

PARATACAMITE



The trigonal trimorph of atacamite and botallackite. A rare supergene copper mineral that may be more common in the Keweenaw native copper deposits than previously thought. Northern Peninsula.

Houghton County: **1.** Osceola mine: With vaterite (q.v.) coating basalt (S. A. Williams, written communication, 1986). Probably a post-mine species, resulting from the interaction of chlorine-rich mine waters with native copper. Williams (1966) regards paratacamite as among the most common supergene copper species in the district, but it has been verified from only a few deposits. **2.** Centennial mine, Number 2 Shaft: As bright green micro-crystalline coatings on native copper (M. P. Basal, personal communication, 1999); verified by X-ray diffraction and qualitative energy dispersion X-ray spectrometry. **3.** Quincy mine: As granular, green encrustations on massive, granular calcite associated with native copper. Verified by X-ray diffraction.

Keweenaw County: Mohawk Number 6 mine, Mohawk: Emerald green microcrystals occur on quartz crystals in small vugs. Identified by S. A. Williams (T. Rosemeyer, personal communication, 2000).

Ontonagon County: **1.** Algomah mine: Occurs with atacamite, nantokite, plancheite, and several other secondary copper minerals (Williams, 1962b). **2.** White Pine mine: As a blue-green crystalline crust on native copper (verified by X-ray diffraction). Paratacamite also has been found with atacamite as post-mining products in standing pools of water that are also coated with a thin layer of petroleum residue (Robbins et al., 1994). SEM, TEM and stable isotope analyses suggest that bacteria may have played an important role in the formation of these minerals. Vajdak (2001) reports that paratacamite also occurs with hydromagnesite (q.v.) on native copper.

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