

The marked similarity of the Black Creek fauna with that found in the Magothy-Matawan series is thus clearly shown. Although the differentiation of this fauna into faunules as described by Weller for the New Jersey region cannot be made, it is significant that such forms as *Belemnitella americana* (Morton), *Ostrea larva* Lam.,¹ *Exogyra costata* Say, and *Pecten tenuitestus* Gabb introduced at the opening of the Monmouth in New Jersey are likewise not found below the Peedee in North Carolina. The reappearance of the earlier faunal facies as a distinct faunule after the introduction of the *Belemnitella* fauna, as shown in the Redbank beds in New Jersey, has not been recognized farther south, a fact that is perhaps to be explained on the ground that the physical conditions necessary for the reintroduction of these forms did not again occur south of New Jersey. It is apparent, therefore, from the faunal evidence submitted that the Black Creek formation of North Carolina is to be correlated with the Magothy-Matawan formations of the northern Coastal Plain.

When a comparison is instituted with the Gulf Cretaceous, it is more difficult to correlate the deposits, since the range of the species in the Gulf series has never been determined with care. There is little doubt but that the Black Creek-Peedee faunas combined are the equivalent of the Magothy-Matawan-Monmouth of the northern part of the Coastal Plain and that these find their counterpart in the Eutaw-Selma-Ripley of the eastern Gulf.

The eastern Gulf faunas are being studied at the present time by Dr. L. W. Stephenson. An extensive fauna has been found at certain localities in the Eutaw formation as well as in the Lower Ripley (or Selma), and many of the forms which are limited to the Black Creek beds in North Carolina and the Magothy-Matawan of the region farther north are found to be likewise limited to the Eutaw and lower Ripley (or lower Selma). The studies of Stephenson have shown, however, that, of the 19 species common to, and confined to the Black Creek formation of the Carolinas and the Magothy-Matawan of New Jersey, 9 range upward into the upper Ripley, or what he has termed the *Exogyra costata* zone, of the eastern Gulf region. These are as follows: *Nucula percrassa* Conrad, *Nemodon brevifrons* Conrad, *Pteria petrosa* (Conrad), *Cymella bella* Conrad, *Cardium eufaulense* Conrad, *Schizodesma appressa* Gabb, *Cadulus obnutus* (Conrad), *Gyrodes crenata* (Conrad), and *Pugnellus densatus* Conrad. These species appear, therefore, to have a higher range in the Gulf region than they are known to have in the Atlantic coast region.

¹*Ostrea falcata* Morton, found in the upper Matawan, has been referred by some writers to this species.