

Annotated List of Canadian Minerals.*

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(Continued from page 185.)

183. **NICCOLITE**—Has been found, in admixture with domeykite, in a vein cutting a bed of amygdaloid on Michipicoten Island, Lake Superior, Province of Ontario. Anal., T. S. Hunt, Geol. Can., 1863, p. 506.

184. **NITRE**—Has been found in cavities in calcareous tufa, on the Nazco River, and has also been met with at Big Bar, Fraser River, Province of British Columbia.

185. **OBSIDIAN**—Is found in large and small masses on the higher eastern slopes of the Il-ga-chuz Mountain, but the most notable locality for this mineral is the mountain named Beece or Anahim's Peak, an isolated summit between the Il-ga-chuz and Tsi-tsutl Mountains, in the upper Blackwater country (G. M. Dawson, Rep. Geol. Can., 1876-77, pp. 78, 79): it also occurs at Tsooskatli, the upper part of Masset Inlet (on a small islet north-east of Tas-kai-guns), Queen Charlotte Islands (id.—ib., 1878-79, p. 88 B), and other localities in British Columbia.

186. **OCTAHEDRITE**—Is reported, by Prof. How, as occurring in small but fine crystals, in quartz, at Sherbrooke, Guysborough County, Province of Nova Scotia.

187. **OLIGOCLEASE**—Occurs in more or less perfect crystals, in groups, of a white or faintly greyish-white color, in the Township of Hull (Ottawa Co.), and a white, rarely greenish or greyish, felspar, having the composition of oligoclase forms, with black hornblende, the intrusive diorite of Mount Johnson (Iberville Co.), Province of Quebec. A white to pale grey felspar, also referable to this species, is the constituent of a coarse crystalline diorite occurring at the Fournier mine, in the township of South Sherbrooke, Lanark County, in the Province of Ontario. Analyses, T. S. Hunt, Geol. Can., 1863, p. 477; B. J. Harrington, Rep. Geol. Can., 1873-74, p. 198.

188. **ONTARIOOLITE**—A scapolite from the Township of Galway, Peterborough County, Province of Ontario, has been called Ontarioolite by C. U. Shepard (Am. Journ. Sci., 3 ser., vol. xx, p. 54, 1880). [The value of an approximate analysis given, is destroyed by the impurity of the material analyzed; thus far it has no claim to be considered an independent species—Dana, Min., App. iii, p. 106, 1882.]

189. **OPAL**—Common opal or semi-opal is mentioned, by Dr. How, as occurring at a few localities in the Province of Nova Scotia. See also notes to "Cacholong" "Hyalite" (under Addenda), "Tripolite."

190. **ORTHOCLASE**—This felspar is very abundant among the rocks of the Laurentian system, and well-defined cleavable masses of a reddish, greyish-white or white color, may be obtained in many localities, some of the most important (Laurentian) of which are—the Townships of North Burgess and Elmsley (Lanark Co.), Ross, in large crystals, and Sebastopol, also in very large crystals (Renfrew Co.), in the Province of Ontario—Grenville and Chatham (Argenteuil Co.), and most of the Townships of Ottawa County. Also occurs in veins cutting altered slates in the Townships of Leeds and Inverness (Mégantic Co.), and Sutton (Brome Co.), and in the trachytes of Chambly, Brome and Shefford Mountains, and Mount Royal, Province of Quebec. Analyses, T. S. Hunt, Geol. Can., 1863, pp. 475, 476; G. C. Hoffmann, Rep. Geol. Can., 1876-77, pp. 511, 512.

191. **PARGASITE**—Finely terminated crystals of dark green pargasite, sometimes an inch in diameter, are found implanted upon, or imbedded in, a greenish-white pyroxene, at the High Falls and at the Ragged Chute, on the Madawaska in the Township of Blythfield, Renfrew County, Province of Ontario. Anal., T. S. Hunt, Geol. Can., 1863, p. 466.

192. **PEARL-SPAR**—Is abundant, generally associated with calcite and gypsum, in cavities and geodes in the dolomites of the Niagara formation; also, in association with calcite, gypsum, barite and quartz, in geodes in the dolomites of the Calciferous formation, and is found in many of the metalliferous veins of Lake Superior and Lake Huron, Province of Ontario—and occasionally in those of the Eastern Townships of the Province of Quebec.

