

## THOMSONITE



One of the zeolite group minerals commonly found in vesicles in basalt. In the Copper Country it usually occurs as an amygdule filling but also is found in veins. It is usually not closely associated with the copper (Butler and Burbank, 1929). Thomsonite, along with natrolite, is restricted to amygdules and interstitial matrix in flow tops of lavas overlying the Ashbed lode, occurring in both the Portage Lake Lava series and the Copper Harbor Conglomerate. Two analyses have been presented by Livnat (1983, Table 2), who reported the assemblages: thomsonite + natrolite + hematite, and thomsonite + laumontite  $\pm$  chlorite. Beach pebbles of pinkish prehnite (q.v.) found along the Keweenaw Peninsula are often confused with those of thomsonite, which are far less common. Northern Peninsula.

**Alger County:** Lake Superior beaches near Grand Marais: Beach pebbles (Dorr and Eschman, 1970).

**Houghton County:** 1. In vesicles in top of Kearsarge flow (Stoiber and Davidson, 1959). 2. Baltic Number 2 mine. 3. Osceola mine (2 and 3, Hawke, 1976): Both may be prehnite. 4. Isle Royale mine: Reported by Lane (1911). A number of specimens labelled "thomsonite" from the Isle Royale mine have been shown to be either mesolite or natrolite, based on X-ray diffraction and energy dispersion X-ray analyses. 5. South Range quarry, South Range: Rare as multicolored



Figure 142: An intergrowth of thomsonite and mesolite from Thomsonite Hill, near Eagle Harbor, Keweenaw County. 3 x 4.5 cm. A. E. Seaman Mineral Museum specimen No. DM 23110, Jeffrey Scovil photograph.

radial amygdule fillings in basalt (verified as thomsonite + mesolite by X-ray diffraction).

**Keweenaw County:** 1. General: Zeolites, including thomsonite, are present in important amounts in basaltic rocks that crop out near the eastern tip of the Keweenaw Peninsula (Stoiber and Davidson, 1959). From these outcrops the beach-pebble thomsonites of the county are derived. An X-ray diffraction study of specimens from this locality in the collection of the A. E. Seaman Mineral Museum showed most are either natrolite or mesolite mixed with thomsonite. 2. Near the Ashbed mine at Eagle River. An X-ray diffraction study of specimens from the Ashbed lode in the collection of the A. E. Seaman Mineral Museum showed them to be mixtures of thomsonite and mesolite. 3. *Fort Wilkins-Copper Harbor beaches:* Pebbles with radial-fibrous groups, white, pink, pinkish yellow, or green are found. They may show concentric color variation (Dobell, 1966a; Rosendahl, 1966) and rarely exceed 2.5 cm in diameter. They are also found as rough nodules in amygdaloid near beaches (Willems, 1958). 4. Long reported from Isle Royale beaches, including Thomsonite Beach, Todd Cove, and McCargo Cove, as white-to-pink pebbles of slender needles, some with single pink or green "eyes." The variety "lintonite" is pale to dark green (Dustin, 1931; Zeitner, 1960; Regin,

1965). Much of the “thomsonite” from Isle Royale (particularly the pink variety) is mainly prehnite (q.v.) (Huber, 1969). Actual thomsonite is found only rarely on the island. **5.** Clark mine, Copper Harbor. **6.** Cliff mine. **7.** Copper Falls mines. **8.** Delaware mine. **9.** Five Mile and Seven Mile points, Eagle River area: As beach pebbles. **10.** *Lookout Point (Thomsonite Hill)*, Eagle Harbor: As amygdule fillings in basalt (5-10, Morris, 1983). X-ray diffraction and energy dispersion X-ray spectrometry analyses of several amygdules from this locality showed most to be either natrolite or mixtures of thomsonite with mesolite, natrolite, or analcime. **11.** Central mine: Morris (1983) reported thomsonite from the Central mine, although X-ray diffraction and energy dispersion X-ray spectrometry analyses of one such specimen in the collection of the A. E. Seaman Mineral Museum showed the mineral to be natrolite.

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