

MARCASITE



The orthorhombic dimorph of pyrite. Marcasite usually forms as a supergene mineral in clay, coal, limestone, and iron formations. It may be concretionary. Northern and Southern Peninsulas.

Alpena County: **1.** South of Alpena at Squaw Bay: Concretions in Antrim Shale (Devonian) occur with pyrite and dolomite (“anthraconite”) (Poindexter et al., 1939; Mihelcic, 1954; Dorr and Eschman, 1970). **2.** LaFarge Corporation, Great Lakes Region (formerly National Gypsum Company) quarry, Alpena: Microcrystals, with calcite, dolomite, barite, sphalerite, pyrite, and rare strontianite (Morris, 1983). **3.** Paxton quarry, Paxton: With calcite, dolomite, sphalerite, chalcopyrite, pyrite, and quartz (Morris, 1983).

Antrim County: Norwood: As walnut-shaped and walnut-sized concretions in Antrim Shale with pyrite, calcite, and chert, 0.8 km south of Norwood (*Rocks and Minerals*, **33**, page 500, 1958; Dorr and Eschman, 1970).



Figure 101: Twinned marcasite crystals coated by iron oxide with calcite and pyrite from Highway 69 road cut near Felch, Dickinson County. Field of view approximately 4 cm. A. E. Seaman Mineral Museum specimen No. DM 23123, Jeffrey Scovil photograph.

Baraga County: Ohio mine, Imperial Heights: With other sulfides, carbonates, Fe-oxides, and several silicates (Morris, 1983).

Calhoun County: Battle Creek: In northeast-trending fractures in pits sunk in limestone 16 km

north of Battle Creek on west side of Battle Creek River (*Rocks and Minerals*, **28**, 248, 1953).

Charlevoix County: Just south of Norwood along Lake Michigan shore (Hawke, 1976).

Chippewa County: Neebish Island: Occurs in Trenton Limestone (Ordovician) (Mandarino, 1948).

Dickinson County: **1.** *Groveland mine*, Randville: As bladed, twinned crystals in aggregates several centimeters across with dolomite, calcite, hematite, and Fe-silicates. **2.** *Vulcan mine and West Vulcan mine*, Vulcan: As bladed, twinned crystals up to 1 cm associated with hematite, goethite, and other sulfides (1, 2, Morris, 1983). **3.** *Felch*: Rosettes of cockcomb twinned marcasite crystals 1.5 cm across have been collected from a vuggy zone in Randville Dolomite exposed by a road cut on highway 69 near the west end of the village. Most specimens exhibit an attractive brown patina of iron oxide and are associated with small crystals of dolomite, calcite, and octahedral pyrite. Some exceptional specimens have been recovered (S. M. Carlson, personal communication, 2000). **4.** Prospect pits in iron formation approximately 1 km north of Felch: As bladed crystal aggregates several millimeters across with dolomite in brecciated iron formation.

Eaton County: *Cheney Limestone Company* quarry at Bellevue: Found in vugs in Bayport Limestone (Mississippian) as bladed, twinned crystals with pyrite and calcite. Some specimens are iridescent (Rexin, 1961; Zeitner, 1964; Dorr and Eschman, 1970).

Huron County: **1.** Point Aux Barques lighthouse, Port Austin Township: As a constituent of concretions in shale (*Rocks and Minerals*, **31**, page 19, 1952) and cementing conglomerate. **2.** Sebewaing coal mine: Found in Bayport Limestone and shale. **3.** Jackson coal mines: In coal beds (Lane, 1900).

Iron County: **1.** Iron River: Fine, granular masses with quartz and calcite crystals are found in vugs in iron ore. **2.** Buck mine, Gastra: With hematite-goethite, other sulfides, and uranium minerals (Morris, 1983).

Jackson County: John C. Jeffrey quarry, 5 km north of Parma: With aragonite in limestone (W. H. Wagner, Jr., personal communication).

Marquette County: 1. Beacon iron mine (Dorr and Eschman, 1970). 2. North Champion mine: Finely granular. 3. *Bessie mine* at Humboldt: As lustrous, twinned microcrystals on stalactitic goethite. 4. Michigan gold mine and other nearby gold mines. 5. Yellow Dog peridotite, sections 11 and 12, T50N, R29W: Trace amounts of secondary marcasite, with bornite and covellite, are constituents of the sulfide accessory assemblage (Klasner et al., 1979). See augite, enstatite, olivine, pyrrhotite, pentlandite, and chalcopyrite. 6. Dalliba (Phoenix) mine, near Champion: As bladed crystals to 5 mm in cavities in limonite.

Monroe County: France Stone Company quarry near Monroe: With calcite crystals (Dorr and Eschman, 1970).

Ontonagon County: White Pine: Found in one drill core as microscopic fracture fillings associated with galena (Brown, 1968).

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