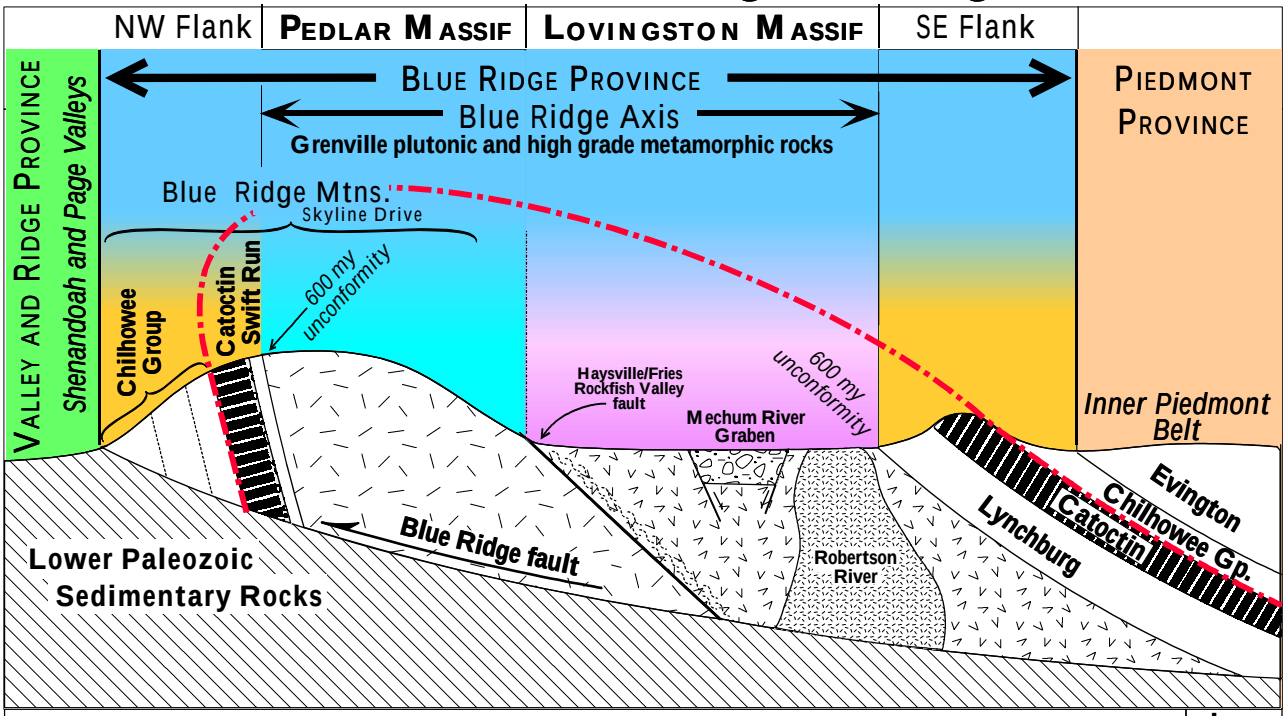
Structure and History of the Grenville Rocks in the Blue Ridge of Virginia



Alleghenian orogeny, Africa (Gondwana) collides with North America; major thrust faulting and folding; formation of Blue Ridge fault. Blue Ridge moved up to 10's of kilometers westward from original location.				Allegh-enian
Greenschist metamorphism		Amphibolite metamorphism		Taconic
Chilhowee: shallowing platform to beach	*Post Rifting Stabilization Phase*		Shelf, slope rise, deposition	Lower Cambrian
Aulacogens or lateral graben; e.g. Ocoee and Grandfather Mtns.	*Rift related horsts* Crossnore Robertson River pluton	Intra axial rift graben (Mechum River)	Axial graben length of Blue Ridge; (i.e. Lynchburg)	Late Proterozoic
Late Grenville granulite metamorphism		Late Grenville Granulite/ Amphibolite metamorphism		Grenville
Grenville Intrusive Suite - Pedlar River, Saddle Back Mtn., & Peaks of Otter plutons		Grenville Intrusive Suite: diorite, charnokite, anorthosite		
Country Layered Gneiss, e.g. Nellysford, Flint Hill, Lady Slipper (volcaniclastic protolith)				
		Stage Road Gneiss country rock (sedimentary protolith)		

L.S. Fichter, 1993