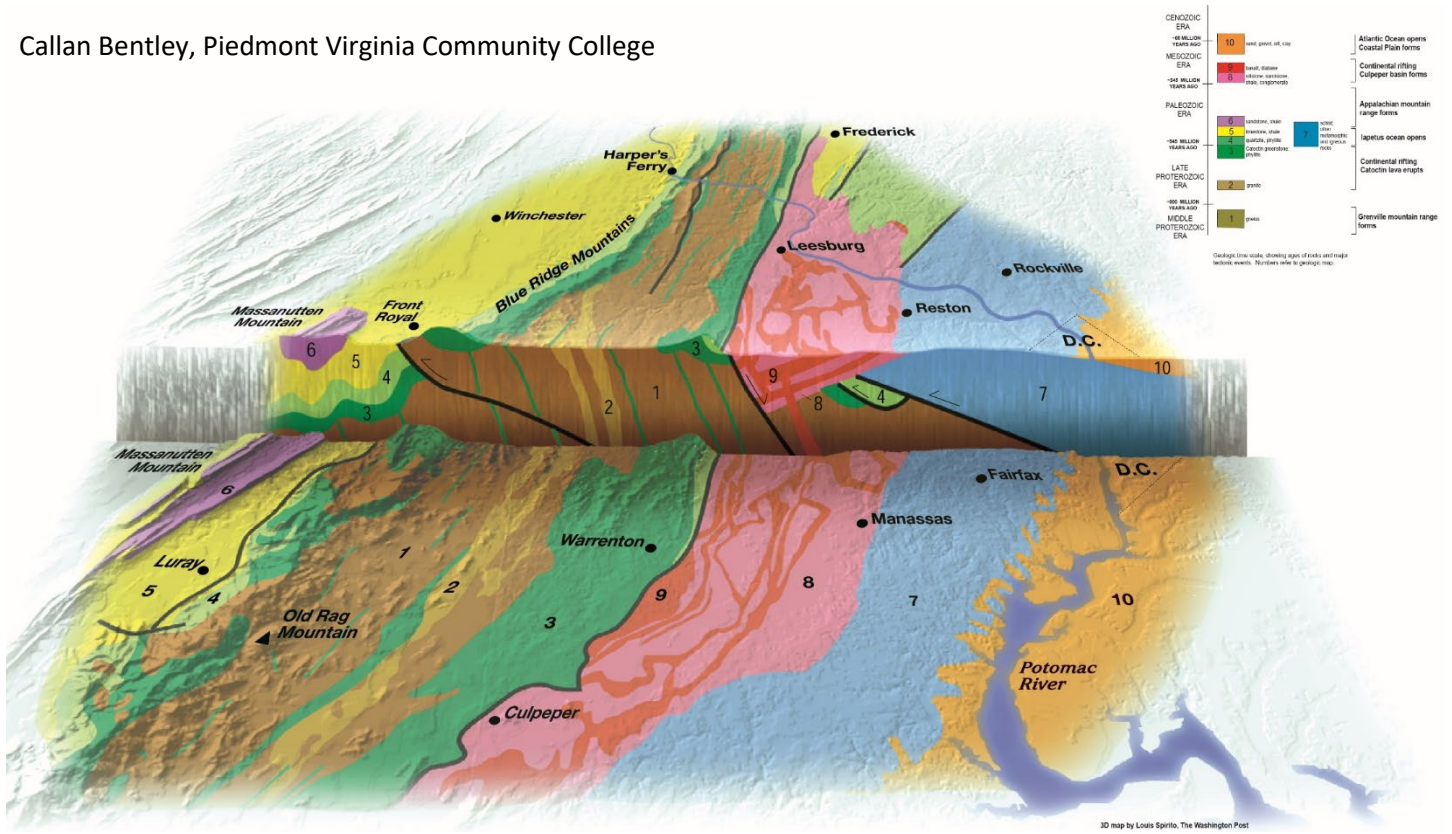
