

Cradle-of-Forestry-in-America fault, a strike-slip fault that cuts amphibolite grade gneiss and schist of the Neoproterozoic Ashe-Tallulah Falls Formation and Paleozoic granitoid gneiss of the Looking Glass and Pink Beds plutons, is situated within the Tugaloo terrane, eastern Blue Ridge, northwest of the Brevard fault zone. The fault is a zone several hundred meters wide that contains block-in-matrix tectonic mélange that consists of blocks of a wide variety of lithologies both indigenous and exotic, and a matrix dominated by white mica with lesser amounts of biotite and chlorite. The fault zone is oriented northeast-southwest and dips steeply northwest. Kinematic indicators suggest a dextral shear sense. Crosscutting relationships of fault-related features indicate two major episodes of strike-slip movement. The earliest was a ductile event under amphibolite facies conditions, the second a ductile-brittle event. A third event was very weak, brittle and dip-slip in nature. A modest retrograde greenschist overprint of the earliest features suggest one or both of the latter two events occurred under greenschist facies conditions. The earliest movement could have been no earlier than ~380 Ma or Neoproterozoic. The latter movements were probably a result of Alleghanian events.