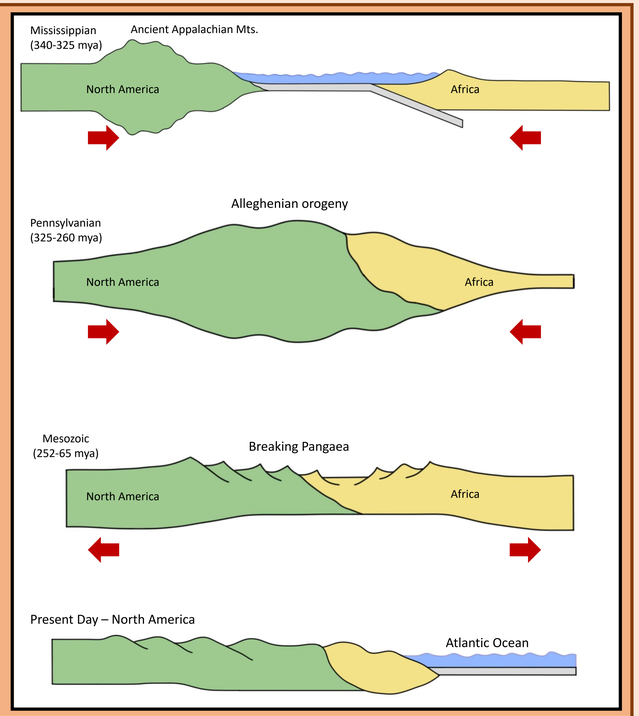
# Making the Appalachian Mountains

Mountains like the Appalachians form when two land masses crash into each other. As both masses push against each other, they crumple vertically, rising vertically and pushing downward into the earth.

When the Appalachians first formed, they would have been as tall and as broad as the Himalayas are today.

But over time mountains are worn down. Wind, rain, plants, animals, temperature and gravity are always turning bedrock into boulders, pebbles and eventually soil. We call this ***weathering.*** The tops of mountains are the most exposed and break down fastest, turning tall peaks into low hills over geological ages.

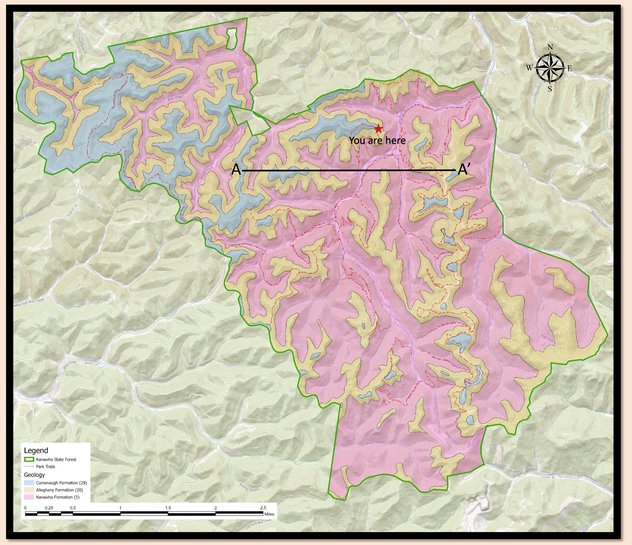
Not everything weathers at the same rate. Sandstone is more resistant than shale and so most of the rocks you will see in the park are sandstone.



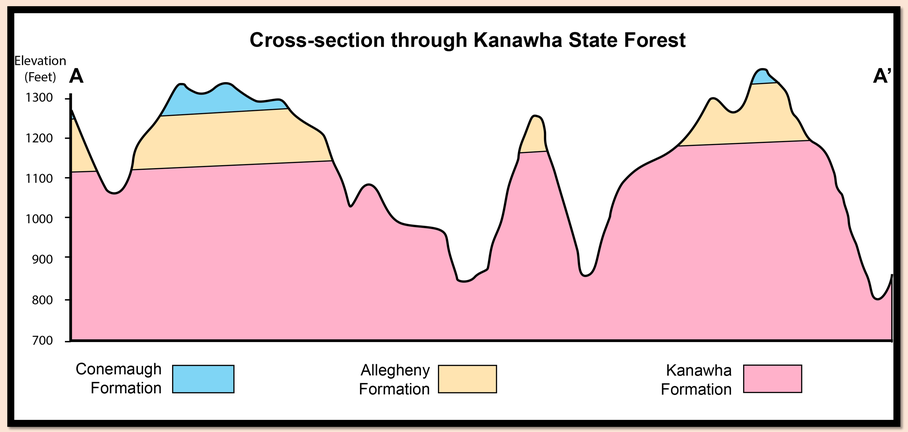

At the Overlook

The Appalachians formed over a long period of time and are the result of three different mountain building events or ***orogenies***. This area was formed as part of the final event, the Alleghenian orogeny, around 325 million years ago.

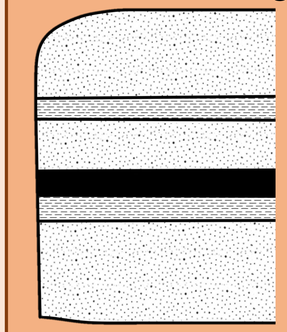
Lower Overlook Trail




The black line (A-A') in the map above marks the path of the cross-section, below. A cross-section shows the changes in elevation along with the geology. From it, you can see that the Conemaugh Formation is found only on mountain tops in the park, and the Kanawha Formation is found in the valley bottoms. You can also see that the formations dip slightly to the west. Go far enough west and the Conemaugh Formation will be in the valley bottoms!




## Before Weathering



As you walked along the trail, you most likely noticed the boulders that littered the ground. These fell off the cliffs due to weathering. These boulders, known as ***colluvium*,** are loose sediment deposited at the base of hillslopes. Colluvium continues to break down into smaller units, eventually becoming soil and washing out of the park through its streams.

## After Weathering