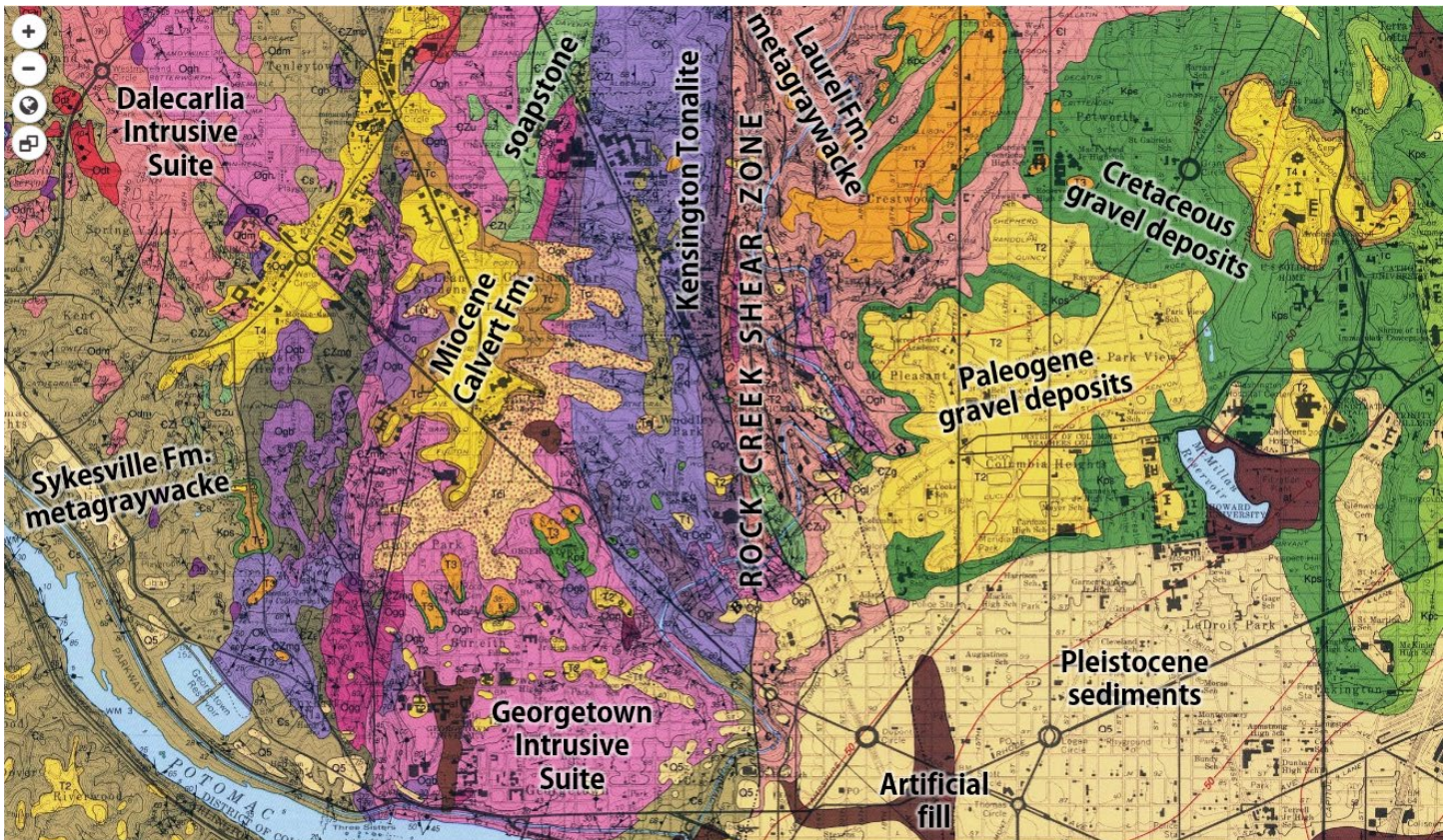


