

The main argument in favor of marginal origin is the great linear extent of the Lower Cretaceous terrane, for beds supposed to be of this age are known to occur from Maryland to Alabama.

Whatever its nature, the principal streams from the land to the northwest discharged their load of detrital matter into this body of water. Near the shore line the materials laid down were coarse and a high degree of cross-bedding was produced by the waves or in the deltas of the streams. Strong currents, however, swept out from the mouths of the principal streams to considerable distances from the land, and through the gradual checking of their velocities dropped their load of detrital matter, producing more or less homogeneous layers of sand of varying thickness in which cross-bedding was but subordinately developed. The fine argillaceous sediments which constitute the minor quantity of the mass were laid down in the quieter portions, forming broad clay lenses. The alternating layers of clay and sand were evidently produced by the occasional shifting of the main currents.

Just how long the sedimentation continued is not known, but it was finally brought to a close by an elevation of the region, producing a land surface. The forces of erosion became active and probably a large part of the sediments were removed and carried farther eastward into the main ocean, whose western shore may then have stood to the east of the present coast line.

The interval which elapsed between the deposition of these oldest sediments of the Coastal Plain and the inauguration of the next submergence of the region was very different, apparently, in the different portions of the Coastal Plain. To the northward through Virginia and Maryland transgression of the sea again took place before the close of the Lower Cretaceous, and a great formation known as the Patapsco formation, composed largely of clay and still containing chiefly plant remains, was deposited, remnants of which resting on the crystalline rocks may be found as far north as Pennsylvania, indicating a probably deeper submergence of the Piedmont Plateau in that direction than during the earlier epoch of the Lower Cretaceous. No evidence of these deposits has been found in North Carolina or farther southward, and it is probable that this southern region still stood above sea level.

UPPER CRETACEOUS.

With the advent of the Upper Cretaceous the entire Coastal Plain district which had evidently been above sea level at the close of the Lower Cretaceous was now depressed throughout its entire extent from New York southward to the Gulf. The transgression of the sea started somewhat earlier in the north than in the south, as the presence of the