the form of marcasite, although possibly in some instances in the form of pyrite. This is found coating the lignite or filling the seams and cracks within the structure of the wood itself, and also in the form of irregular concretions of various sizes, not, as a rule, attaining very large dimensions. The surface which in the original position in the beds was covered with crystals of the mineral, is commonly corroded and rusty, as a result of exposure to the atmosphere. Amber has been observed at many places in the form of small particles not exceeding one-half inch in longest dimension.

Toward the upper part of the formation the laminated sands and clays become interstratified to greater or lesser extent with layers or lenses of greensand or marine clay. Likewise in the laminated portions themselves the thin sand partings and layers are noticeably glauconitic in places. These glauconitic beds constitute the transition deposits marking the passage from the more typical Black Creek formation into the greensands of the overlying Peedee formation.

The strike of the beds of this formation is approximately parallel to that of the Patuxent formation—that is, northeast-southwest.

On account of the cross-bedding and horizontal variation in the character of the materials it is impossible to determine the dip of the strata by tracing individual beds. From the position of the formation, however, between the gently inclined beds of the underlying Patuxent formation and the equally gently inclined marine beds of the Peedee formation above, it may be inferred that the dip is slight, probably not exceeding 20 feet to the mile and possibly much less.

Owing to the lack of data regarding the exact dip of the beds, it is impossible to estimate with any degree of accuracy the thickness of the formation. The width of the belt of outcrop in the Cape Fear River region is at least 30 miles. If the dip amounts to as much as 20 feet to the mile the thickness called for would be 600 feet. This estimate may be too large.

To the northward the formation becomes thinner rapidly, the thickness on the Neuse being perhaps less than one-half that on the Cape Fear; and on Contentnea Creek and Tar River still less. The fossil remains contained in the formation are for the most part those of plants. As above stated, lignite is common, being present as particles and pieces of all sizes from comminuted fragments up to large limbs or trunks, and fossil resin or amber is in many places associated with it. Leaf remains are common, having been collected up to the present time from over 20 localities. The great bulk of the material belongs to the more resistant types of plants, especially those capable of resisting