## TALC Mg<sub>3</sub>Si<sub>4</sub>O<sub>10</sub>(OH)<sub>2</sub>

Found in low-grade regionally metamorphosed rocks rich in magnesium, often associated with dolomite, tremolite, or serpentine. Also, massive occurrences as "steatite" or "soapstone" are known, commonly found as a hydrothermal alteration of peridotites and related rocks. Northern Peninsula.



Figure 141: Talc from the Ropes Gold mine, Ishpeming, Marquette County. Field of view approximately 3 × 5 cm. A. E. Seaman Mineral Museum specimen No. DM 22952, Jeffrey Scovil photograph

Dickinson County: 1. Metronite quarry, 4 km east-northeast of Felch: In contact-altered marble (Conrad, 1952; Heinrich, 1962b). 2. Talc schists are reported in the Randville Dolomite (marble) at the Norway, Aragon, Walpole, and Pewabic mines. The schists also contain dolomite, quartz, hematite, serpentine, and kaolinite (Bayley, 1904).
3. Chapin mine: White talc coats slickensided surfaces in jaspilite and underlying slate (Bayley, 1904).

**Gogebic County:** Gogebic iron range generally: In altered mafic extrusive and intrusive rocks (Mann, 1953). According to James (1953), this is not verified, but subsequently verified by Mann (1954).

**Iron County:** Riverton mine, Iron River: Lenticular beds up to 7 cm thick in hematitic iron formation (Bailey and Tyler, 1960).

Marquette County: 1. Tracy mine: In ore and in oxidized iron formation (Bailey and Tyler, 1969). 2. South Jackson pit near Negaunee: Variety "soapstone" in altered mafic rocks (James, 1953; Mann, 1953, 1954). 3. Southwest corner section 29, T48N, R27W: Outcrops on bluffs. Pale green pure talc is found in fist-sized masses in calcite veins cutting massive talc ("steatite") (Rominger, 1881). 4. NE 1/4 section 11, T47N, R27W, on north side of the west end of Moss Mountain: Seams of pure talc in a talcose schist (Brooks, 1873; Dana, 1892). 5. Chocolay quarry south of the mouth of the Carp River: In quartzose marble (Brooks, 1873). 6. South side of Carp River, section 27, T48N, R27W: Bulky masses of dark gray "steatite' with carbonate, serpentine, and magnetite (Rominger, 1881). 7. Ropes gold mine: As talc schist and "steatite" formed by alteration of peridotite (Spiroff, 1940; Broderick, 1945). Also as sea-green foliated masses with dolomite in a small outcrop (road cut) along the road leading to the Verde Antique quarry. 8. Beacon mine: "Beaconite," an obsolete name for fibrous, asbestiform talc (Rocks and Minerals, 27, page 34, 1952). 9. Champion mine: In manganiferous quartz veins cutting Negaunee Iron Formation (Babcock, 1966a, b). 10. Verde Antique quarry, Ishpeming. 11. Near Edgewater Motel along U.S. Highway 41 about 5 km south of Marquette: Here Hawke (1976) found talc ("soapstone") along a slickensided fault plane in a cliff exposure. 12. Yellow Dog peridotite, sections 11 and 12, T50N, R29W: A constituent of the secondary suite of serpentine, chlorite, biotite, actinolite, brown hornblende, "sericite," carbonate, clinozoisite, and spinel. 13. Associated with many high-grade secondary hematite deposits ("soft ores") were layers of talcose schists, either overlying and/or underlying the ore units. These were known to the miners as "soapstones" or, if impregnated by finegrained iron oxide species, as "paint rock." They consist mainly of talc and quartz, with minor muscovite ("sericite"), calcite, and variable amounts of chlorite (Van Hise and Bayley, 1897).

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## UPDATE

**Dickinson County:** Near Iron Mountain: Bands of talc from  $\sim 8 - 89$  m thick have been encountered in drill cores from the contact of a serpentinized ultramafic rock and the Randville Dolomite. Accessory minerals include magnesite, magnetite and serpentine, with the talc content variable from 20 - 90% (R. Weege, personal communication, 2007).

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