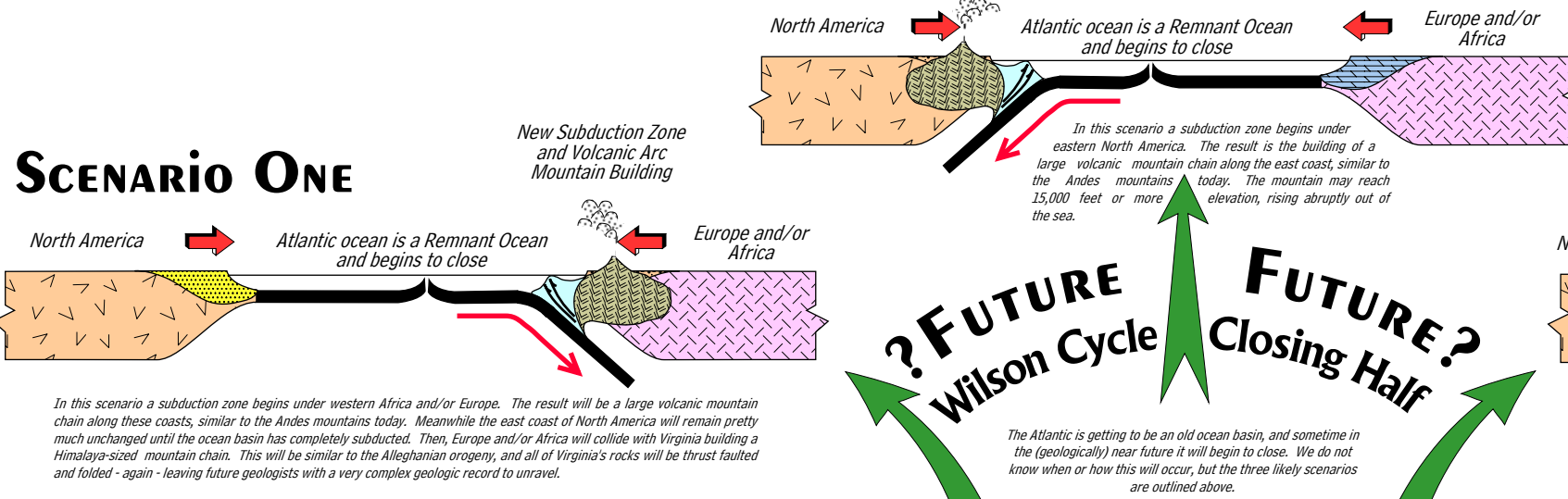


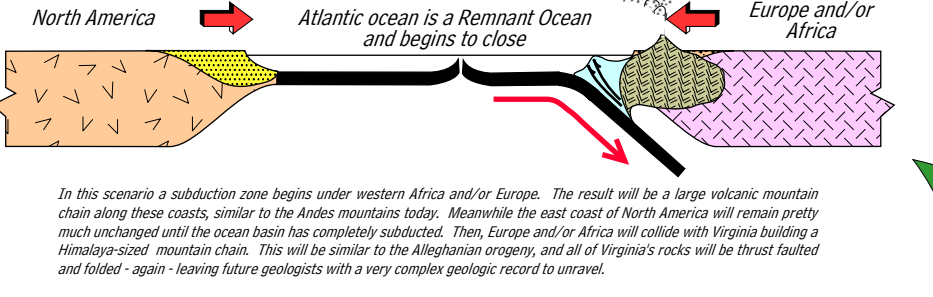
# Geological Evolution of Virginia

## And the Mid-Atlantic Region

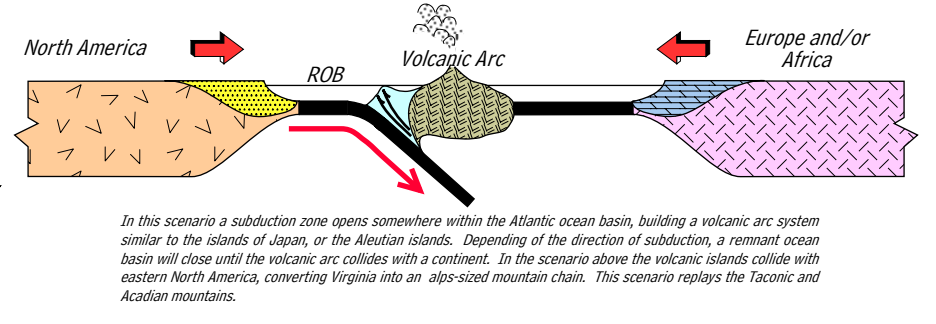
### SCENARIO TWO



### SCENARIO ONE



### SCENARIO THREE

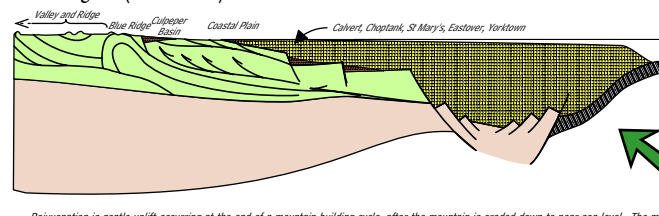


In this scenario a subduction zone begins under eastern North America. The result is the building of a large volcanic mountain chain along the east coast, similar to the Andes mountains today. The mountain may reach 25,000 feet or more elevation, rising abruptly out of the sea.