193. **PECTOLITE**—Occurs in radiated fibrous aggregations, the fibres being an inch and a quarter and less in length, at Cathcart (now McKellar's) Point, Thunder Bay, Lake Superior, Province of Ontario.

194. **PERISTERITE**—The felspar described by Dr. Thompson under this name (in allusion to its beautiful blueish opalescence)—a variety of albite, occurs in large cleavable masses, with quartz, in veins in the Township of Bathurst (Lanark Co.), and in a vein made up of a fine-grained mixture of reddish-white albite and quartz, enclosing large cleavable masses of the opalescent albite, on the north shore of Stoney Lake, near the mouth of Eel Creek, in Burleigh (Peterborough Co.), Province of Ontario. Analysis of a specimen from first-named locality, T. S. Hunt, Geol. Can., 1863, p. 477.

195. **PERTHITE**—The Perthite of Dr. Thompson (a flesh-red aventurine felspar, which, as shown by Breithaupt, consists of interlaminated albite and orthoclase) occurs in large cleavable masses, in pegmatite veins cutting Laurentian strata, in the Township of North Burgess, Lanark County, Province of Ontario.

196. **PETALITE**—Is here mentioned among the minerals of Canada, upon the authority of Dr. Bigsby, according to whom this mineral was found, with tremolite, in a large boulder on the lake shore, at Toronto, York county, Province of Ontario.

197. **PETROLEUM**—The most important oil springs are

in the township of Enniskillen, in the western peninsula of Ontario, but it also occurs in other townships of this section of the country, as for instance those of Mosa, Oxford and Dereham. It is found, in small quantity, on Great Manitoulin Island in Lake Huron, Province of Ontario—also on the St. John River, and on a branch of Silver Brook, and other localities in the County of Gaspé, Province of Quebec.

198. **PHLOGOPITE**—This mineral is of very common occurrence among the crystalline limestones of the Laurentian system, through which it is sometimes more or less abundantly disseminated in the form of small scales or crystals. The largest specimens are generally found in beds near to bands of quartzite or pyroxenic gneiss, which often limit the crystalline limestones, or are interstratified with them. It is also met with imbedded in massive pyroxene rock. Large plates are obtainable in the Townships of Grenville (Argenteuil Co.), Buckingham, Templeton, etc. (Ottawa Co.), in the Province of Quebec—and in the Townships of North and South Burgess, in the Province of Ontario. Anal., T. S. Hunt, Geol. Can., 1863, p. 495.

199. **PICKERINGITE**—Occurs as an efflorescence on the shale of a sheltered cliff on the banks of the Meander, Newport, Hants County, Province of Nova Scotia. Anal., H. How, Journ. Chem. Soc., new series, vol. 1, p. 200, 1863.

200. **PICROLITE**—This variety of serpentine is met with in the Townships of Bolton (Brome Co.), Shipton (Richmond Co.), etc., in the Province of Quebec. Anal., T. S. Hunt, Geol. Can., 1863, p. 472.

201. **PITCHSTONE**—A pitchstone-porphry, and pitchstone with veins of agate, occurs on the eastern extremity of Michipicoten Island, Lake Superior, Province of Ontario.

202. **PLATINUM, NATIVE**—The earliest reference to the finding of native platinum in Canada, is that by Dr. T. Sterry Hunt (Rep. Geol. Can., 1851-52, p. 120), who mentions having observed it, in association with iridosmine, in the gold washings of the Rivière du Loup and Rivière des Plantes, Beauce County, in the Province of Quebec. It has since been met with, according to Dr. G. M. Dawson (Ann. Rep. Geol. Can., vol. iii, 1887, Part R), in association with placer gold in several localities in the Province of British Columbia—occurring in notable quantity in the region of the Upper Similkameen and Tulameen Rivers, in minute scales where the gold is "fine" but increasing in coarseness to small pellets and nuggets in places where "coarse" gold is found. Coarse grains and pellets have, so far, been found only on Granite, Cedar and Slate Creeks, all entering the Tulameen on the south side. He also mentions its occurrence, in fine scales with gold, on Tranquille River, Kamloops Lake; at a place ten miles below Lillooet on the Fraser River, and in nearly all the tributaries of the Yukon River which have been worked. Analyses, G. C. Hoffmann, Trans. Roy. Soc. Can., vol. v, sec. iii, p. 17 1887—and an abridged statement of results, Ann. Rep. Geol. Can., vol. ii, p. 5 T, 1886.

