

The next exposure of importance is at Phoebus Landing below milepost 68, right bank. The materials here consist of laminated, lignitic, and pyritiferous sands and clays of the usual character, rising 4 or 5 feet above the water's edge. For a distance of 400 or 500 feet the overlying Pleistocene, consisting of clay loam, sand, and gravel, has been removed by erosion back from the water's edge some 50 or 60 feet, leaving a bench of dark clays of the Black Creek formation, which slopes gently toward the river. Imbedded in the clay and also lying loose upon the surface of the Black Creek beds occur numerous broken pieces of large dinosaur bones, coprolites, crocodilian teeth, turtle and gavial plates, and sharks' teeth. The bones are badly broken and are for the most part in a poor state of preservation. Imbedded in the clay are a number of logs of lignite and silicified wood. Among the vertebrate remains from this locality which are now in the U. S. National Museum, the following forms have been identified by C. W. Gilmore:

DINOSAURIA:

*Hypsibema crassicauda* Cope.

*Trachodon tripos?* Cope.

Carnivorous dinosaur (*Zatomis?*).

CROCODYLIDÆ:

*Thecachampsa rugosa* Emmons.

*Polydectes biturgidus* Cope.

TESTUDINATA:

*Taphrosphys dares* Hay.

*Amyda* sp.

At Big Sugar Loaf Landing, milepost 66, left bank, a fine section of Black Creek materials about one-fourth mile in length is exposed. The upper 20 feet of the section consists of very loose, white to buff, coarse and fine sand, with a gravel band at base, of Pleistocene age. The Black Creek materials underlying the loose sands vary widely in character along the bluff. They consist for the most part of dark laminated sands and clays. (See Plate V, B.) In places the clay predominates from top to bottom, while a short distance away at the same level occur great lenses of yellowish or buff sands, with very little clay. A large amount of lignite, in the form of large and small pieces of limbs, etc., in some instances teredo-bored, and comminuted particles, occurs in both the sands and clays. Some of the thin laminae are made up almost entirely of comminuted vegetable particles. Pieces of lignite resembling charred wood are not uncommon. Both sands and clays are in places coated with yellow sulphur stain. A few