

When a comparison of the fauna of the Black Creek formation is made with that of the European Cretaceous, we find that its general character is that of the Senonian, and the view has been commonly held by paleontologists that all of the marine beds of the Atlantic and eastern Gulf coasts represent that epoch of the Cretaceous, with the possible exception of certain later deposits in New Jersey which have been regarded by the writer and others as of Danian age. Some even include in the Senonian all of the Upper Cretaceous strata, both marine and nonmarine, from New Jersey to the Mississippi basin, since even the lowest known Upper Cretaceous deposits in this area (Raritan formation) contain a few marine invertebrates of probably identical species with those of higher horizons. Those who hold this view necessarily consider that the earlier Turonian and Cenomanian epochs are unrepresented, since every one agrees that the unconformably underlying deposits are of Lower Cretaceous age.

It is essential, however, before passing final judgment on the basis of marine invertebrates, to examine the evidence furnished by the fossil plants which occur in great variety in the lowest beds beneath those containing the marine invertebrates as well as in interbedded strata in the middle of the series.

Mr. E. W. Berry of the Johns Hopkins University, who has made a study of the flora of the formation, has prepared the following statement regarding the significance of the plant remains. He says:

"Fossil plants have been collected at 21 different localities within the Black Creek formation of North Carolina. These collections are of very unequal interest, ranging from those made up entirely of detached leaves of *Araucaria bladenensis* Berry to that at Court House Bluff, where 45 different species are represented. The great bulk of the localities show but little individual diversity in their fossils, the conditions of sedimentation during the formation of the deposits eliminating in most instances many of the more delicate types and in some cases even reducing them all to an unrecognizable condition. Among the most resistant and at the same time most common types are *Araucaria bladenensis* Berry and *Pistia Nordenskioldi* (Heer) Berry. Some other less common forms, such as *Andromeda novaecaesareae* Hollick, are almost equally capable of withstanding maceration. Evidently all of the plants were in the water a considerable time before fossilization, as the coriaceous leaves of *Araucaria bladenensis* Berry which successfully resisted destruction in the tritulating currents which cross-bedded the sands have lost all trace of their internal structure. Furthermore, the less resistant forms at Court House Bluff which owed their preservation to somewhat more favorable physical conditions, likewise show evidence of having been in the water a long time through the almost universal absence of apex and base and the frayed condition of the margin of many of the leaves, as commonly seen in the very abundant *Myrica*