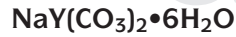


Adamsite-(Y)



Triclinic, $P\bar{1}$

TYPE LOCALITY: Poudrette quarry [south corner, levels 7–9], Poudrette pegmatite, Mont Saint-Hilaire, Rouville County, Quebec [45° 33' N, 73° 08' W].

OCCURRENCE: Found in the low-temperature, hydrothermally replaced core of a pegmatite dike cutting hornfels, as radiating aggregates of vitreous, colorless, transparent, pale pink and white, elongate, flattened, acicular crystals up 3 cm long. Associated minerals include microcline, leifite, rhodochrosite, thomasclarkite-(Y), petersenite-(Ce), shomiokite-(Y), horváthite-(Y), gaidonnayite, donnayite-(Y), elpidite, leucophanite and many others.

TYPE SPECIMENS:

All type specimens designated by J.D. Grice.

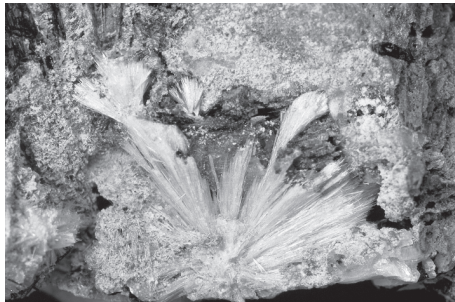
CAN: CMN, CMNMC 82939 CT (two capsules of grains up to $4 \times 1 \times 0.5$ mm, seven single-crystal mounts); 82940 CT (three matrix specimens to $3.5 \times 2 \times 1.3$ cm, five capsules of fragments, four probe mounts, one X-ray powder mount)

CAN: GSC, NMCC 068086 CT (two vials of crystal fragments, three X-ray mounts)

NAME: In honor of Frank Dawson **Adams** (1859–1942), Canadian geologist, chemist and lithologist at the Geological Survey of Canada (1881–1889), Logan Professor of geology and paleontology (1893–1924), Dean of Applied Science and the School of Graduate Studies (1906–1924), McGill University, Montreal. A pioneer in the study of the series of igneous intrusions, including Mont Saint-Hilaire, which he named the Monteregian Hills petrographic province, and the Precambrian rocks of the Grenville Province. Adams contributed greatly to Canadian geology and was the author of the acclaimed *Birth and Development of the Geological Sciences*, published in 1938. He was very influential in Canadian science education and the establishment of Canada's National Research Council.

COMMENTS: IMA 1999–020. A report on the structure determination is included in Grice *et al.* (2000). Color photo number 1.

GRICE, J.D., GAULT, R.A., ROBERTS, A.C. & COOPER, M.A. (2000): Adamsite-(Y), a new sodium–yttrium carbonate mineral species from Mont Saint-Hilaire, Quebec. *Canadian Mineralogist* **38**, 1457–1466.



Adamsite-(Y), radiating aggregates of acicular crystals up to 2.4 cm long, field of view 6.5 cm wide. Poudrette quarry, Mont Saint-Hilaire, QC. Horváth Collection #11466



Charmarite

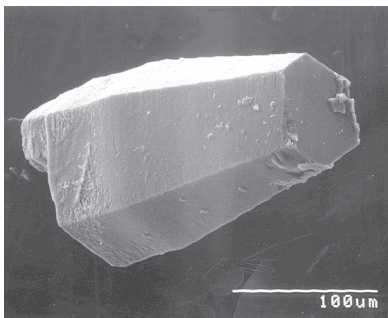


Charmarite-2H: Hexagonal, $P6_322$;

Charmarite-3T: Trigonal, $P3_112$ or $P3_212$

TYPE LOCALITY: Former Demix quarry, now the west side of the Poudrette quarry, Mont Saint-Hilaire, Rouville County, Quebec [45° 33' N, 73° 08' W].

OCCURRENCE: Found in pegmatites andmiarolitic cavities in nepheline syenite, as colorless, transparent, pale orange-brown, pale brown and pale blue hexagonal tabular, tapering hemimorphic and pagoda-shaped crystals up to 3 mm long. Associated minerals include analcime, natrolite, microcline, aegirine, astrophyllite, catapleiite, calcite, siderite, rhodochrosite and burbankite.



