

The former seems to be closely related to the Miocene in paleontologic characteristics, while the latter is more closely allied to the Pleistocene. The information in regard to the Neuse River localities is so meager that it seems inadvisable at the present time to establish a new Pliocene formation to include those beds. In fact, it seems highly probable that they may later be found to belong to the Pleistocene and correlated with the Simmons Bluff locality in South Carolina or the marine Pleistocene strata that underlie a considerable portion of the Great Dismal Swamp in Virginia and North Carolina. It is with these reservations that the Waccamaw is here made to include beds that seem to be somewhat unlike faunally. The Lafayette formation, which has been provisionally referred to the Pliocene, is discussed later.

EOCENE.

TRENT FORMATION.

Name.—The Trent formation receives its name from the Trent River, along which stream it is exposed from the vicinity of Trenton, Jones County, to near the junction of the Trent and Neuse rivers.

Definition.—The Trent formation consists of the basal beds of the Eocene in North Carolina, and is composed of calcareous marls, fossiliferous limestones, and fine-grained, siliceous sandstones deposited under marine conditions and extending inland from the coast south of the Neuse River to Wake, Moore, and Harnett counties.

The Trent strata rest upon an uneven inter- or post-Cretaceous erosion surface that at present has a gentle slope to the southeast. A few miles southeast of Raleigh and about 3 miles northeast of Spout Springs the deposits rest directly upon the uneven surface of the Lower Cretaceous rocks. These and some other small areas are isolated from the main body of the Trent and represent remnants that have resisted the agents of erosion which have removed strata of the same age that, probably, at one time covered a large portion of the Piedmont rocks in this State. Elsewhere the Trent formation overlies Cretaceous strata belonging to the Patuxent, Black Creek, and Peedee formations. In some places it can be plainly seen to occupy depressions in Cretaceous deposits, thus indicating the uneven erosion surface on which deposition took place when the Trent submergence occurred. One of the best examples of this unconformity is shown along the Neuse in the vicinity of Broadhurst Bridge (82¼ miles above New Bern). At this point exposures of Eocene limestone occur at several places for a distance of about 1½ miles with no Cretaceous strata showing beneath, but both upstream and downstream the marine Cretaceous rises to view.