CRYPTOMELANE
\[ \text{K(Mn}^{4+},\text{Mn}^{2+})_{8}\text{O}_{16} \]

One of several supergene manganese oxide minerals commonly formed under surface conditions and found in weathered manganiferous iron formations. It is often mixed with other manganese or iron oxide minerals, and is probably more common than has been noted. Much of what is labelled “psilomelane” is probably cryptomelane (often barium-rich), admixed with romanechite (q.v.), hollandite (q.v.), or other manganese oxide minerals. These species require X-ray diffraction and/or chemical data for positive identification. Northern Peninsula.

![Figure 67: Botryoidal cryptomelane on goethite from Ironwood, Gogebic County. Field of view 7.5 x 10.5 cm. A. E. Seaman Mineral Museum specimen No. JTR 1656, Jeffrey Scovil photograph.](image)

Dickinson County: Vulcan mine: Black botryoidal aggregates.

