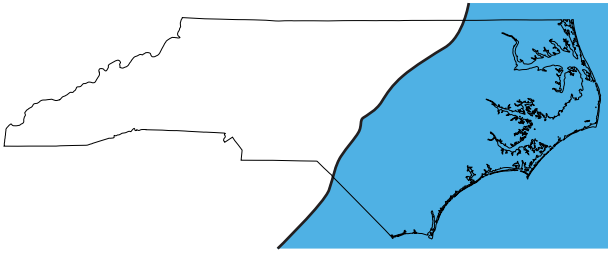


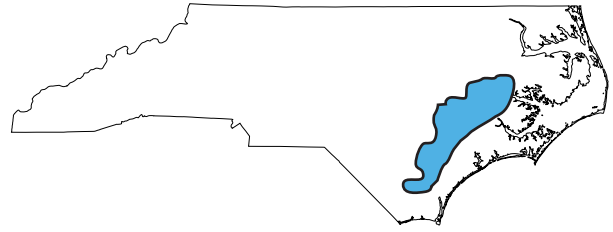
The Geology of the North Carolina Coastal Plain

A review from 65 MYA (million years ago) to the present

Eocene: 55-34 MYA

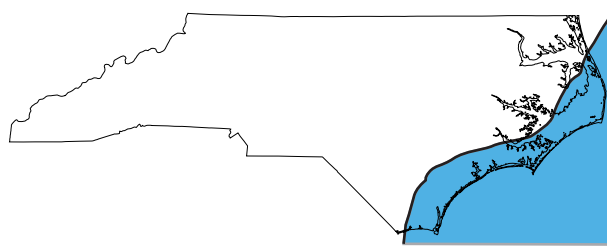


Castle Hayne Deposit



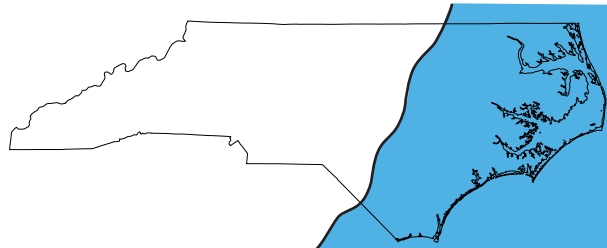
About 65 million years ago the ocean covered the coastal plain to the edge of the Piedmont. During the next 15 millions years the shoreline slowly migrated east. About 50 million years ago the sea reinvaded the land and the deposit known as the Castle Hayne was formed. This limestone deposit contains bivalves, gastropods, corals, fish bones, shark teeth and vertebrae. The shoreline at this time was west of Raleigh.

Oligocene: 34-24 MYA:



The shoreline moved eastward to the Pollocksville area over the next 15 million years. Much of the deposit of the epoch eroded away, but some remains near Maysville and Richards North Carolina

Miocene: 25 - 5 MYA:

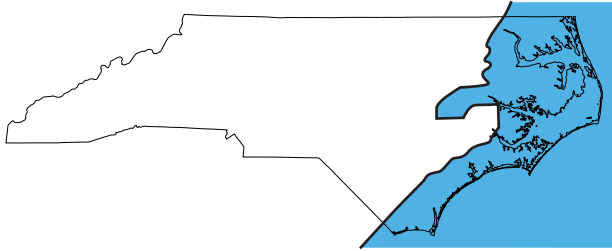


25 - 5 million years ago the sea withdrew all the way to the continental shelf then reinvaded the land and deposited the Pungo River formation. It was probably a closed shallow basin where oxygen was depleted, hydrogen sulfide was formed and phosphate was deposited.

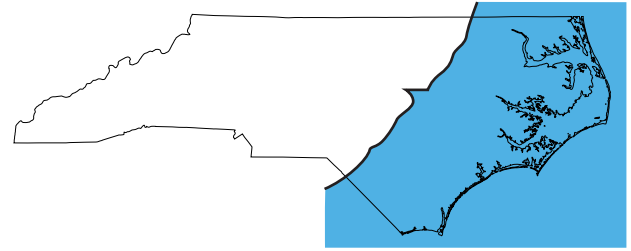
The Geology of the North Carolina Coastal Plain Continued:

A review from 65 MYA (million years ago) to the present

Pliocene: 5 MYA



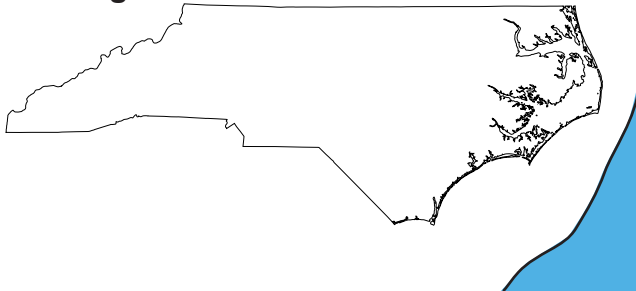
Yorktown Formation: 2-5 MYA



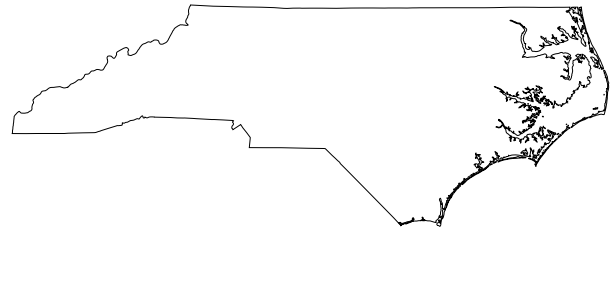
5 million years ago the Yorktown formation began to be deposited above the Castle Hayne formation at New Bern, and the Pungo River formation in Aurora. This was fossil rich material with predominantly shark teeth, marine mammal bones and teeth, fish bones, bivalves and phosphate rocks.

Sea level continued to rise. The shoreline was as far west as the present day Wilson area. Marine deposits were laid down for 3 million years as the sea retreated, and invaded the land.

Pleistocene to Recent: 2 MYA to 10,000 Years Ago



Today



2 million years ago continental glaciation was occurring in the north, no glaciation occurred in North Carolina. The ocean retreated out to the continental shelf as ice grew.

Mammoths and mastodons roamed the coastal plain until they became extinct about 7,000 years ago.

Today the shoreline continues to submerge as sea level continues to rise.