Crystal of charmarite-2H. SEM photo and specimen from the Canadian Museum of Nature.

TYPE SPECIMENS:

All type specimens designated by G.Y. Chao.

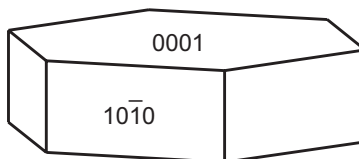
CAN: CMN, CMNMC 81542 CT [2H] (four matrix specimens to $2.5 \times 1.5 \times 1$ cm, one single-crystal mount), 81543 CT [2H] (three matrix specimens to $1.5 \times 1.5 \times 1$ cm, one single-crystal mount), 81544 CT [2H] (four capsules of fragments), CMNMC 81545 HT [3T] (one vial of fragments, one powder mount, three single-crystal mounts, part of holotype)

CAN: ROM, M45194, M46765–66 (3) CT [2H]; M46767 CT [3T]

NAME: After **Charles H. Weber** (b. 1917) and **Marcelle Weber** (b. 1918), a husband-and-wife team of amateur mineralogists from Guilford, Connecticut, U.S.A., who discovered the mineral.

COMMENTS: IMA 1992–026 [charmrite-2H]; IMA 1992–027 [charmrite-3T]. Crystal drawing by the author is based on data given in Chao & Gault (1997). Color photo number 6.

CHAO, G.Y. & GAULT, R.A. (1997): Quintinite-2H, quintinite-3T, charmrite-2H, charmrite-3T and caresite-3T, a new group of carbonate minerals related to the hydrotalcite–manasseite group. *Canadian Mineralogist* **35**, 1541–1549.



Crystal of charmrite-3T.

Labradorite



Triclinic, $C\bar{1}$

TYPE LOCALITY: Ford Harbour, Paul Island, near Nain, off the east coast of Labrador, Newfoundland and Labrador [56° 30' N, 61° 30' W].

OCCURRENCE: Found in mafic igneous rocks as the typical composition of the plagioclase solid-solution series, in the range An₅₀ to An₇₀.

TYPE SPECIMENS: None documented.

NAME: After the geographic area of the type locality, **Labrador**.

COMMENTS: *Labradorstein* or labradorite was the first new mineral species mentioned as coming from Canada, in Werner's 1780 translation of Cronstedt's 1758 systematic mineralogy. Perhaps for this reason, the first description of labradorite is incorrectly attributed by some to Cronstedt (Grice 1989). Cronstedt's pioneering work appeared in many later translations, including in English (1770, 1772, 1788) and in German (1760, 1770, 1780). *Labradorstein* first appeared in Werner's 1780 augmented and updated German edition, whereas the English and German versions published in 1770 made no mention of it. The original *Labradorstein* material was taken to Europe after 1771, and Cronstedt did not revise his work after 1758, and he died in 1765. *Labradorstein* was known to Werner since about 1775 (Hintze 1897), and it is Werner who gave the first description; he later (1789) also described *Labradorische hornblende* (enstatite) from the same locality. The person credited with bringing the first labradorite to Europe was a Mr. Wolfe (Dana 1892), a missionary of the order of the *Unitas Fratrum*, also known as the Moravian Church. The order established their first mission in Labrador at Nain, very close to Paul Island in 1771. Various names have been applied to the mineral (Dana 1892), among them *Labrador*, *Pierre de Labrador*, *Labradorstein*, *chatoyant*, *opaline* and *Labrador feldspar*, but the name labradorite became established in the literature, where it firmly remained for more than 200 years. The validity of labradorite as a mineral species is ambiguous; Clark (1993) and Mandarino (1999) no longer list it as a valid species, although it was never formally discredited. Authors of other recent reference works (Nickel & Nichols 1991, Anthony *et al.* 1995, Weiß 1998) still consider it a valid species, covering the compositional range An₅₀ to An₇₀. The locality name has also been given in the literature as Isle of Paul, Paul's Island, Isle of St. Paul and St. Paul-Insel.

CRONSTEDT, A.F. (1758): *Försök til Mineralogie, eller Mineral-Rikets Upstaellnig*. Publisher, Stockholm, Sweden. (This is the original Swedish edition.)

