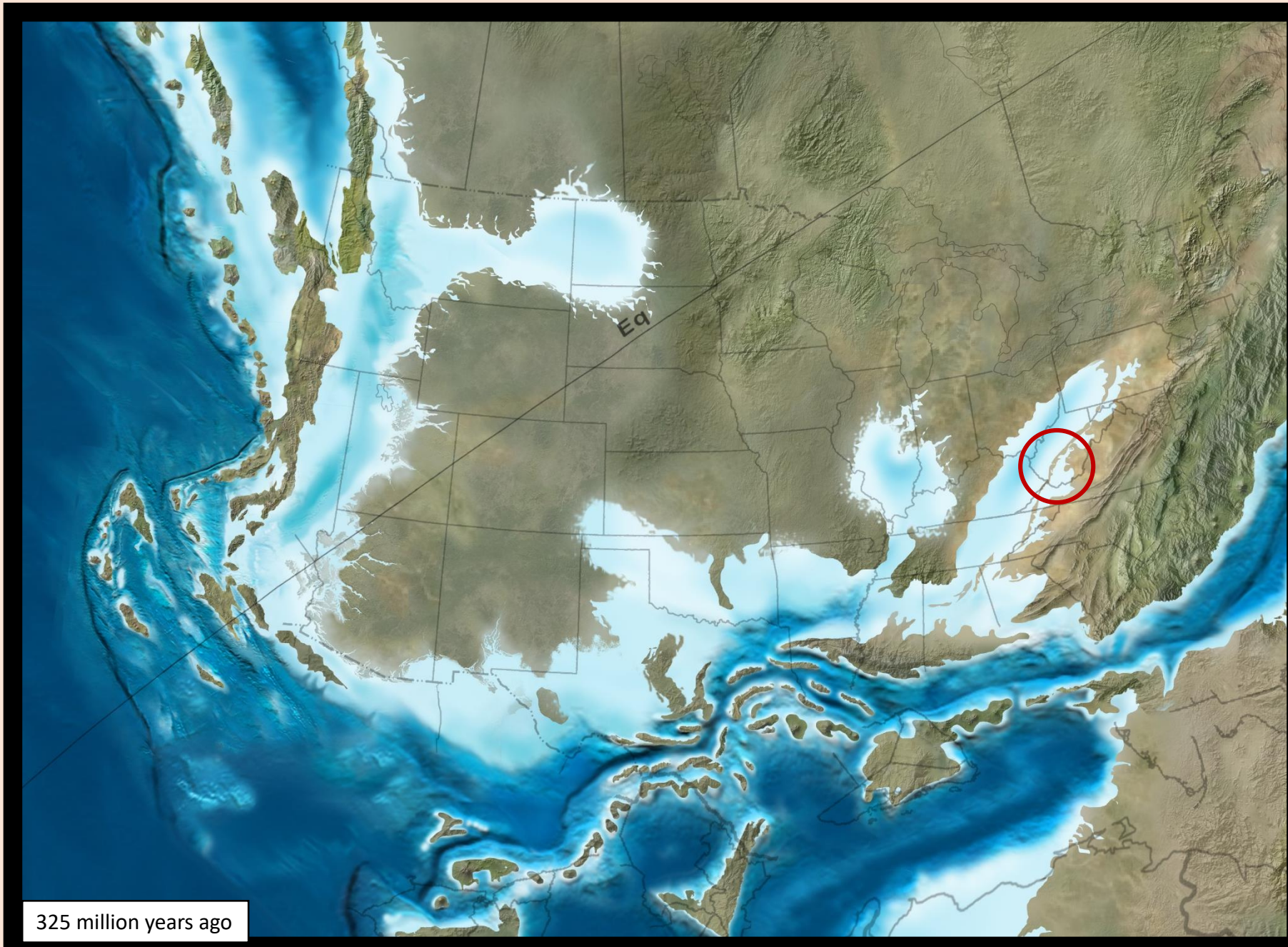
