km W of Amos, Launay Tp., Abitibi Co., Quebec. GSC #17980. Holotype designated by Jambor.

Nioobophyllite (K₆Na₃)(Fe³⁺₄⁺,Mn)(Nb,Ti)₅Si₄ (O,OH,F)₂₃ (Nickel et al. 1964): Ten Mile Lake area, Seal Lake, Labrador, Newfoundland. GSC #61503 (metatype); ROM #M26148. Part of holotype designated by Nickel.


Nolanite Fe₂V₂O₁₆ (Barnes & Qushari 1952, Robinson 1955, Robinson et al. 1957): (1) "A" zone of Eldorado Mining & Refining Ltd., Fish Hook Bay, Lake Athabasca, Beaverlodge region, Saskatchewan. (2) 1st level, Nicholson mine (Consolidated Nicholson Mines Ltd.), N side of Lake Athabasca, about 3 km E of the site of Goldfields, Beaverlodge region, Saskatchewan. (3) Ace mine, about 10 km E of Uranium City, Beaverlodge Lake, Saskatchewan. (4) Pitch group of claims, SW shore of Beaverlodge Lake, Saskatchewan. BM 1965, 206 (cotype, part of NMNH #112965); BM 1966, 210 (undesignated); NMNH #112965 (cotype).

Nusuffelite Pb₂Cu(Pb,Bi)Bi₂S₃ (Kingston 1968): Patsy Creek, Lime Creek stock, British Columbia Molybdenum Ltd., Kitsault, 8 km S of Alice Arm, Observatory Inlet, Cassiar Dist., British Columbia. GSC #13448 (cotype); ROM #31491, M31618, M31619 (probable cotypes collected by J.D. Scott), M37319 (R893) (cotype).

Paracostibite CoSbS (Cabri et al. 1970): Trout Bay, Red Lake area, Mulchay Tp., Kenora Dist. (Patricia portion), Ontario. GSC #37132; ROM #M35546. Both are part of the holotype designated by Chao.

Pararammelberite NiAs₂ (Peacock 1939, 1940, Peacock & Michener 1939, Peacock & Dadson 1940): (1) Moose Horn mine, Lot 4 Con. V, James Tp., Timiskaming Dist., Ontario. (2) Hudson Bay mine, Lot 6, Con. VI, Coleman Tp., Timiskaming Dist., Ontario. (3) Keeley mine, Claims HR19 and HR21, South Lorrain Tp., Timiskaming Dist., Ontario. ROM #M11772a (R13), M11772b (R15), M11772c (R16) Hudson Bay mine, M12411 (R18) Moose Horn mine, M14242 (R14) Keeley mine. All are cotypes.

Pararegalgar AsS (Roberts et al. 1980): (1) Mount Washington copper deposit, Comox Dist., Vancouver Island, British Columbia. (2) Gray Rock property, head of Trux Creek, Bridge River area, Lillooet Dist., British Columbia, GSC #61566 (Mount Washington), 61567 (Gray Rock). Both are cotypes designated by Roberts.

Pellylite Ba₃Ca(Fe³⁺₄⁺,Mg)₆Si₃O₁₇ (Meagher 1971, Montgomery et al. 1972): Ross River and Pelly River, 3 km SW of Gillespite Lake, Yukon Territory. UBC #S-79-21484. Cotype designated by J. Nagel, UBC.

Penikisite Ba₃(Mg,Fe³⁺₄⁺)₂Al₆(PO₄)₃(OH)₃ (Man- darino et al. 1977): Rapid Creek (Cross-cut Creek), Big Fish River – Blow River area, Yukon Territory. ROM #M34172. Holotype designated by B.D. Sturman, ROM.

Petarasite Na₂ZrSi₃O₁₄(Cl,OH)⁺²H₂O (Chao et al. 1980): Mont St-Hilaire, Rouville Co., Quebec. GSC #61531; NMNS #43721,
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43630, 43631; ROM #M36456, M36457, M36458. All cotypes designated by Chao.


POITEVINITE (Cu,Fe⁺⁺,Zn)₅SO₄·H₂O (Jambor et al. 1964): Avoca claim, Hat Creek, Bonaparte River, Lillooet Dist., British Columbia. ENSM; GSC #12122; NMNH #142995; ROM #M25440. NMNH specimen undescribed, the rest are cotypes designated by Jambor.