203. **POLYDYMITE**—What is regarded as evidently a ferriferous variety of this mineral is found in association with pyrrhotite, chalcopyrite, some pyrite etc., at the mines of the Canadian Copper Company, Sudbury, District of Nipissing, Province of Ontario. Anal., F. W. Clarke and C. Catlet, Am. Journ. Sci., 3 ser., xxxvii, p. 372, 1889.

204. **PRASE**—A breccia, consisting of angular fragments of prase cemented together with white chalcidony, was found by Dr. G. M. Dawson filling cavities in Tertiary basaltic rocks in mountains at head of Nicoamen River, British Columbia.

205. **PREHNITE**—Occurs chiefly in the trap rocks of Lake Superior, sometimes forming distinct veins, as on Slate River, an affluent of the Kaministiquia and with imbedded nodules of native copper on an island near St. Ignace—Province of Ontario. It has also been found in the Laurentian of the Township of Templeton (Ottawa Co.) in the Province of Quebec. Analyses, E. J. Chapman, Can. Journ., 2 ser., vol. xii, p. 267, 1869; B. J. Harrington, Rep. Geol. Can., 1877-78, p. 34 G.

206. **PSEUDOMORPHOUS QUARTZ**—Fine specimens of quartz pseudomorph after chabazite, have been found at Horse-Shoe Cove, Cape d'Or, and of quartz pseudomorph after stilbite, at Clarke's Head (Cumberland Co.), Province of Nova Scotia. Silicified wood is found in the vicinity of the Elbow of the South Saskatchewan River, and very characteristic specimens of the same at Ross Coulee, Irvine, District of Assiniboia, North-west Territory.

207. **PSILOMELANE**—Occurs in association with pyrolusite, at Douglas, Hants County, Province of Nova Scotia.

208. **PYRALLOLITE**—Occurs in beds in the crystalline limestone of Grenville (Argenteuil Co.), and Clarendon (Pontiac Co.), in the Province of Quebec—also in the Townships of Ramsay (Lanark Co.), and Rawdon (Hastings Co.), in the Province of Ontario. Analyses, T. S. Hunt, Geol. Can., 1863, p. 471—and of a specimen from Portage du Fort, Township of Clarendon, B. J. Harrington, Rep. Geol. Can., 1876-77 p. 484.

209. **PYRITE**—Is very widely distributed throughout the Dominion. The following are a few of the localities where it is met with in a crystalline form:—in fine crystals at La Hve (Lunenburg Co.), and Seven Mile Plain (Hants Co.), in the Province of Nova Scotia—in large cubical crystals in a vein of copper ore in the Township of Melbourne (Richmond Co.), Province of Quebec—in perfect octahedra at Elizabethtown (Leeds Co.), also in a crystalline form in many of the veins and gneissoid rocks of the Townships of Madoc, Elzevir and Tudor (Hastings

Co.), and in the trap dykes of Lakes Superior and Huron; Province of Ontario.

210. **PYROLUSITE**—Is met with near Kentville (King's Co.), at Springville (Pictou Co.), Musquodoboit (Halifax Co.), Onslow (Colchester Co.), near Amherst (Cumberland Co.), and at Walton and other places, especially at Tenny Cape, in Hants County, Province of Nova Scotia. This mineral also occurs at several places in the Counties of Westmoreland, Albert, St. John and King's,—the most important deposit being at Markhamville, in the parish of Upham, King's County,—in the Province of New Brunswick.

211. **PYROXENE**—Is of common occurrence especially among the rocks of the Laurentian system, where it is not unfrequently forms beds, or large segregated veins, which sometimes consist of pure pyroxene, at other times of pyroxene in admixture with other minerals, constituting pyroxenite. It also sometimes occurs disseminated in beds of magnetic and, in the form of grains and imperfect crystals, it is common in the beds of limestone. Among the numerous localities of its occurrence may be mentioned:—Kildare (Joliette Co.), the Townships of Argenteuil and Grenville (Argenteuil Co.), Buckingham, Templeton, Portland, Wakefield, and adjoining Townships (in Ottawa Co.), and Litchfield (Pontiac Co.), in the Province of Quebec. The Townships of North Elmsley and North Burgess (Lanark Co.), and elsewhere in this part of the Province of Ontario. Very large crystals of pyroxene are not unfrequently met with in the above referred to Townships of Templeton, Portland, and Wakefield, as also in the Townships of Sebastopol and Blythfield (Renfrew Co.), in the Province of Ontario—and a very handsome lilac-colored pyroxene occurs in the Augmentation of the aforementioned Township of Grenville. See also notes to "Augite," "Coccolite," "Diallage," "Fassaite," "Malacolite," "Sahlite."