In this scenario a subduction zone opens somewhere within the Atlantic ocean basin, building a volcanic arc system similar to the islands of Japan, or the Aleutian Islands. Depending on the direction of subduction, a remnant ocean basin will close until the volcanic arc collides with a continent. In the scenario above the volcanic islands collide with western North America, covering Virginia into an alps-sized mountain chain. This scenario plays the Taconic and Acadian mountains.

# Opening of Mesozoic-Cenozoic Wilson Cycle

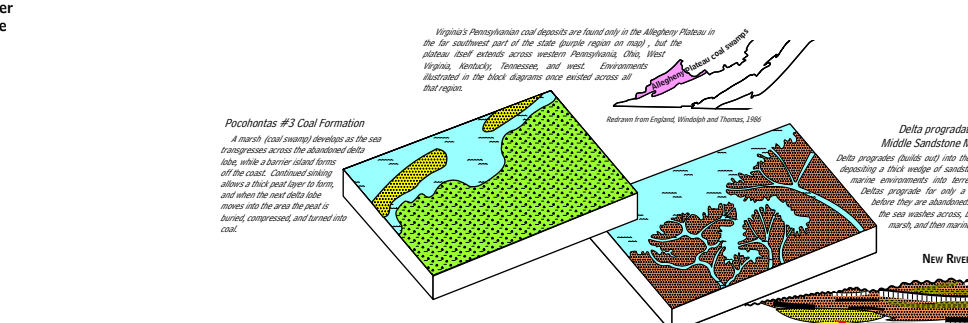
### REJUVENATION



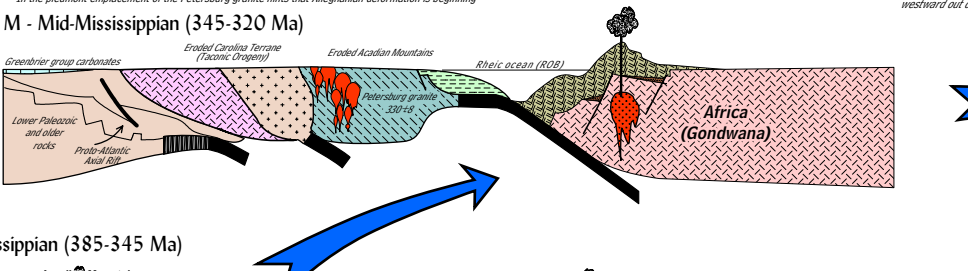
### P - Late Cretaceous-Paleogene (175-45 Ma)



