VERMICULITE

$(Mg,Fe^{2+},Al)_3(Si,Al)_4O_{10}(OH)_2 \cdot 4 H_2O$

A hydrothermal and weathering alteration product of biotite and other primary iron-bearing silicates. Commonly interlayered with chlorite and clay minerals (q.v.). In altered wall rocks of veins and mineralized zones and in soils. Northern and Southern Peninsulas.

Houghton and Keweenaw Counties: Many megascopically or optically defined "chlorites" in the altered Portage Lake volcanic rocks are actually randomly interlayered chlorite-vermiculites. The percentage of the vermiculitic component decreases with increasing metamorphic grade (Livnat, 1983). See chlorite.

Lake Superior: In gray varved clay (q.v.) from boreholes in the floor of the lake (Dell, 1971).

Marquette County: Presque Isle: In paleosols formed on granodiorite; also on serpentinized peridotite with dolomite, quartz, talc, and chlorite (Kalliokoski, 1975).

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.