SABINAITE Na₂Zr₂Ti₃O₈(CO₃)₆ (Jambor et al. 1980): Francon Litée quarry, Pie IX Blvd. & Jarry St., St-Michel district, Montreal, Quebec. ENSM: GSC #61017 to 61024 (inclusive), 61063; ROM #M35902, M35907. All cotypes designated by Jambor.

SATTERTHYTE (Fe⁺⁺⁺,Mg,Fe⁺⁺)₉(PO₄)(OH) (Mandarino et al. 1978): Big Fish River, Big Fish River – Blow River area, Yukon Territory. NMNH #1457a3; ROM #M34649. Both are part of the holotype designated by B.D. Sturman, ROM.


SPENCERITE Zn₃(PO₄)₂(OH)₆·3H₂O (Walker 1916a, b, c, 1918): H.B. mine, about 8 km SE of Salmo, near Nelson, Kootenay Dist., British Columbia. MHNH 120.22; NMNH #121566; ROM #M9602, M9610, M9691, M9726. All metatypes.

SPENCITE: see TETRIOHITE – (Y).


SPERTINITE Cu(OH)₂ (Grice & Gasparrini 1981): Jeffrey mine, Shipton Tp., Richmond Co., Quebec. NMNS #44696, 44697, 44698. 44699. All cotypes designated by Grice.

SPIONKOPITE Cu₂₅S₆₈ (Goble 1980): Yarrow Creek, Yarrow Creek – Spionkop Creek deposit, SW Alberta. GSC #61551 (cotype); QU (metatype). Designated by Goble.

STEACYITE Th(Na₃Ca)₃(K₁₋₃)₅Si₆O₁₈, z = 0.39 (Perrault & Szymański 1982): Mont St-Hilaire, Rouville Co., Quebec. EP #E.P. 12480; GSC #61529. Both cotypes.

STERRYTITE Pb₁₀(Sb₂As₂)₁₈O₆ (Jambor 1967b): Taylor pit, Lot 13 [Jambor (1967b) gives Lot 12]. Con. XIV, Huntingdon Tp., Hastings Co., Ontario. GSC #12169, #12172, 61066; ROM M#35891, M35894. All cotypes designated by Jambor.

STIBIVANITE Sb₅⁺₂V⁺⁺O₁₋₄ (Kaiman et al. 1980): Lake George antimony deposit (Consolidated Durham Mines & Resources Ltd.), 453 stope. Prince William Parish, York Co., New Brunswick. GSC #61523, 61524, 61525 (cotypes); NMNS #44654, 44655, 44656, 44567, 44658 (metatypes); ROM #M36642 (cotype).

STROMTODRESSERITE (Sr,Ca)₂Al₄(CO₃)₆(OH)₁₋₄·H₂O (Jambor et al. 1977a): Francon Litée quarry, Pie IX Blvd. & Jarry St., St-Michel district, Montreal, Quebec. GSC #13704; ROM #M34626, M34627. All cotypes designated by Jambor.

SUDUBYRITE (Pd,Ni)Sb (Cabri & Laflamme 1974): Copper Cliff South mine, Lot 1, Con. I, Snider Tp., Sudbury Dist., Ontario. BM; BRGM; IGEM; ROM #M32841. All cotypes designated by Cabri.

TANCOHITE HNa₃LiAl(PO₄)₂(OH) (Ramik et al. 1980): Tanco mine, Bernic Lake, Township 17, Range 15, 48 km ENE of Lac-du-Bonnet, Manitoba. BM; ENSM; FM; HMM #117129; NMNH #146284; NMNS #42900; ROM #M36416, M36417, M36418; UM #M5553, M5554. All are cotypes designated by Ramik.

TELLURANTIMONY Sb₂Te₅ (Thorpe & Harris 1973): Mattagami Lake Mine Ltd., Galinée Tp., Abitibi Co., Quebec. GSC #12151, 12152, 12154, 12155; ROM #M31957, M31958. All cotypes designated by Harris.


TETRANATROLITE Na₂Al₃Si₃Os₂*2H₂O (Andersen et al. 1969, Chen & Chao 1980): (1) Illimassaq, Greenland (referring to “tetragonal natrolite”). (2) Mont St-Hilaire, Rouville Co., Quebec. NMNS #37131; ROM #M35545 (Both cotypes, Quebec). M36160 (ideotype, Greenland). Designated by Chao.

TINTINAITE Pb₁₁(Sb,Bi)₅S₆₈ (Harris et al. 1966, 1968): (1) Tintina Silver Mines Ltd., 160 km NW of Watson Lake, Whitehorse Div.,
Yukon Territory. (2) Deer Park mine, Rossland, British Columbia. GSC #12133, 12134, 12135 (Yukon); ROM #M27173, M27174, M27175, M27176 (British Columbia), M37320 (R894) (Yukon). All are cotypes.

