

In the autumn of 1905 this section was observed from the deck of a passing river boat. The water was then very low and there was revealed beneath the laminated materials a bed of Cretaceous shell marl in a matrix of compact marine sand or clay, several feet in thickness, which was not exposed when the above section was made. This is the last exposure of undoubted Black Creek materials observed in descending the river.

Just below Whitehall Landing, $53\frac{1}{2}$ miles above Wilmington, right bank, about 8 or 10 feet of dark greenish clay is exposed above the water's edge. This is questionably regarded as belonging to the Black Creek formation.

At Deep Water Point, $51\frac{1}{2}$ miles above Wilmington, left bank, there is exposed at extreme low water a layer of greenish-gray, calcareous and fossiliferous rock about 1 foot in thickness, of marine origin. It is underlain by a dark, unconsolidated shell marl containing many sharks' teeth and fragile Cretaceous fossils, about 1 foot being exposed above the water. These materials are questionably referred to the Black Creek formation. The rock forms a shelf along the cove side of the bend, and passes back under a covering of Pleistocene terrace materials.

Ten feet of dark-blue laminated clay forming the base of the bluff at Donohue Creek, $50\frac{1}{3}$ miles above Wilmington, should perhaps be regarded as the top of the Black Creek formation, their lithologic character favoring this view. It is reasonably certain that the overlying strata in this section should be referred to the Peedee ("Burches Ferry") formation, the reference being based upon the presence of the fossils *Ostrea subspatulata* Forbes and *Exogyra costata* Say. (See section on page 147.)

In Sampson County a few poor exposures of weathered laminated sands and clays have been observed on one of the headwater tributaries of Black River between Roseboro and Clinton, which are believed to belong to the Black Creek formation. No work was done in the Black River Valley between these occurrences and Clear Run. One exposure of dark laminated beds was examined about 4 miles west of Tomahawk on South River, which forms the western boundary of Sampson County. On Black River outcrops of the formation have been studied from Clear Run in Sampson County to Horrell Landing in Bladen County. Throughout this distance as observed in the river bluffs the formation is everywhere overlain by Pleistocene terrace materials.

The Black River occurrences are described in detail on the following pages. (See sketch map of Black River, Fig. 12, p. 124.)