CHAPTER III.

THE GEOLOGICAL HISTORY OF THE COASTAL PLAIN OF NORTH CAROLINA.

BY WM. BULLOCK CLARK, BENJAMIN L. MILLER, AND L. W. STEPHENSON.

The geological history of the North Carolina Coastal Plain embraces, as far as we have knowledge, that portion only of geological time covered by the series of unconsolidated sediments represented in the subaërial and submarine divisions of that district and already described in preceding pages. Whether older deposits of early Mesozoic or late Paleozoic age were ever deposited on the floor of crystalline rocks throughout any part of the present Coastal Plain district may never be known. The deep wells at various points near the coastal border have never revealed such strata, and it may be that this broad belt stood above sea level throughout these periods of geological history.

We know that the rocks of the Piedmont Plateau on which the deposits of the Coastal Plain rest had been extensively folded, faulted, and intruded by igneous rocks of varied types and the whole mass extensively metamorphosed before the close of the Paleozoic; also, that during Triassic time the Piedmont Plateau was invaded by extensive bodies of water which were probably partly or perhaps entirely cut off from connection with the open sea. These basins, produced by downward warping of the land surface or by faulting or by both, were then covered by extensive sheets of arenaceous and argillaceous sediments, with here and there interstratified carbonaceous beds and with intrusive and extrusive igneous rocks. Later these basins were elevated and drained, the strata faulted and the greater part of these materials then eroded by the streams that developed upon the surface, the débris being carried out and deposited in the main ocean. Between the time of the disappearance of these inland bodies of water and the beginning of Coastal Plain sedimentation another long period must have elapsed which probably included all of Jurassic time.

LOWER CRETACEOUS.

With the opening of Coastal Plain history at the close of the Jurassic or at the beginning of Cretaceous time there doubtless existed a great peneplain over the Piedmont Plateau. The floor on which the sediments of the Coastal Plain were laid down consisted of a great complex of crystalline rocks, some of undoubted sedimentary and some of