

In the vicinity of Wilmington and northeastward at least as far as Neuse River, Eocene strata have been shown to occupy more or less disconnected basin-like depressions in the undulating Cretaceous surface. To the eastward of this portion of the belt the Eocene thickens and probably forms a continuous sheet, as shown by well records. Beneath this sheet the Peedee beds pass coastward, becoming deeper and deeper beneath the surface for an unknown distance. From the South Carolina line northeastward to Neuse River, thin, more or less discontinuous sheets of Miocene and Pliocene deposits occur resting unconformably upon the Peedee formation, except where the above-mentioned Eocene strata intervene. In Greene and Pitt counties Miocene beds probably intervene continuously between the Peedee surface and the overlying Pleistocene deposits. Throughout the belt of outcrop of the Peedee formation wherever the above-mentioned Tertiary strata are absent the Peedee beds are overlain by thin, surficial Pleistocene deposits.

The great mass of the materials of the Peedee formation consist of dark-green or gray, finely micaceous, more or less glauconitic and argillaceous sands, many layers of which are calcareous and some of which are sufficiently calcareous to form an impure limestone. Irregular concretionary masses of impure calcium carbonate occur in places. These are either scattered irregularly through the sands, or are arranged in layers parallel to the bedding, producing nodular-like bands along the river bluffs. Such concretions have been observed as large as 4 or 5 feet in their longest diameter. Dark marine clays are present to some extent interstratified with the sand beds. The materials as a whole are quite compact. Fossils, principally invertebrates, occur either scattered irregularly through the deposits or arranged in layers 1 to 3 or more feet in thickness. Where the lime carbonate of the shells remain, as is commonly the case, the materials may be classed as shell marl. The content of glauconite in the greensands of North Carolina appears to be less than that of the greensand marls of New Jersey. A number of analyses of the greensands are given by Ebenezer Emmons in his report of the North Carolina Geological Survey, 1858, entitled "Agriculture of the Eastern Counties," pp. 89-100.

The strike of the formation may be assumed to be approximately parallel to the direction of the belt of outcrop. To the north of Cape Fear River this direction is north-northeast and south-southwest. In the region of Cape Fear River it swings around northeast-southwest and extends into South Carolina in that direction.

The Peedee beds have a gentle southeastward dip, the amount of which can be determined only approximately. Calculations based upon