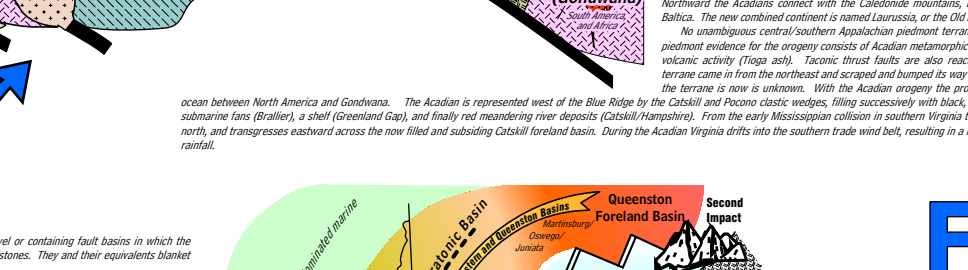
### DIVERGENT CONTINENTAL MARGIN



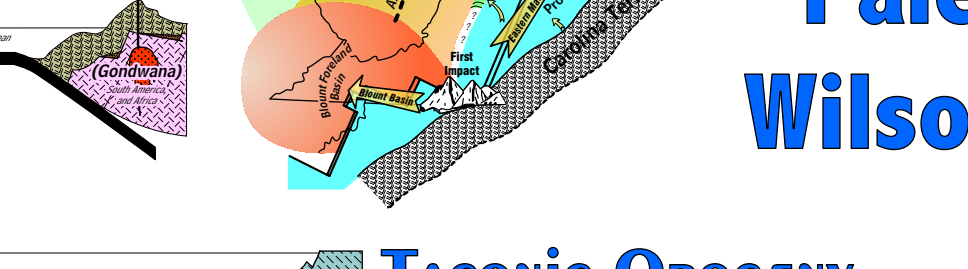
### M - Mid-Mississippian (345-320 Ma)



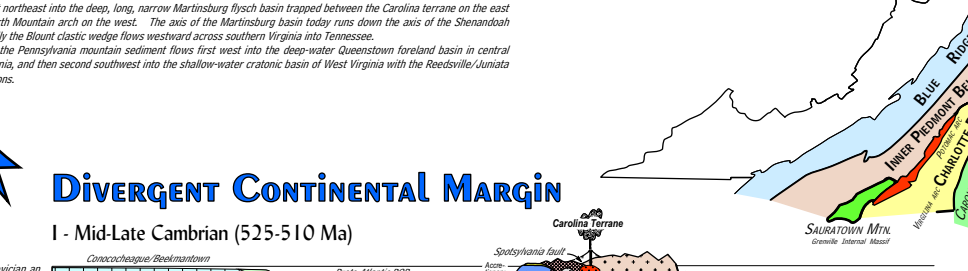
### L - Mid-Devonian-Early Mississippian (385-345 Ma)



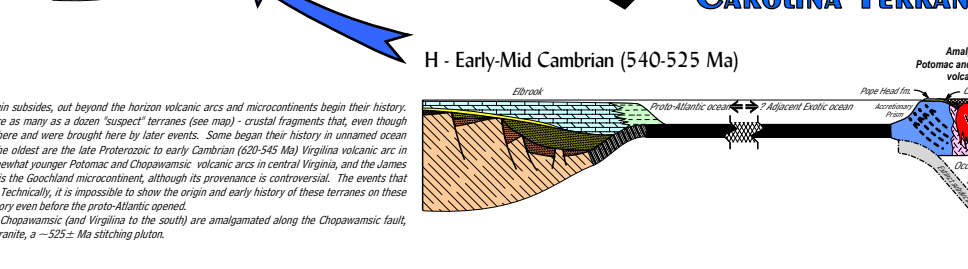
### J - Mid-Late Ordovician (485-438 Ma)



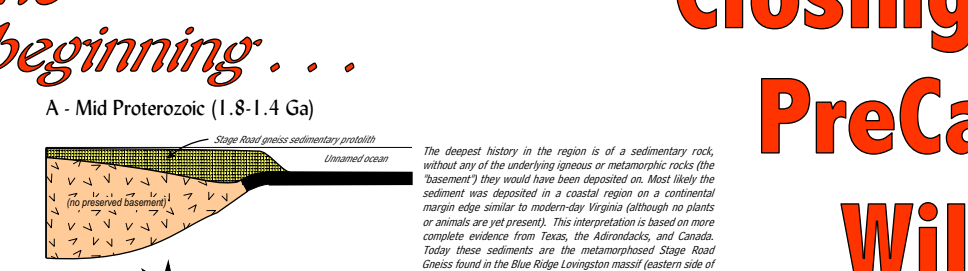
### I - Mid-Late Cambrian (525-510 Ma)



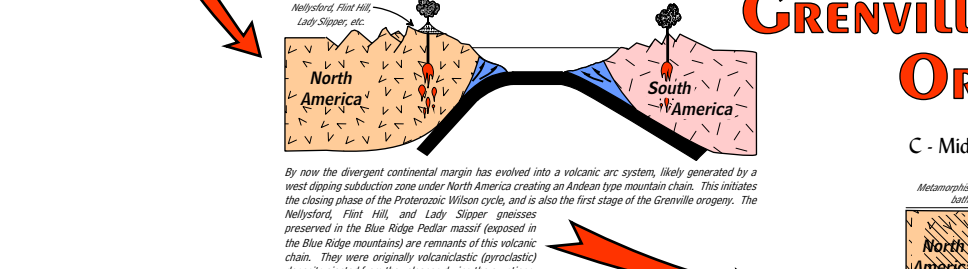
### H - Early-Mid Cambrian (540-525 Ma)



