sioned by the upper beds which form the surface of the land in the Vale of Thames, having been more excavated in some parts than in others.

As the London clay and plastic clay and sand, taken together, equal or exceed in thickness the beds of plastic clay, calcaire grossier, and gypsum in the Paris basin, the London clay may properly be regarded not as identical with the calcaire grossier and gypsum, but as their geological equivalent. While the beds of limestone and gypsum were depositing in the Paris basin, the London clay might be deposited in the London basin; and this may explain why many species of marine shells in the London clay are similar to those found in the calcaire grossier; but we nowhere discover the astonishing variety of species that occur in some of the strata of the calcaire grossier; nor have any bones of land quadrupeds, similar to those in the Paris basin, been found in the London clay. The two sides of the trough or basin in which the London clay and plastic clay were deposited, are formed on the north, by the range of chalk hills in Hertfordshire and the adjacent counties, and on the south, by the range of chalk hills in Surrey and Kent.

The relative geological position of the chalk, the plastic clay and sand, immediately upon it, and the upper beds of London clay covering the Vale of Thames, is represented in a small section at the bottom of the map of England. (Plate VI.) In some parts of the Vale of Thames, as at Hampstead, north of London, and near Cobham in Surrey, the London clay rises into hills, three hundred feet above the Vale of Thames, and is capped by a bed of sand, which has received the name of the upper marine sand. *a*, *a*, chalk, *b*, *b*, plastic clay, *c*, *c*, London clay, *d*, *d*, marine sand. From this small section, the geological student may form some idea of the devastating effects of mighty inundations, which have swept over the surface of the globe, and carried away considerable portions of the upper beds. The marine sand, *d*, *d*, which forms isolated caps on several of the hills in the Vale of Thames, was probably part of one continuous bed, which has been excavated with a portion of the subjacent London clay; such excavations and denudations are common phenomena in almost every country.

Balls of imperfect ironstone, called *septaria*, (of which Parker's cement is made,) are common in some parts of the London clay; branches and stems of trees, penetrated by the *Teredo navalis*, are found in it, and a species of resin, to which the name of *retinasphaltum* was given by Mr. Hatchett. Remains of turtles have been dug out of this clay at Highgate and Islington. Some bones of a crocodile were discovered by Mr. Parkinson, who considers this as a solitary instance of the occurrence of the remains of these animals in the London clay. In 1830, the head of a crocodile was found by E.