

MANGANITE



A widespread and common manganese ore mineral formed both in low-temperature hydrothermal deposits and in deposits resulting from weathering and/or ground-water actions. Manganite is locally abundant in some of the iron formations of the Northern Peninsula, and world-class specimens have been found.

Baraga County: 1. *Taylor mine*, approximately 3.2 km north of Alberta, off old U.S. Highway 41: As bladed, lustrous, prismatic black crystals to 6 cm, associated with quartz in brecciated cherty iron formation (confirmed by X-ray diffraction) (Mihelcic, 1954). Pyrolusite (q.v.) also occurs at the Taylor mine, some of which may be pseudomorphous after manganite. The best way to differentiate the two is by X-ray diffraction, although, when sufficiently pure, manganite has a decidedly brownish streak when compared directly to the black streak of pyrolusite. 2. In banded iron formation, SE ¼ section 10, T51N, R32W: Cross-fiber needles up to 2.5 cm long.

Gogebic County: 1. Gogebic iron range, general: Crystals have been found in oxidized iron formation (Mann, 1953). 2. Penokee mine at Ironwood. 3. Geneva-Davis mine, 30 to 31st level: A 30 - kilogram “kidney” (Eddy, 1948). 4. *Newport mine* at Ironwood: In large groups of thick, bladed prismatic crystals to 3 cm in length, associated with goethite. 5. *Colby mine*, NE ¼



Figure 99: Manganite crystals on quartz from the Taylor mine, Alberta, Baraga County. Largest crystal is 1.6 cm long. A. E. Seaman Mineral Museum specimen No. CVW 28, Jeffrey Scovil photograph.



Figure 100: Manganite crystals on barite from the Lucy mine, Negaunee, Marquette County. 9 x 12 cm. A. E. Seaman Mineral Museum specimen No. DCG 400, George Robinson photograph.

section 16, T47N, R46W: As lustrous prismatic crystals lining cavities in goethite.

Houghton County: Reported from the Wolverine mine, and as microcrystals in the Calumet and Hecla conglomerate (Wilson and Dyl, 1992).

Iron County: **1.** Bristol mine north of Crystal Falls: Found with goethite and hematite in manganese iron ore in Upper Huronian oxidized iron formation (Pettijohn, 1952). **2.** Bengal (Cannon) mine at Iron River: Manganite occurs rarely with braunite, pyrolusite, and psilomelane in manganese iron ore (Brower, 1968; Hewett, 1972). Kustra (1961) reports finding one specimen as a post-hematite filling in a hematite-lined vug. **3.** Judson mine area near Iron River (Hewett, 1972).

Keweenaw County: **1.** Manganese mine near Lake Manganese, about 1.6 km south of Copper Harbor in section 4, T58N, R26W: Occurs with other manganese species (e.g., braunite, orientite, macfallite) (Butler and Burbank, 1929). **2.** Locality unspecified: A few small crystals in the Calumet and Hecla Conglomerate (may be in Houghton County, Butler and Burbank, 1929). **3.** Ashbed mine.

Marquette County: **1.** *Jackson mine* at Negaunee: In fine specimens of fibrous crystal aggregates with barite and gypsum, and as razor-sharp, lustrous black microcrystals several millimeters in length in cavities in quartz (Spiroff, 1940; Mann, 1953). **2.** *Lucy (McComber) mine* at Negaunee: In superb specimens of sheaflike bundles of prismatic crystals several centimeters in length; and as plates of smaller black crystals up to 30 cm across associated with snow white barite rosettes (Hobbs, 1895a; Markert, 1960). **3.** Tracy mine: Crystals 3 mm long with nacrite in a manganite-goethite bed in oxidized cherty iron formation (Bailey and Tyler, 1960). **4.** Blueberry mine, Snowville near Diorite: With barite (Morris, 1983). **5.** N ½ section 7, T47N, R26W: Veinlets and vug coatings in Negaunee Iron Formation (Gair, 1975).

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