RHODOCHROSITE

$Mn^{2+}CO_3$

A widespread manganese mineral in hydrothermal veins and manganiferous iron formations. Rhodochrosite forms solid solution series with calcite and siderite. Northern Peninsula.

Baraga County: Taylor mine 3.2 km north of Alberta just off old U.S. 41, NE ¼ NW ¼ section 9, T49N, R33W: Small, pink rhombohedral crystals in cavities in massive manganese oxide ore have been found in a prospect pit near the main water-filled pit (M. P. Basal, personal communication, 1999). Most have black exteriors, due to abundant manganese oxide inclusions.

Figure 121: Rhodochrosite crystals on hematite from the Homer-Wauseca mine, near Iron River, Iron County. Largest crystal is 2.5 mm across. A. E. Seaman Mineral Museum specimen, John Jaszczak photograph.

Gogebic County: Gogebic iron range in general: Reported from several mines in small amounts (Mann, 1953) in unaltered iron formation.

Houghton County: Baltic Shaft Number 2: Qualitative energy dispersion X-ray spectrometry analyses of the dark pink rhombohedral carbonate from this locality, previously thought to be rhodochrosite (Mortenson, 1953), have shown the mineral in question is pink calcite, with minor iron and little-to-no manganese.

Iron County: **1.** *Bengal (Cannon) mine* near Iron River: Cements brecciated hematite in the Young's iron ore body of the Riverton Iron Formation (Kustra, 1961). It is locally common in post-ore veinlets as pink material interstitial in hausmannite and as veinlets cutting iron ore near hausmannite (James et al., 1968). Also with shigaite (q.v.). **2.** Sherwood mine (Morris, 1983). **3.** *Chicagon mine* 8 km east of Iron River: As aggregates of pale pink rhombohedral crystals. **4.** *Homer-Wauseca mine*, near Iron River: Pink rhombohedral crystals on brecciated hematite.

Keweenaw County: Reported from the Central mine (Hawke, 1976). Unverified.

Marquette County: **1.** Marquette iron range generally: Relatively widespread but only locally common in unaltered iron formation (Mann, 1953). It was also reported in altered manganiferous iron formation with pyrolusite by Rominger (1881), who described it as "rare is the occurrence of the pale rose-colored sparry carbonate of manganese and lime." All specimens labelled as "rhodochrosite" from the McComber (Lucy) and Dalliba mines in the collection of the A. E. Seaman Mineral Museum (Michigan Technological University) have been shown to be either manganoan calcite or dolomite (q.v.) by energy dispersion X-ray spectrometry. The manganoan calcite typically forms pale pink botryoidal-to-stalactitic aggregates, while the dolomite most often occurs as brown or tan-white crystals on stalactitic goethite. **2.** Tracy mine: Found in specular hematite pockets and fractures in goethite ore associated with serpentine minerals, talc, montmorillonite, and apatite (Bailey and Tyler, 1960). **3.** Champion mine: Rhodochrosite occurs in manganese-quartz veins cutting iron formation. Ferroan rhodochrosite, with 32% $FeCO_3$, has been reported from a quartz vein (Babcock, 1966a, b). Magnesian rhodochrosite (verified by X-ray diffraction and energy dispersion X-ray spectrometry) also occurs as pink cleavable masses intergrown with bladed hematite crystals. **4.** Wheat mine (Dana, 1892). **5.** Beacon mine. **6.** South Jackson mine: As pale pink crystals to 2 mm associated with minor seamanite (q.v.) and an unidentified manganese chloride mineral (A. E. Seaman Mineral Museum collection, specimen AES 609). Identification confirmed by X-ray diffraction and energy dispersion X-ray spectrometry.

FROM: Robinson, G.W., 2004 Mineralogy of Michigan by E.W. Heinrich updated and revised: published by A.E. Seaman Mineral Museum, Houghton, MI, 252p.