

## LAUMONTITE



A common zeolite found in vesicles and veins in basalts, andesites, and other mafic to felsic igneous rocks. In Michigan, nearly all the occurrences are in rocks of the native copper deposits. It is usually pink or salmon colored. Locally, especially in vugs, it is white. It is abundant in many fissures and amygdaloids, but nearly absent in the conglomerates. Laumontite is one of the later minerals of the ore-forming period where it replaces earlier species and, in turn, is replaced by some later minerals (Butler and Burbank, 1929; Livnat, 1983). Details of its paragenesis and analyses are given by Livnat (1983). Laumontite is unstable under normal room conditions and partially dehydrates into a white powdery material that has been called "leonhardite." Fresh specimens may be preserved by storing them in deionized water. Northern Peninsula.

**Dickinson County:** Section 15, T39N, R30W, Little Quinnesec (Bequenesec) Falls, Menominee River: With quartz in talcose slate (Brooks, 1873).

**Gogebic County:** Approximately 0.8 km west of North Bessemer, in a railroad cut of the Duluth, South Shore and Atlantic Railroad: Coarse, prismatic crystals to 3 cm colored pinkish brown by inclusions of chlorite and iron oxide (verified by X-ray diffraction).

**Houghton County:** 1. Calumet and Hecla mine. 2. *Isle Royale mine*: In large, nearly pure masses of interlocking pinkish-white crystals (Lane, 1911; Mihelcic, 1954). 3. Baltic mine: With copper sulfides, ankerite, and epidote (Mihelcic, 1954). 4. Hancock mine. 5. *Quincy mine*: Number 2 shaft, 86th level: Many fine specimens. 6. Centennial Number 2, 4, and 6 mines (Moore and Beger, 1963). 7. Osceola Number 6 mine, 46th level: As 2.5 cm crystals in vein in Portage Lake Volcanics associated with chlorite, quartz, calcite, and copper. 8. Laurium mine, south of Calumet. (Morris, 1983). 9. *Huron mine* (Hawke, 1976). 10. Huron Creek: Chalky white crystals with quartz and calcite. 11. *Franklin and Franklin Jr. mines*: As opaque white crystals on copper.

**Keweenaw County:** 1. *Phoenix mine* (Jackson, 1845). 2. Copper Falls mine: In pure masses,

finely intergrown with copper (Foster and Whitney, 1853; Whitney, 1859). 3. Eagle Harbor: In pipe amygdules in basalt (Spiroff, 1938). 4. Eastern tip of Keweenaw Peninsula: With other zeolites at the top of the Kearsarge flow outcrop (Stoiber and Davidson, 1959). 5. Section 25, T58N, R28W: With calcite (Hubbard, 1898). 6. Bete Grise Bay: Veins of laumontite and calcite, some with prehnite and copper (Hubbard, 1898). 7. Copper Harbor lighthouse: Red crystals in vesicles up to several centimeters in diameter. 8. Mount Bohemia: In drill core. 9. *Mohawk mine*: Abundant white crystals in Mohawk fissure. 10. Clark mine, Copper Harbor (Morris, 1983). 11. South of Eagle Harbor: In drill core, analyzed by Jolly and Smith (1972). 12. *Cliff mine*: With analcime, prehnite, silver, and apophyllite (Williams, 1966). Crystals show forms {100}, {110}, {110}, {301}, and  $\{s\bar{u}p6(-01)\}$ . 13. Keweenaw Point: As "superb sprays of crystals" (T. M. Bee, written communication, 1985). 14. Manganese mine, near Lake Manganese, about 1.6 km south of Copper Harbor in section 4, T58N, R26W: As a minor constituent in calcite veins. 15. Seven Mile Point: Abundant as a pinkish-white amygdule filling in basalt (verified by X-ray diffraction).

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