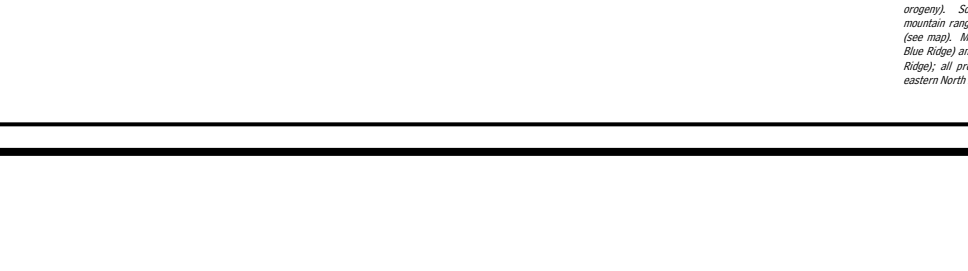
### G - Early Cambrian (~560 Ma)



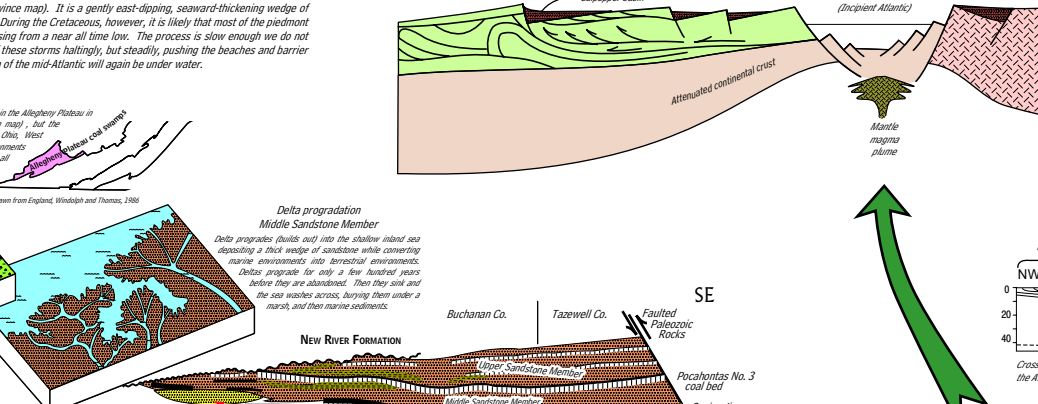
### F - Early Cambrian (700-570 Ma)



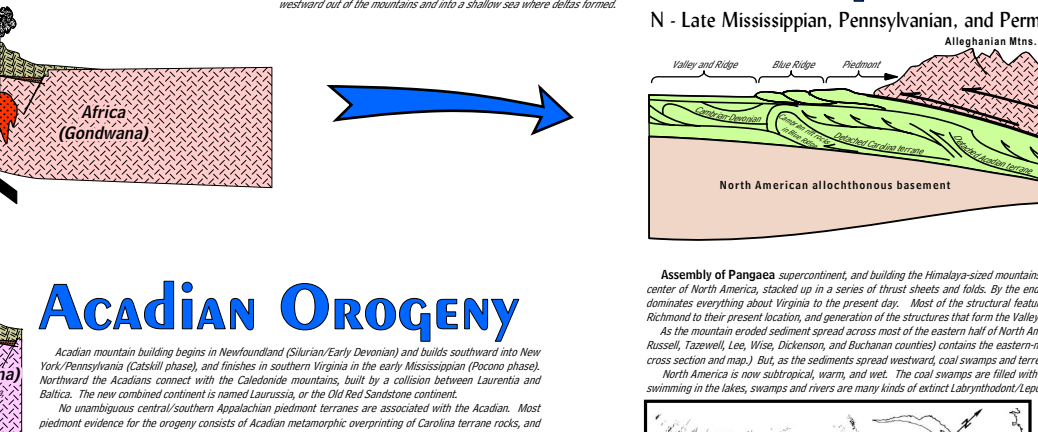
### E - Late Proterozoic-Early Cambrian (760-700 Ma)



