
The Nature of Vermiculite in Adirondack Soils and Till

Richard H. April, Michele M. Hluchy and Robert M. Newton

Department of Geology, Colgate University Hamilton, New York 13346
Department of Earth Sciences, Dartmouth College Hanover, New Hampshire 03755
Department of Geology, Smith College Northampton, Massachusetts 01063

Abstract: The clay and bulk mineralogy of soil and till from 26 Adirondack watersheds was studied. The materials consist typically of quartz, K-feldspar, plagioclase, mica, vermiculite, and kaolinite. Talc, smectite, halloysite, and hornblende are present in some samples. The clay fraction of the soils is composed predominantly of vermiculite, likely derived from the transformation of a mica precursor, and kaolinite. The soil vermiculite commonly contains hydroxy-Al interlayers which are especially prevalent in the B-horizon samples. Despite significant variation in the type of bedrock and the composition of heavy mineral assemblages in these watersheds, the clay mineralogy is remarkably uniform. This finding supports earlier suggestions that the occurrence of vermiculite in soils is more dependent on climate than on the nature of the parent material.

Key Words: Adirondacks • Hydroxy-Al • Soil • Till • Vermiculite • Weathering

Clays and Clay Minerals; October 1986 v. 34; no. 5; p. 549-556; DOI: [10.1346/CCMN.1986.0340508](https://doi.org/10.1346/CCMN.1986.0340508)
© 1986, The Clay Minerals Society
Clay Minerals Society (www.clays.org)