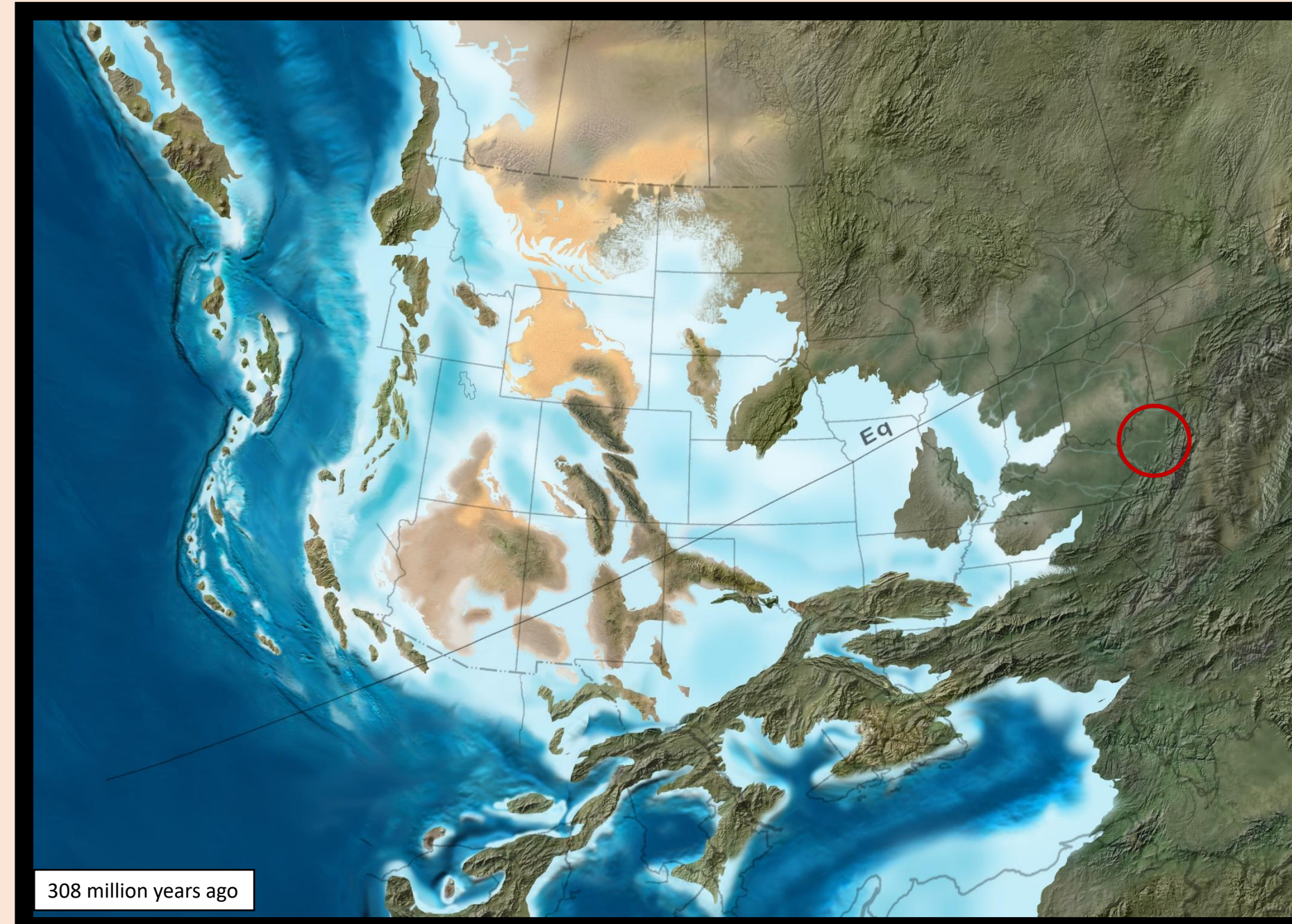


