

Merguerian, Charles; Mose, D. G., and Nagel, Susan, 1984, Late syn-orogenic Taconian plutonism along Cameron's Line, West Torrington, Connecticut.

Near Torrington, Connecticut a deformed composite mafic-ultramafic pluton (the Hodges Complex [HC]) and a foliated two mica-garnet granite (the Tyler Lake Granite [TLG]) are structurally controlled by and intruded across Cameron's Line - a ductile shear zone separating contrasting lower Paleozoic and older lithofacies. The shear zone marks the easternmost exposures of North American basement-cover rocks which consist of allochthonous Precambrian units of the Berkshire massif and parautochthonous lower Paleozoic paragneiss of the Waramaug Formation. Rocks found east of Cameron's Line are of eugeosynclinal parentage (the lower Paleozoic Hartland Formation). During the development of Cameron's Line two progressive phases of isoclinal folds formed in the Paleozoic wallrocks.

Contact metamorphic overprinting of the fold-fault fabric by the plutons indicates maximum intrusive P-T conditions near the Al_2SiO_5 triplepoint. The plutons and Cameron's Line are deformed by dextral SW-plunging folds with steep NE-trending, NW-dipping post-intrusive axial surface foliations. Widely separated sample suites from the TLG (which crosscuts the HC) yield a well-defined $466 + 12$ ma Rb-Sr isochron with initial $\text{Sr}^{87/86} = 0.7082 + 0.0011$. This medial Ordovician age is the first proof of a Taconian or possibly older age for Cameron's Line; the $\text{Sr}^{87/86}$ ratio of the TLG implies either anatexic derivation from, or passage through, continental crustal materials. The late syn-orogenic HC and TLG may have been emplaced when oversteepened oceanward subduction of tectonically thickened crust composed of imbricated basement-cover rocks enabled ultramafic to granitic magmas to ascend along a ductile shear zone (Cameron's Line) deep within the Iapetus suture.

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