

Merguerian, Charles; Baskerville, C. A.; and Harris, James, 1983, Engineering geology of New York City.

Bedrock geologic mapping of Manhattan Island has delineated an areally extensive, polydeformed, ductile-fault-bounded allochthonous sheet and smaller outlier. The rocks have classically been designated as the Ordovician Manhattan Schist and consist of rusty-weathering, nodular sillimanitic quartz-plagoclase-biotite-muscovite-garnet schist and gneiss with subordinate interlayered muscovite schist and local massive amphibolite. They are in tectonic contact with both the Cambro-Ordovician Inwood Marble and with gray-weathering quartz-muscovite-biotite-garnet granofels with thin amphibolite of unknown age or structural position. Lithostratigraphic similarities suggest that the sillimanitic rocks, which comprise roughly 90% of the exposed "Manhattan Schist", are correlative with the Cambrian to late Precambrian Hoosac or Waramaug Formation of western Massachusetts and Connecticut, and with the Manhattan Formation (Units B and C of Hall, 1968) of White Plains, N.Y. Stratigraphic difficulties clearly exist in the type-area of the Manhattan Schist in that older rocks are physically above the Cambro-Ordovician miogeosynclinal sequence (Inwood) thus disqualifying the layer-cake stratigraphic model that has existed for roughly 100 years.

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