212. **PYRRHOTITE**—Occurs in many localities; among which may be mentioned the Townships of Barford (Stanstead Co.) Sutton and Bolton (Brome Co.) where it is associated with copper ores; St. François (Beauce Co.) associated with pyrite, arsenopyrite, etc., and St. Jérôme (Terrebonne Co.) associated with pyrite—in the Province of Quebec. Abundantly, more or less associated with chalcopyrite, in McKim and adjoining townships (District of Nipissing); accompanying pyrite in Elizabethtown (Leeds Co.), at Balsam Lake (Peterborough Co.), Province of Ontario. A very interesting twin crystal found by Dr. Harrington at the Elizabethtown deposit (Anal., B. J. Harrington, Rep. Geol. Can., 1874-75, p. 304), was examined by Dr. E. S. Dana, Am. Journ. Sci., vol. xi, p. 386, 1876.

213. **RETINALITE**—Is found, imbedded in crystalline limestone, in the Township of Grenville (Argenteuil Co.), and on Calumet Island (Pontiac Co.), in the Province of Quebec. Analyses, T. S. Hunt, Geol. Can., 1863, p. 471.

214. **RHODOCHROSITE**—Has not, as yet, been found in Canada in distinct examples, but occurs in admixture with many of the manganese ochres, and is also present, in traces, in some of the altered strata of the Eastern Townships of the Province of Quebec.

215. **RIPIDOLITE**—Has, so far, not been identified with certainty as occurring in Canada. A chloritic mineral occurring—in uneven folia, of an olive-green color and pearly lustre—in association with apatite, quartz, pyrite and calcite, in the Township of Templeton (Ottawa Co.), Province of Quebec, has been examined by Dr. Harrington (Rep. Geol. Can., 1877-78, p. 34 G), and found to have, approximately, the composition of ripidolite. A foliaceous mineral found in a serpentine rock in the adjoining Township of Buckingham would, so far as it has yet been examined, also appear to be referable to this species.

216. **ROCK CRYSTAL**—Is found, in large crystals, at South River (Antigonish Co.): in perfect crystals at Spencer's Island (Cumberland Co.): at Sandy and Mink Coves (Digby Co.), etc., in the Province of Nova Scotia. In crystals (known as Quebec diamonds) showing unusual modifications in form, in fissures and cavities in limestone rocks in the vicinity of Quebec, and in large transparent crystals, in quartz veins, at Harvey Hill mine (Leeds Co.), Province of Quebec. Also in good crystals in cavities of the quartz veins of the Bruce mines, Lake Huron, and similar veins at Thunder Bay, Lake Superior, Province of Ontario.

217. **ROSEQUARTZ**—Is found at Westfield (Queen's Co.) and, in the form of pebbles, near the town of Shelburne (Shelburne Co.), in the Province of Nova Scotia.

218. **RUTILE**—Occurs, in the form of needles in quartz, at Scot's Bay (King's Co.), Province of Nova Scotia. In small orange-red grains in the ilmenite of St. Urbain, Bay St. Paul (Charlevoix Co.); in small red flattened crystals in the chloritic schists of the township of Sutton (Brome Co.); in minute grains in the black sand obtained in the washing of the auriferous gravel at Rivière du Loup (Beauce Co.), and in somewhat large crystals, occasionally geniculated, in a gangue of dolomite and barite, in the Township of Templeton (Ottawa Co.), Province of Quebec. It has been found in tolerably distinct crystals in crystalline limestone on Green Island in Moira Lake, in the township of Madoc (Hastings Co.), and in the form of delicate acicular crystals, in quartz cavities at the Wallace mine, Lake Huron, Province of Ontario. See also note to "Sagenite."

219. **SAGENITE**—A transparent quartz penetrated with needles of rutile is stated, by Prof. How, to have been found at Scot's Bay, King's County, Province of Nova Scotia.

220. **SAHLITE**—The most common variety of pyroxene met with in the apatite deposits of Ottawa County,

* Paper read before the Royal Society of Canada.