### PANGAEA RIFTING



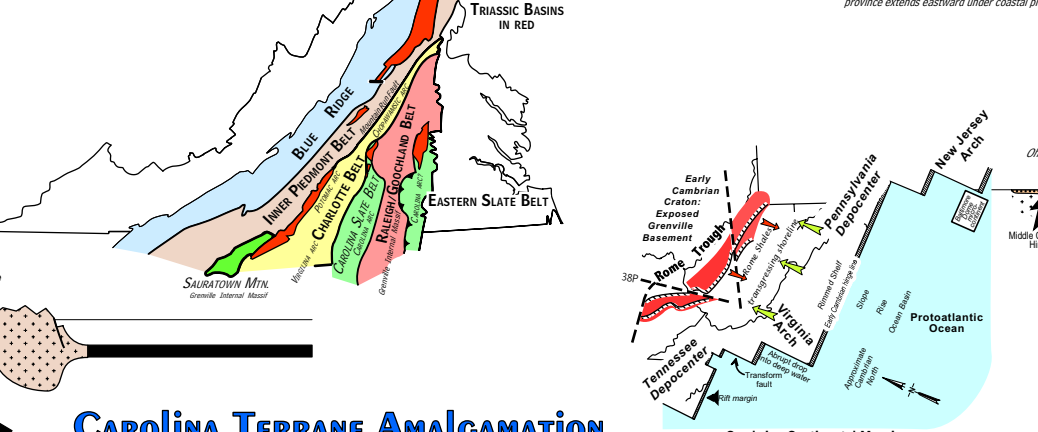
### Alleghanian Orogeny



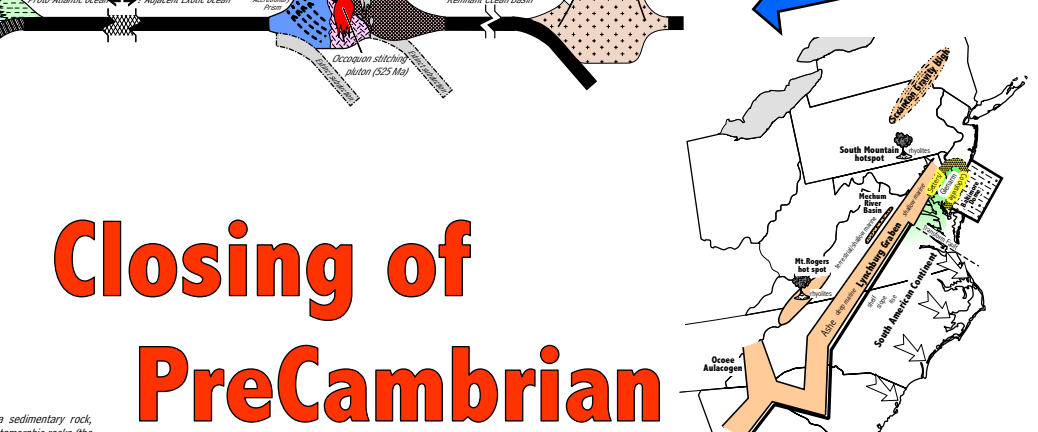
### Full Paleozoic Wilson Cycle



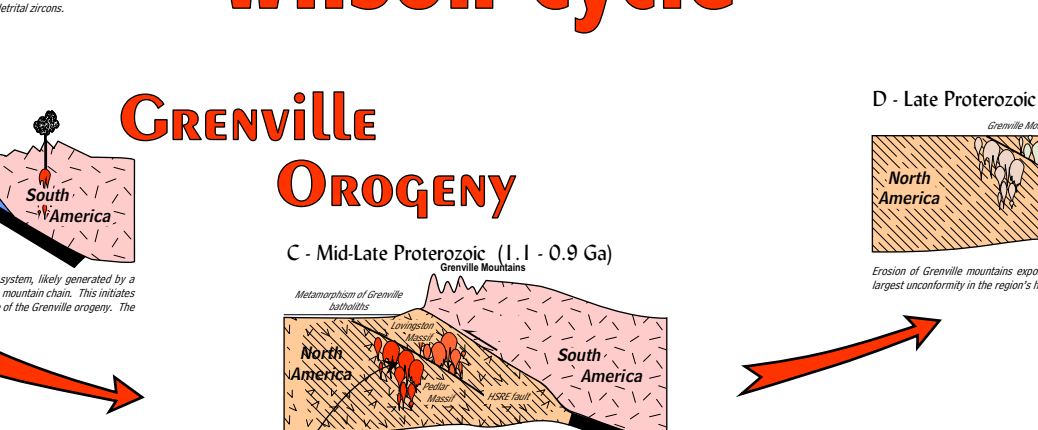
### Closing of PreCambrian Wilson Cycle



### Grenville Orogeny



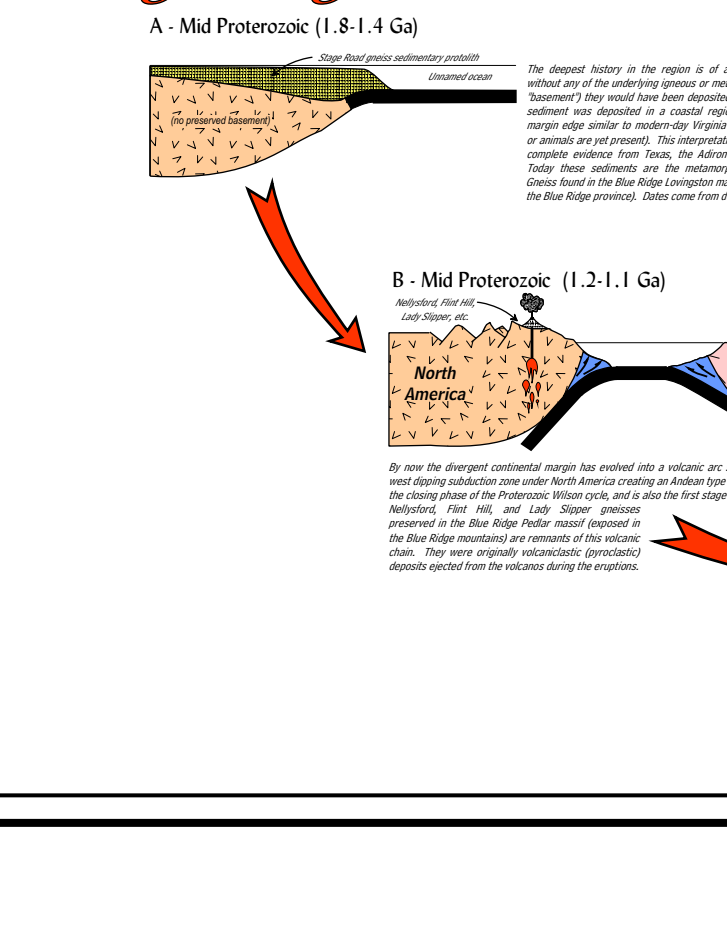
