The Upper Marine Sand and *Sandstone* contains numerous marine shells; it has frequently a reddish colour; it is a thin bed, compared with the sandstone without shells, and is not of general occurrence. It may be studied at Montmartre. Whether any analogous beds have been found in England, is not well ascertained, but the beds of sand at Bagshot Heath, and in other situations resting on London clay, have been generally classed with the upper marine sandstone of the Paris basin. The Bagshot sands consist according to Mr. Warburton, of ocherous sand, foliated green clay, with green sand, and various coloured marls; a few marine shells have been found in this sand. The Crag of Norfolk has been often classed with the upper marine sand, but it probably belongs to a more recent series, and will be noticed at the end of the present chapter.

The marine sand and sandstone is, in some parts, covered with a bed of argillaceous and ferruginous marl, from three to fourteen feet in thickness, in which are imbedded irregular layers of compact silex or hornstone, full of pores and cavities, which give it a corroded and cellular appearance. It is this asperity of surface that renders this stone peculiarly fitted for mill-stones. The substance of mill-stone, when unmixed, is pure silex; it has, generally, a reddish or yellowish colour, but that of the best quality is nearly white. All the best mill-stones used in England are brought from this bed, and are known by the name of Burrh stones. There are no shells or organic remains in this bed.

Upper Freshwater Formation.—This formation, though extensively spread over many parts of the Continent, is scarcely known in England: it occurs in the Isle of Wight. In the Paris basin, it covers all the other tertiary strata, and is itself covered with vegetable soil. The upper freshwater formation is so called, because all the shells which it contains are analogous to freshwater shells: it consists, principally, of calcareous earth, and siliceous earth, sometimes separated, and sometimes intermixed. Calcareous earth, in the state of pure limestone, is the most common: large masses of freshwater silex are more rare. The silex occurs, sometimes, as a pure translucent flint, and sometimes, opaque, with a resinous fracture; sometimes, it approaches to the state of jasper, and sometimes, it has all the characters of mill-stone.

Freshwater limestone, in the vicinity of Paris, has generally, a greyish white, or a yellowish colour; it is sometimes, as tender as chalk, and sometimes, hard and compact, with a fine grain and conchoidal fracture: in the latter state, it is brittle, and breaks into sharp-edged fragments like flint. Some of this limestone, at a distance from Paris, particularly that of Château Landon, presents the character of a transition marble, and will receive a fine polish. Several of the basins with *jets d'eau* in the gardens of the Thuilleries are made of this marble. Many of the harder freshwater limestones, however, rapidly disintegrate on exposure to air and moisture, fall to