Bedrock geology of Washington, D.C.

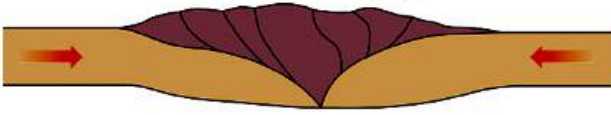
Callan Bentley, Piedmont Virginia Community College



Washington Post (above) and Fleming, et al. (below)



Grenville orogeny

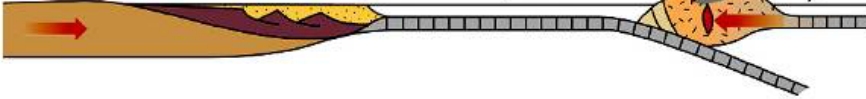


Post-Grenville rifting



Paleozoic passive margin

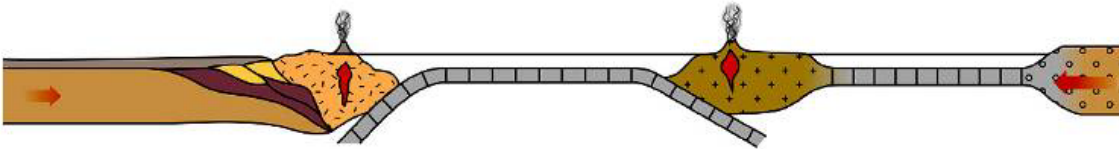
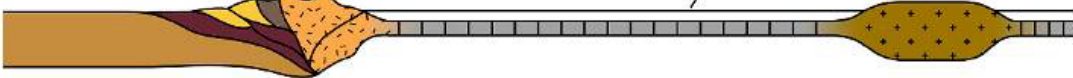
Sea level



