

tions are available. The surface is formed of Pleistocene terrace plains, and from such information as can be secured the greater part of the surface is believed to lie within the limits of the Chowan plain, with elevations ranging from about 30 to about 50 feet above sea level. Limited areas of the Pamlico terrace plain not exceeding 20 or 25 feet above the sea are present along the coast and along Cape Fear and Northeast Cape Fear rivers. It is possible that the Wicomico plain, with elevations of 60 to 70 feet, extends into the county from the northeast. The surface has been somewhat dissected by stream erosion. Portions of the surface are covered with low, rolling sandhills. These are believed to constitute beach-sand accumulations which were deposited by the retiring sea at the time the Chowan plain, due to an uplift of the land, was emerging from the sea. These sand accumulations were doubtless shifted by the wind to form dunes in the same manner that such dunes are being formed at the present time in many places along the coast.

At a distance of about $11\frac{1}{2}$ miles from the mainland the coast, beginning at its northeastern extremity and extending to Carolina Beach, is paralleled by a series of beaches and banks separated by narrow inlets. The sounds between these banks and the shore are being rapidly filled with detritus from the land.

Geology.—The deposits of this county rest upon a deeply buried surface of crystalline rocks. In the northern part of the county this surface is believed to exist at a depth of about 900 or 950 feet below sea level. At Wilmington it was encountered at 1,100 feet below sea level, and at Fort Caswell, in Brunswick County, which is near the southern extremity of New Hanover County, at about 1,530 feet below the same datum.

The relative positions and thickness of the materials of different ages making up the overlying formations are shown in the graphic section, Fig. 20, which is constructed along a line running lengthwise of the county from Castle Hayne to the southern extremity of the mainland. The lower 400 feet consist of marine materials of Cretaceous age, probably referable to the Black Creek formation. Above this comes a (maximum) thickness of 886 feet of gray or greenish-gray, more or less calcareous and glauconitic sands and marine clays belonging to the Pee-dee formation. In that part of the section between Castle Hayne and Wilmington the Pee-dee beds rise about to sea level, their upper surface undulating a little above and a little below this level. Near Wilmington their surface passes below sea level, gradually becoming deeper until near the southern extremity of the mainland of the county its