TRITOMITE—(Y) (Y, Ca, La, FeFe²⁺)₆(Si, B, Al)₁₂(O, OH, F)₁₈ (Frohnel 1961, Jaffe & Molinsky 1962, Hogarth et al. 1973): Lot 7, Con. XX Cardiff Tp., Haliburton Co., Ontario. GSC #14270; HMM #10800; NMNH #106358. All part of the holotype designated by Frohnel.

TULAMEENITE Pb₄Fe₆Cu₂ (Cabri et al. 1973c): (1) Tulameen River, (2) Similkameen River, Similkameen Dist., British Columbia. NMNH #128460; ROM #M33256. Both cotypes from Similkameen River, designated by Cabri.


TYRELLITE (Cu, Co, Ni)₆Se₆ (Robinson & Brooker 1952, Hey 1961): (1) Western part of the Eagle group of claims, Goldfields Dist., Saskatchewan. (2) Head of Ato Bay, Beaverlodge Lake, Saskatchewan. GSC #61952 (cotype, Beaverlodge); MNHN 180.53 (cotype, Beaverlodge, gift of Robinson); ROM #M26095, M26096 (both Beaverlodge, undesignated).

VEENITE Pb₄(Sb, As)₈S₈ (Jambor 1967a): Taylor pit., Lot 13 [Jambor (1967a) gives Lot 12], Con. XIV, Huntingdon Tp., Hastings Co., Ontario. GSC #12170, 12174; ROM #M35895. All cotypes designated by Jambor.

WAKEFIELDITE YVO₃ (Hogarth & Miles 1969, Miles et al. 1971): Evans–Lou mine, near St.-Pierre-de-Wakefield, Lot 28, Range VI, Portland Tp., Papineau Co., Quebec. GSC #12165 (holotype); ROM #M30382 (metatype); UO (metatype). Designated by J.L. Jambor.

WELLOGANITE Sr₄Na₄Zr(BO₃)₆·3H₂O (Sabina et al. 1968, Gait & Grice 1971, Gait & Perrault 1975): Francon Ltee. quarry, Pie IX Blvd, & Jarry St., St-Michel dist., Montreal, Quebec. GSC #17257, 61337. Cotypes designated by J.L. Jambor.

WICKSITE NaCa₄(Fe²⁺₄, Mn)₆MgFe²⁺(PO₄)₆·2H₂O (Sturman et al. 1981b): Big Fish River, Big Fish River – Blow River area, Yukon Territory. GSC #61309; NMNH #145607; ROM #M37364. All part of the holotype designated by Sturman.

WODGINITE (Ta, Nb, Sn, Mn, Fe)₆O₃₂ (Nickel et al. 1963): (1) Wodgina, Western Australia. (2) Tanco mine, Bernic Lake, Township 17, Range 15, 48 km ENE of Lac-du-Bonnet, Manitoba. GSC #12200 (Man.); GSWA #8492 (Wodgina); ROM #M25655 (Man.). The Wodgina specimen may be a cotype; the others are ideotypes.

YARROWITE Cu₅S₄ (Goble 1980): Yarrow Creek, Yarrow Creek–Spionkop Creek deposit, SW Alberta. GSC #61552 (cotype); QU #14270; ENSM #10800; NMNH #106358. Designated by Goble.

YOFOERTERITE (Mn, Mg)₆Si₆O₁₇(OH)₈·8–9H₂O (Perrault et al. 1975): Mont St-Hilaire, Rouville Co., Quebec. BM 1975, 418; ENSM; MNHN 178.118; NMNH #131952; NMNS #37133; ROM #M33627, UP. These are probably cotypes.

YUKONITE Ca₃Fe⁴⁺₄(AsO₄)₆(OH)₈·18H₂O (Tyrell & Graham 1913, Jambor 1966): west side of Windy Arm, Tagish Lake, Yukon Territory. GSC #18594 (holotype); NMNH #R5783 (undesignated); ROM #M11468 (metatype).

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- L.G. Berry (deceased), Queen's University, Kingston, Ontario.
- I.V. Bulgak, Fersman Mineralogical Museum, Moscow, U.S.S.R.
- L.J. Cabri, CANMET, Ottawa, Ontario.
- C.A. Francis, Harvard University, Cambridge, Massachusetts.
- J.P. Fuller, British Museum (Natural History), London, England.
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