

considered as being characteristic of the London Clay; but it is not the only one of the English beds which contain them. †

By the preceding remarks and sections, it will appear that this formation is uniformly marked as consisting of a vast argillaceous deposit, containing subordinate beds of calcareous concretions, sometimes passing into solid rocks, or exhibiting some local variations from the occasional mixture of sand or calcareous matter in the mass of the clay: these local changes however never prevail to such a degree as to interfere materially with the general identity of character.

(b) *Mineral contents.* It contains interspersed through it, sulphuret of iron, || selenite, and occasionally phosphate of iron; hence, on account of its containing these salts, the water issuing from this stratum is unfit for domestic purposes. (G. T. vol. ii. p. 188). It is also suspected to contain sulphate of magnesia.\*

The fossil copal or resin discovered in excavating Highgate archway, though evidently derived from the vegetable kingdom, still in its present state may be classed among the mineral contents of this formation. Amber also is said occasionally to be found in the gravel about London, and is also found in the cliffs of brown clay, probably belonging to this stratum, which occur on the coast of Holderness in the south of Yorkshire. (Pennant's *Arctic Zoology*). It probably exists in this stratum, since it is so found in the contemporaneous formations of other parts of Europe, as Italy, France, and, especially Prussia, where it

† The septaria on the south of Walton on the coast of Essex, are very imperfect; they are collected into heaps on the Nore, and shipped to Harwich, where they are manufactured by government into a cement. (G. Notes.) Dale, in his history of Harwich, (p. 101), speaking of the septaria so abundantly found in the cliffs of the neighbourhood, says, 'with these the walls of the town were for the most parts built, and the streets generally pitched, they by ancient custom belonging to the town as their right.' The long cliff of the London Clay extending along the northern side of Sheppey Isle furnishes abundance of septaria, from which that excellent material for building under water and for stucco, is made, and which is known by the name of Parker's Cement. Being separated from the clay by the action of the sea, they are collected on the beach, and exported to various places where they are calcined and ground. (G. T. vol. ii. p. 193)

In Hampstead and Highgate hills in Middlesex, and in Boughton hill in Kent, the layers of septaria occur about 50 feet below the summit. (G. Notes.) In Shooter's hill they are very near the surface. At Epping, they were not found nearer than 100 feet beneath the grass, and continued to the depth of 300 feet. (P.)

|| The manufactory of sulphuret of iron from the pyrites contained in this stratum, is carried on in many places; as near Walton on the Suffolk coast, the Isle of Sheppey, &c. &c.

\* Said to have been noticed by the late Mr. Tennant. See (i) *Phænomena of water, &c.*