West Virginia Long, Long Ago



The world looked very different 300 million years ago. Vast oceans had recently flooded West Virginia and then great swamps and forests covered the land.

325 million years ago southern West Virginia (red circle) was located south of the equator. At this time, the area transitioned from being a shallow ocean to coastal swamps. The sediments deposited then were buried, turned to rock and later exposed at the surface. The rocks in Kanawha State Forest are mostly from the land-based or terrestrial environments and include **sandstone, shale, limestones, and coals.**



Rocks in Kanawha State Forest

The rocks you see around you are typical of those in West Virginia. Geologists recognize four major categories of rock in the area.

Shale is a thin, flat rock. Shale is made when mud is pressed over time into stone. The shales are frequently covered by other rocks or soil. When you see a shale in the Forest, you know that once this was the bottom of a lake or ocean. Claystone and mudstone are rocks very similar to shale.



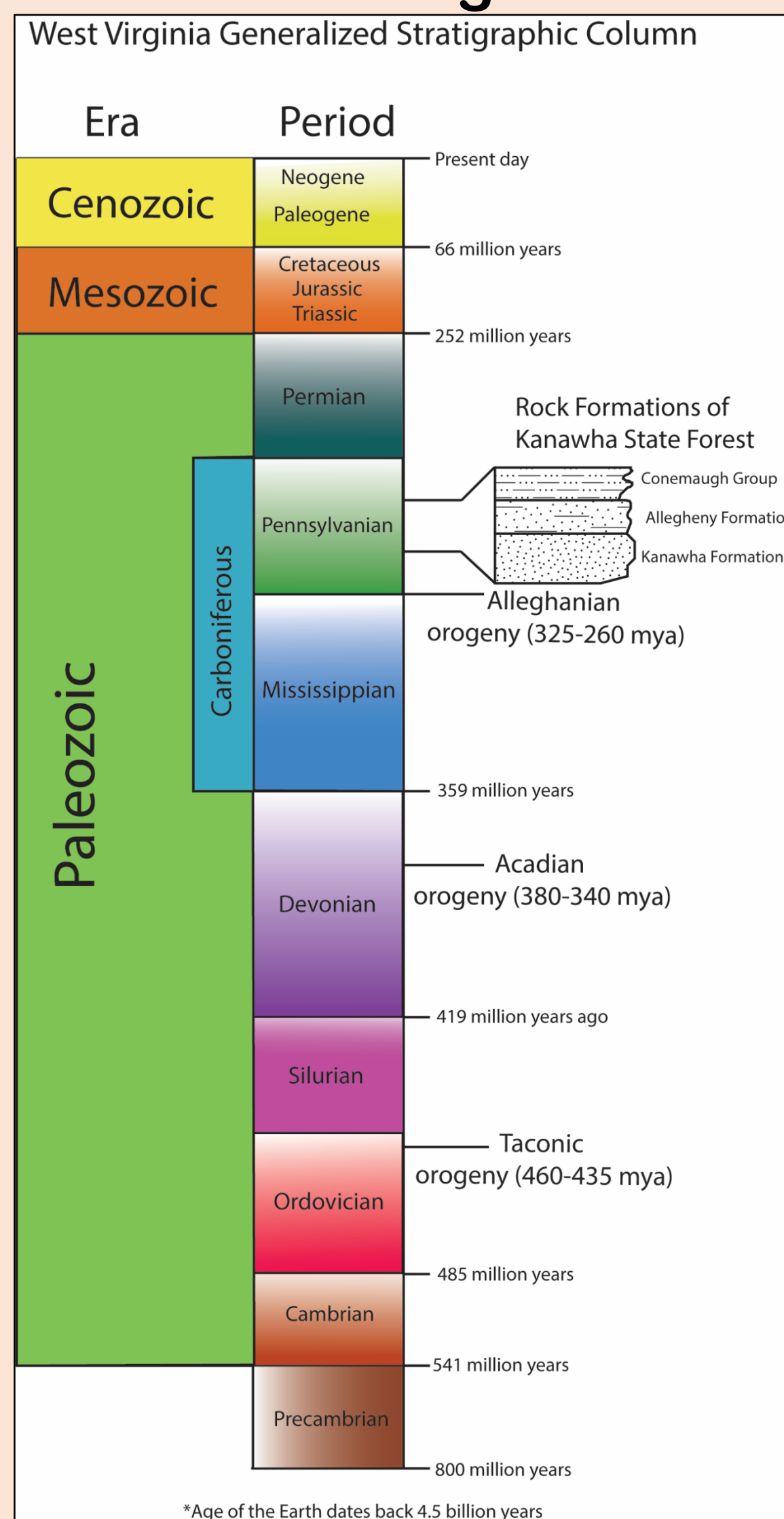
Sandstone is a rock made out of sand grains which have been cemented together by some other mineral. Most of the rocks in the Forest are sandstones. These can be very strong rocks. In West Virginia, sandstones make up many ridge tops and cliffs, like on the Overlook Trail.

Coal was mined extensively from the Forest a century ago. Coal is a rock made from plants that have been compressed underground for millions of years. It takes at least 10 feet of plants to make a foot of coal!



Limestone is the most difficult rock to find in the Forest. It is made of the leftover skeletons and shells of aquatic animals. The limestones in this park are thin but can have fossils!

Geological Formations



Geologists divide the rocks in the park into three **formations**. Each unit represents a distinct period of time.

The **Conemaugh** is the youngest formation in the Forest and is blue on the map. It caps the northwest ridges. Nearly all of the coals the Conemaugh Formation is known for stop before the forest, leaving this unit as mix of shales and sandstones. It is best seen from the Mary Ingles Trail.

The **Allegheny** is the middle formation in the Forest and is yellow on the map. It caps ridges in the center and south. It is also an alternating series of shales and sandstones, but has one major coal seam, the Number 5 Block Coal, at its base. The Allegheny Formation can be seen from the Overlook Trail.

The **Kanawha** is the oldest formation in the Forest and is pink on the map. It underlies the valley floors and ridges; most of the coal mining in the Forest was in the Kanawha Formation. Several coals including the Winifrede and Stockton were mined here. The Kanawha Formation can be seen from the CCC Snipe Trail.

