

crocodiles, and remains of gigantic birds (*Gastornis*) have been found. The highest organisms are bones of mammalia, including the *Coryphodon*.

The Blackheath or Oldhaven Beds,²³ at the base of the London Clay, consist in W. Kent almost wholly of rolled flint-pebbles in a sandy base, which, as Mr. Whitaker suggests, may have accumulated as a bank at some little distance from shore. Though of trifling thickness (20-40 feet), they have yielded upward of 150 species of fossils. Traces of *Ficus*, *Cinnamomum*, and *Coniferæ* have been obtained from them, indicating perhaps a more subtropical character than the flora of the beds below, but without the Australian and American types which appear in so marked a manner in the later Eocene floras.²⁴ The organisms, however, are chiefly marine and partly estuarine shells, the gasteropods being particularly abundant (*Calyptræa trochiformis*, *Potamides* [*Cerithium*] *funatus*, *Melania inquinata*, *Natica infundibulum*, *Cardium plumstedense*, *Pectunculus terebratularis*, etc.).

The London Clay²⁵ is a deposit of stiff brown and bluish-gray clay, with layers of septarian nodules of argillaceous limestone. Its bottom beds, commonly consisting of green and yellow sands, and rounded flint-pebbles, sometimes bound by a calcareous cement into hard tabular masses, form in the London basin a well-marked horizon. The London Clay is typically developed in that basin, attaining its maximum thickness (500 feet) in the south of Essex. Its representative in the Hampshire basin, known as the "Bognor Beds," and exposed at Bognor on the Sussex coast and at Portsmouth, consists of clays, sands, and calcareous sandstones, thus differing somewhat, both lithologically and palæontologically, from the typical development in the London basin. The London Clay has yielded a long and varied suite of organic remains, that point to its having been laid down in the sea beyond the mouth of a large estuary, into which abundant relics of the vegetation, and even sometimes of the fauna, of the adjacent land were swept. According to Prof. T. Rupert Jones, the depth of the sea, as indicated by the foraminifera of the deposit, may have been

²³ Whitaker, Q. J. Geol. Soc. xxii. 1866, p. 412; "Geology of London," p. 214.

²⁴ J. S. Gardner, op. cit. pp. 2, 10.

²⁵ Prestwich, Q. J. Geol. Soc. vi. p. 255; x. p. 435; Whitaker, "Geology of London," p. 238.