WERNER, A.G. (1780): *Cronstedts Versuch einer Mineralogie*, S.L.Crusius, Leipzig, Germany (labradorite on p. 149-151). [This is a German version of Cronstedt (1758), translated by and with additional data by A.G. Werner].

CRONSTEDT, A.F. [ENGESTROM, G.] (1770): *An Essay Towards a System of Mineralogy*. E. & C. Dilly, London, U.K. [This is an English version of Cronstedt (1758), translated by Gustav von Engestrom].

CRONSTEDT, A.F. [WIEDEMANN] (1770): *Cronstedts Versuch einer Mineralogie*, Verlegts, C.G. Proft und Rothens Erben, Copenhagen, Denmark and Leipzig, Germany. [This is a German version of Cronstedt (1758), translated by Wiedemann with additional data by Brännich].

DANA, E.S. (1892): *System of Mineralogy* (6th ed.). John Wiley & Sons, New York, N.Y. (334-335).

HINTZE, C. (1897): *Handbuch der Mineralogie, Silicate und Titanate 2*. Verlag Von Veit & Co., Leipzig, Germany (1353).

GRICE, J.D. (1989): *Famous Mineral Localities of Canada*. Fitzhenry & Whiteside, Markham, Ontario.

m

Mandarinoite



Monoclinic, $P2_1/c$

TYPE LOCALITY: Mine Virgen de Surumi (Pacajake), 20 km northeast of Colquechaca, Chayanta Province, Potosí Department, Bolivia.

OCCURRENCE: Found in a vein cutting Devonian sandstone; the pale green, twinned, bladed crystals up to 0.5 mm long are associated with penroseite, clausenthalite, siderite, neumannite, tiemannite, hematite, barite and pyrite.

TYPE SPECIMENS:

Type specimens designated by P.J. Dunn.
CAN: CMN, CMNMC 80119 HT (part of NMNH 142878, one matrix specimen 5 × 4 × 2 cm)
CAN: ROM, M35273 (undesignated)
USA: NMNH, 142878 HT

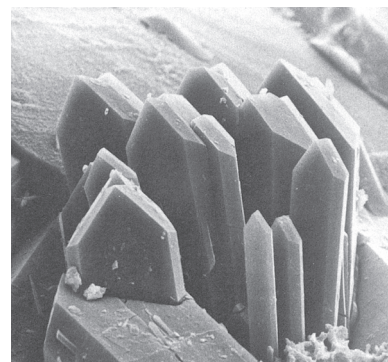
NAME: In honor of Joseph Anthony **Mandarino** (b. 1929), Curator Emeritus of Mineralogy, Royal Ontario Museum, Toronto, Ontario, for his many outstanding contributions to mineralogy, "in particular the insights he has provided into the relationships of the Gladstone–Dale rule." He also contributed greatly to the formalization of mineral systematics as Chairman of IMA CNMMN (1983–1994). Mandarino is the coauthor (since 1991) and author (since 1999) of *Fleischer's Glossary of Minerals Species*, coauthor of *Monteregian Treasures* (1989), and is hard at work on the third edition of the *Encyclopedia of Minerals*.

COMMENTS: IMA 1977–049. The type locality given by Dunn *et al.* (1978) was the Pacajake mine, near Hiaco, Bolivia. The locality information is updated to reflect the current name of the mine and administrative entities (Petrov *et al.* 2001). The crystal drawing is based on data in Dunn *et al.* (1978).

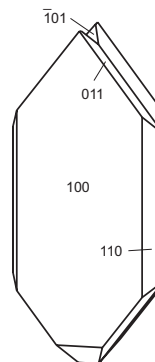
DUNN, P.J., PEACOR, D.R. & STURMAN, B.D. (1978): Mandarinoite, a new ferric-iron selenite from Bolivia. *Canadian Mineralogist* **16**, 605-609.

HAWTHORNE, F.C. (1984): The crystal structure of mandarinoite, $\text{Fe}^{3+}_2\text{Se}_3\text{O}_9 \cdot 6\text{H}_2\text{O}$. *Canadian Mineralogist* **22**, 475-480.

PETROV, A., SMITH, W. & SMITH, C. (2001): A guide to mineral localities in Bolivia. *Mineralogical Record* **32**, 457-482.



Mandarinoite crystals. SEM photo (Dunn *et al.* 1978)



Twinned crystals of mandarinoite (Dunn *et al.* 1978)