

Baskerville, C. A.; and Merguerian, Charles, 1982, Tectonic history of the New York Metropolitan area.

Urban field mapping of basement (literally in some cases) rocks in the New York Metropolitan area has shown the presence of a syn-metamorphic ductile fault (Cameron's Line) that separates contrasting metamorphosed Paleozoic lithofacies. The fault, which has been mapped from Westchester County, through the central Bronx, western Queens and southeastern Manhattan Island, separates the eugeosynclinal Hartland Formation on the east from the Fordham-Inwood-Manhattan A miogeosynclinal sequence on the west and trends southward toward sheared porphyroclastic anthophyllite schist on eastern Staten Island. While it is unclear whether the shearing is related to Cameron's Line (Taconic Orogeny) or a younger event, additional complexities exist on Manhattan Island. The western half of Manhattan is underlain by amphibolitic allochthonous rocks (Manhattan B & C or Waramaug Formation) that are on strike with serpentinites in southwestern Manhattan and eastern New Jersey. These rocks may represent a serpentine-lined klippe that is structurally beneath Cameron's Line. Trace element geochemical analysis of amphibolites in the Hartland, Waramaug, and Manhattan Formations is in progress to determine if chemical signatures are distinctive enough to provide a correlation tool for these highly deformed metamorphic rocks.

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