

formation, applied by Sloan to the southward continuation of the same terrane, might appropriately be substituted for that of Ripley. Brief statements are made regarding the probable correlations of these divisions with Cretaceous deposits in other regions. The names "Cape Fear," "Bladen," and "Ripley" correspond respectively to the names Patuxent, Black Creek, and Peedee, of the present report.

In 1910, E. W. Berry³³ described 29 new species of fossil plants from the Black Creek formation of North Carolina.

Prof. W. B. Clark presented a paper³⁴ in 1909 before the Geological Society of America on the results of the work by himself and associates in the Coastal Plain region between Massachusetts and South Carolina, in which he discusses the Cretaceous formations of North Carolina and points out their relations to the Cretaceous deposits of the Northern Coastal Plain and of the Gulf. The question of their correlation is considered in much detail.

DIVISIONS OF THE CRETACEOUS.

Previous to the investigations furnishing the data for the present report, there had been little attempt on the part of geologists working in the region to differentiate the Cretaceous deposits of North Carolina into formations. It was recognized by Professors Holmes and Ward that the basal Cretaceous beds were the probable equivalent of the Potomac, but neither were clear in their definition of the upper stratigraphic limits of these Lower Cretaceous representatives; and, in fact, Holmes included in this division certain of the beds on Cape Fear River now known to belong unquestionably to the Upper Cretaceous.

The recent investigations in the North Carolina Coastal Plain have led to the recognition of three Cretaceous divisions designated in the ascending order: the Patuxent ("Cape Fear") formation of Lower Cretaceous age, and the Black Creek ("Bladen") and Peedee ("Burches Ferry") formations of Upper Cretaceous age.

As will be seen by referring to the geologic map (Plate XVII, in pocket), these three formations have their widest areal development in the southern part of the Coastal Plain portion of the State. To the northward the area of outcrop narrows, being transgressed more and more by younger, Tertiary strata until at the Virginia line the Cretaceous strata are entirely overlapped and concealed. The best continuous series of Cretaceous exposures is furnished by the bluffs of Cape Fear River and its tributaries, the strata appearing at intervals all the way

³³Torrey Botan. Club, Bull., vol. 37, 1910, pp. 181-200, pls. 19-24.

³⁴Bull. Geol. Soc. America, vol. 20, pp. 646-654, pl. 111, 1910.