cealed from view by relatively thin overlapping Tertiary strata or by surficial Pleistocene terrace deposits, except as revealed by stream or artificial cuttings.

The Pleistocene deposits occur as a surficial covering of both the Tertiary and Cretaceous throughout the entire length of the belt. Except for certain Eocene occurrences in southern Wayne County and a number of Miocene occurrences in the vicinity of Elizabethtown and in southern Robeson County which probably exist as more or less detached basins on the surface of the Black Creek formation, the Pleistocene covering rests directly upon the Black Creek formation from Neuse River southward to the South Carolina State line. From northeastern Wayne County to the northern limit of the belt Miocene beds everywhere intervene between the Pleistocene terrace covering and the Black Creek formation, except along the stream borders, where in the process of formation of the lower terraces the Miocene beds were in places entirely removed.

The mass of the materials of this formation consist of thinly laminated, more or less ferruginous sands and clays. The character of the materials may vary abruptly, however, both horizontally and vertically, in some places the sand and at other places the clay predominating. At a number of places the clay has been observed to be replaced in a short distance horizontally by great lenses of medium-grained, highly cross-bedded sand. Not uncommonly the clay and sand laminæ are tipped at considerable angles from the horizontal, this position being due to current bedding. (See Plate V, B, opposite p. 120.) The clays are, as a rule, dark to black, due to the presence of carbonaceous matter, which explains the usual dark appearance of the exposures. The sands are commonly gray or light yellow, but may have a greenish tinge due to the presence of ferrous iron, or a slight content of glauconite. They are, as a rule, fine to medium grained in texture and almost universally contain a noticeable percentage of very fine flakes of muscovite mica. Thin lignite seams, consisting of finely comminuted vegetable particles, are very common. Pieces of lignite varying in size from small particles to that of twigs, branches, and even large trunks of trees, occur scattered irregularly through the materials of the formation. The larger pieces are in most cases flattened, but as a rule show the structure of the wood distinctly. Many of the smaller pieces appear water-worn, having their edges and ends rounded. Leaves have been found at many localities in a fairly good state of preservation, but in most cases they appear to have been subjected to maceration processes. Iron sulphide is in many places associated with the lignite, probably, as a rule, in