

Along these reëntnants the Coharie and Sunderland plains are separated almost everywhere by sharply defined scarps. Striking examples may be noted along Cape Fear River in the vicinity of Fayetteville and along Neuse River in the vicinity of Goldsboro.

The beds of this formation rest as a relatively thin terrace covering in part upon the basement rocks, in part upon Patuxent (Lower Cretaceous) and Black Creek (Upper Cretaceous) beds, and possibly to a very limited extent upon Eocene beds. In that part of the belt extending from eastern Johnston County northward through Nash and Halifax counties the former relations exist, the basement rocks forming the immediately underlying materials. South of Neuse River the Patuxent and Black Creek formations are the principal underlying terranes, there probably being, however, very limited areas of immediately subjacent Eocene deposits.

The upper surface of the Coharie deposits forms a terrace plain more or less dissected, which slopes up from elevations of about 160 or 170 feet along its southeastern edge to elevations of about 230 or 235 feet along the foot of the escarpment which separates it from the Lafayette belt.

The materials of the formation consist of sandy clays, sands more or less argillaceous or arkosic, and gravels. Local variations occur, due to the character of immediately underlying materials from which the Coharie deposits were in part derived. In general, the Coharie deposits are finer than those of the Lafayette formation. Almost everywhere gravels or coarse sands constitute the basal beds. These are irregularly bedded, and in many places exhibit cross-bedding. In almost all sections where the deposits have been examined the coarser materials near the base grade up into unstratified argillaceous sands or sandy clays, and these in turn into a soil of gray sand or sandy or clayey loam. Over large areas the immediate surface materials from depths of a few inches to 2 or 3 feet consist of loose gray sands, producing very sandy soils.

At many places where the materials have been examined a considerable percentage of the pebbles in the gravel beds are smoothly rounded, although where the formation rests directly upon the crystallines, as it does over considerable areas to the north of Neuse River, there is always a large intermixture of angular quartz fragments. In some areas a considerable percentage of the smoothed pebbles are flat. This is notably true of the region to the southeast, south and southwest of Four Oaks in Johnston County. These flattened pebbles have been compared with pebbles from the beach at Atlantic City, N. J., and a