

CHAMOSITE



An iron-rich species of the chlorite group generally occurring in sedimentary iron formations (Lalonde, 1964), and certain hydrothermal deposits. Chamosite forms a solid solution series with clinocllore, which is its magnesium analog. "Aphrosiderite" is an obsolete name for intermediate members of the series. "Thuringite" is an obsolete name for ferrian chamosite. Northern Peninsula.



Figure 58: Chamosite replacing almandine in chlorite schist from Michigamme, Marquette County. 3 cm crystal. A. E. Seaman Mineral Museum specimen No. DCG 392, Jeffrey Scovil photograph.

Baraga County: *Spurr mine:* Chamosite occurs as partial to nearly complete pseudomorphs after almandine crystals several centimeters across in chloritic schist.

Houghton and Keweenaw Counties: Identified by Moore and Beger (1963) in altered copper lode rocks.

Gogebic County: Ironwood Formation of the Gogebic range. Mann (1953) reports "aphrosiderite" in altered siderite-chert rocks of the Ironwood Formation in the eastern part of the range.

Iron County: 1. Riverton Formation of the Iron River district. James et al. (1951, 1968) report "aphrosiderite" replacing chert and quartz grains in the iron-rich Hiawatha graywackes, which form hangingwall strata of the iron ore deposits. The rock consists of 20% siderite and 80% chlorite. 2. Hiawatha mine, Stambaugh: With clusters of minute calcites overgrown on stalactitic goethite (Morris, 1983). 3. A major constituent, especially in oolitic phases of the Ironwood Iron Formation (Schmidt, 1980) in the Gogebic district.

Marquette County: 1. Eastern part of the Marquette iron range, in altered siderite-chert rocks of the Negaunee Iron Formation (Mann, 1953). 2. Republic, SW ¼ section 8, T46N, R29W: Found as dark green to black, fine-grained aggregates in sheared, "sericitized" Republic Granite (Conrad, 1952). Reported as the obsolete name "brunsvigite." 3. Analyses given by Penfield and Sperry (1886) show the chlorite pseudomorphs after almandine garnet common in the iron mines of the Michigamme area to be a magnesian aluminian chamosite. Fine examples are known from the *Beacon* (Mandarino, 1950), *Champion*, and *Michigamme mines*. 4. In and along margins of some Clarksburg mafic dikes, especially where they cut iron formation and are strongly meta-morphosed (Snelgrove et al., 1944).

Ontonagon County: White Pine mine: Carpenter (1963) found a brown monoclinic chlorite (probably chamosite) with a cation composition $(\text{Fe}^{2+}_{2.60}, \text{Mg}_{2.50}, \text{Al}_{0.90})(\text{Si}_{3.06}, \text{Al}_{0.94})$ in addition to green orthochamosite (q.v.) in veinlets in Nonesuch Shale.

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.