to Florida the Duplin marl lies unconformably on older beds. In the Carolinas the underlying formations range in age from the Upper Cretaceous Black Creek formation to the middle Miocene Hawthorn formation. In Georgia and in Florida east of the Apalachicola the Hawthorn is the underlying formation. West of the Apalachicola the Duplin lies on the Chipola and Shoal River formations.

In Florida the Duplin includes the *Ecphora* and the *Cancellaria* zones of the Choctawhatchee formation of Mansfield. The *Ecphora* zone, which lies near the bottom of the Duplin, is believed to be equivalent to the deposit in South Carolina called the Raysor marl by Cooke (1936, p. 115), which is known from only one isolated place and which was separated from the Duplin because its fauna is a little older than the better-known Duplin fauna of Sumpter County, South Carolina, which represents the *Cancellaria* zone. It is recommended that use of the name "Raysor marl" be discontinued and that the Miocene bed at Raysor Bridge be included in the Duplin marl. The *Ecphora* zone is also equivalent to the lower part of the Yorktown formation of Virginia (Mansfield, 1936, p. 173). At most outcrops of the Duplin, the *Ecphora* zone apparently is only sparingly fossiliferous and is represented by a somewhat different, more calcareous facies.

The *Cancellaria* zone, which is somewhat younger than the *Ecphora* zone, has been correlated with the typical part of the Duplin marl of the Carolinas and with the upper part of the Yorktown formation of Virginia (Mansfield, 1936, p. 173). Therefore, the Duplin of Florida, which includes both zones, seems to be equivalent to the entire Yorktown formation of Virginia and to be somewhat more comprehensive than the Duplin of the Carolinas as interpreted by Mansfield, whose correlation was based almost exclusively on faunal studies.

The Duplin marl is overlain everywhere unconformably by Pliocene or Pleistocene deposits.

Paleogeography—The shore line of the late Miocene sea extended across the Southeastern States about as shown in figure 14. Although the sea transgressed across a land surface, it apparently did not reach inland as far as that of the preceding, middle Miocene invasion except on the Carolina Ridge,