Taconian orogeny

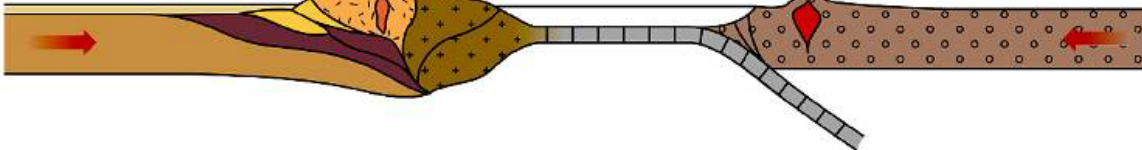
Sea level

Exotic crust



Acadian orogeny

Africa

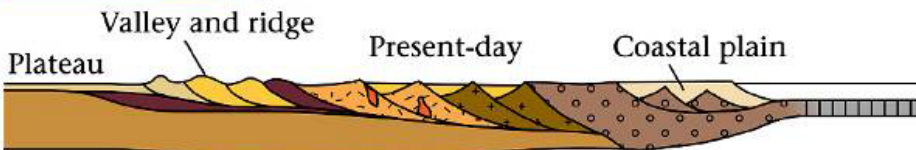


Future Valley and Ridge

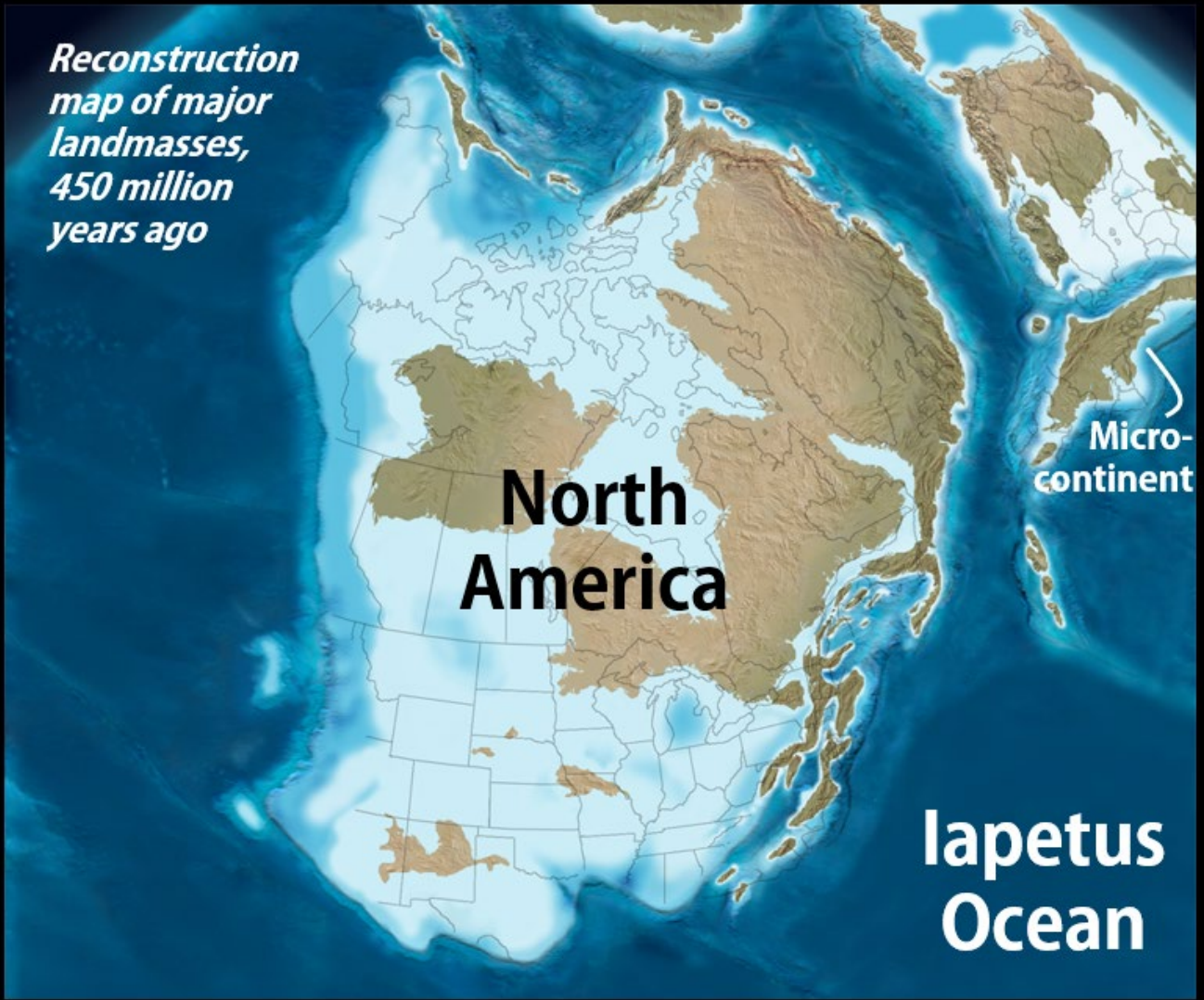
Alleghenian orogeny



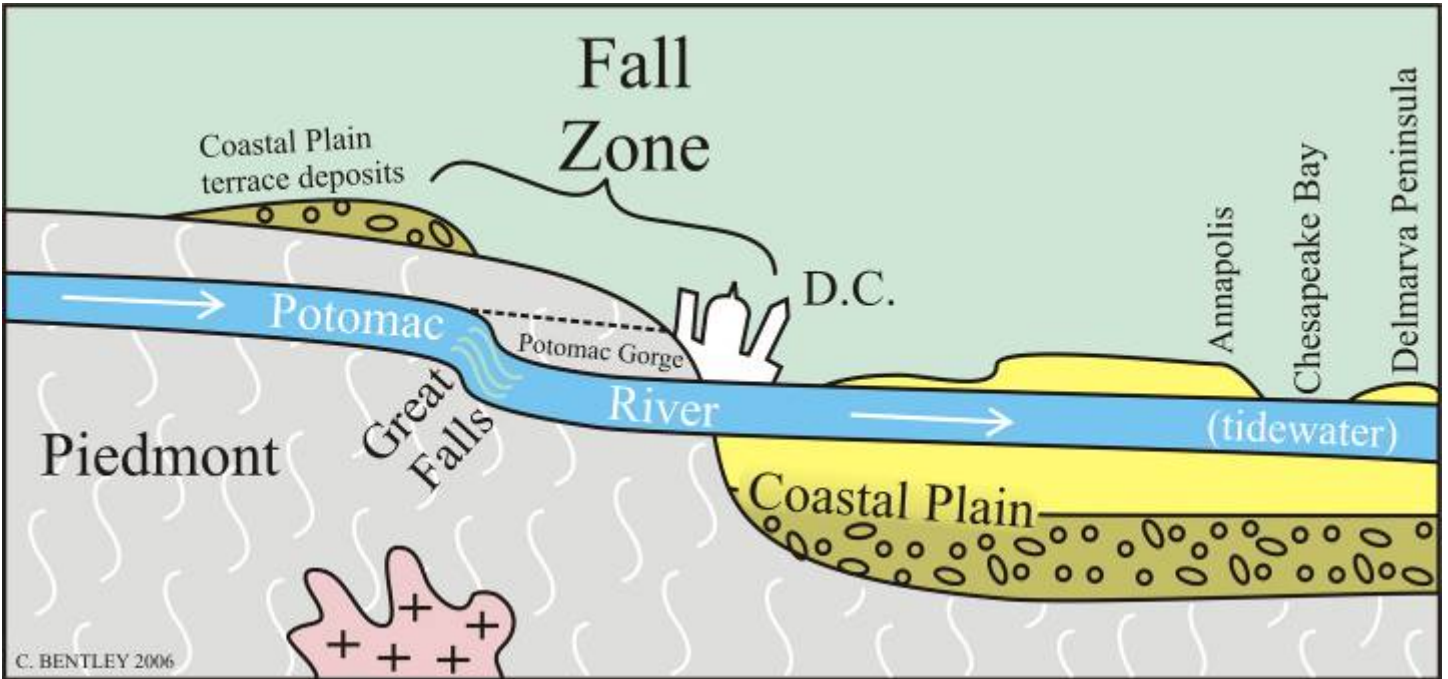
Mesozoic rifting



*Reconstruction
map of major
landmasses,
450 million
years ago*



Map by Ron Blakely, Northern Arizona University,
<http://jan.ucc.nau.edu/~rcb7/nam.html>



C. BENTLEY 2006

Cretaceous aged river gravels of the Potomac Formation, high hilltops in our region (this one at Prince Wm. Forest Park).



A summary of **events** recorded in DC and the Mid-Atlantic region (with dates) AND PROVINCES that record the event particularly well:

Grenville Orogeny (1.2-1.0 Ga) BLUE RIDGE

Rifting of Rodina / opening of Iapetus Ocean (700-560 Ma) BLUE RIDGE

Passive margin sedimentation (Cambrian – early Ordovician) VALLEY & RIDGE

Taconian Orogeny (~460 Ma, late Ordovician) METAMORPHIC PIEDMONT + VALLEY & RIDGE [DC]

Passive margin sedimentation (late Silurian – early Devonian) VALLEY & RIDGE

Acadian Orogeny (~360 Ma, late Devonian) METAMORPHIC PIEDMONT + VALLEY & RIDGE

Alleghanian Orogeny (~300 to ~250 Ma) METAMORPHIC PIEDMONT + VALLEY & RIDGE + BLUE RIDGE

Rifting of Pangaea / opening of Atlantic Ocean (200-180 Ma) TRIASSIC RIFT BASINS OF PIEDMONT

Passive margin sedimentation (Cretaceous to present) COASTAL PLAIN [DC]

Passive-aggressive margin faulting (sometime post-Miocene) COASTAL PLAIN/PIEDMONT UNCONFORMITY [DC]