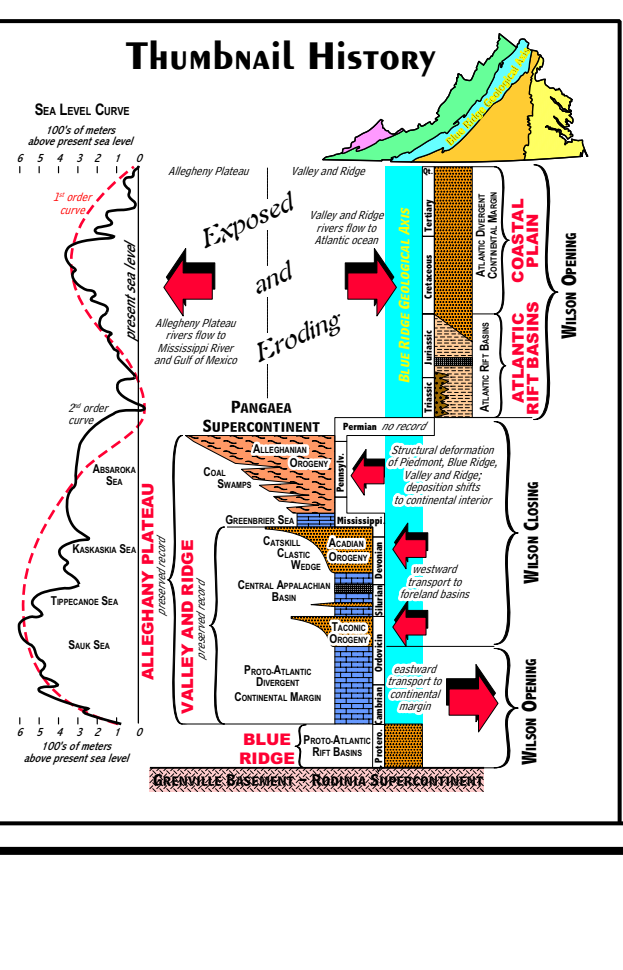
### Rodinia Rifting



### In the beginning...

# Closing of PreCambrian Wilson Cycle

# Grenville Orogeny



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Rodinia Supercontinent  
(One possible reconstruction at about 675 Ma.  
Adapted from Dalziel, 1991)