

## PYRRHOTITE



In volcanogenic massive sulfide deposits, hydrothermal veins, and pyrometasomatic deposits. A widespread iron sulfide. Northern Peninsula.

**Dickinson County:** Vulcan Iron Formation: As an accessory in some units of the formation (James et al., 1961).

**Houghton County:** Isle Royale mine: Reported by Lane (1911) in copper sulfide veins (chalcocite). Unverified.

**Iron County:** Cannon (Bengal) mine, Stambaugh: Hexagonal tabular plates included in calcite crystals (“dogtooth spar”) (Hawke, 1976).

**Marquette County:** 1. Section 22, T47N, R29W: In Crockley pegmatite (Heinrich, 1962a). 2. Champion iron mine, 32nd sublevel: With chalcopyrite, minor pyrite, and quartz containing almandine (Babcock, 1966a, b). 3. Presque Isle: In veins in serpentinite associated with galena, pyrite, chalcopyrite, violarite, and millerite (Snelgrove et al., 1944). 4. Michigan gold mine: In quartz veins (Broderick, 1945). 5. Pyrrhotite is a major species in the accessory sulfide suite of the Yellow Dog peridotite, sections 11 and 12, T50N, R29W, northern Marquette County (Klasner et al., 1979). Other major sulfides are pentlandite and chalcopyrite; minor are pyrite and cubanite; trace amounts of marcasite, bornite, covellite, and mackinawite also are present. Cubanite and pentlandite are generally closely associated with pyrrhotite, some of which contains leaf-like blades of cubanite. See olivine, augite, enstatite, and chalcopyrite. 6. Silver Creek-Rocking Chair Lakes area: With chalcopyrite, arsenopyrite, and local galena and sphalerite in gold-bearing quartz veins (Johnson et al., 1986). 7. Clark Creek region: In veinlets and disseminated mineralization in metabasalt of the Ishpeming Greenstone Belt with quartz, carbonate, chlorite, “sericite,” and other sulfides (pyrite, arsenopyrite, chalcopyrite, galena, sphalerite) (Baxter et al., 1987). 8. Hill’s Lakes area: Found in altered basalts and associated with pyrite; locally with quartz veins, and, in places, with chalcopyrite, galena, sphalerite, and arsenopyrite (Johnson et al., 1987). 9. Ropes Gold mine, north

of Ishpeming: Sharp crystals to 2 mm (DeMark, 2000).

**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.

### UPDATE

(see Part IV, Menominee County)

**UPDATE FROM:** Robinson, G.W., and Carlson, S.M., 2013, *Mineralogy of Michigan Update*: published online by A.E. Seaman Mineral Museum, Houghton, MI, 46p.