2. Lower Freshwater Beds. { Sometimes intermixed with Marine.
   a Marl.
   b Gypsum.
3. Upper Marine Formation.
   a Sand, Sandstone and Millstone without Shells.
   b Sandstone with Shells.
4. Upper Freshwater Formation.
   a Limestone - - } With freshwater Shells.
   b Siliceous Millstone - }

The tertiary strata supposed to be more recent, and called Quaternary, are nowhere observed covering the above formations, because they were deposited in detached seas or lakes: the evidence of these being more recent than the strata in the Paris and London basins, rests on the opinion, that the species of shells which they contain, are, in a large proportion, analogous to existing species.

Plastic Clay and London Clay.—These, with the various associated beds of sand, may properly be regarded as one formation, of which the plastic clay is the lowest member, resting on chalk. Near Paris, the plastic clay is a very thin bed; but in the south of France it acquires a great degree of thickness, and appears to comprise the upper argillaceous beds, or what we call the London clay: it is remarkable for the vegetable fossils and beds of lignite, which it frequently, but not invariably, contains. In England, in the lower beds of this formation, there are found beds of imperfect wood coal; but both in the plastic clay and the London clay, remains of marine animals are chiefly prevalent, though intermixed with some freshwater shells; whereas, on the Continent, beside the great quantities of fossil wood and wood coal found in the same argillaceous beds, there are numerous remains of freshwater shells, which render their title to be denominated marine formations more than doubtful. The beds of sand are sometimes of considerable thickness. By many geologists it is maintained that the beds of soft sandstone (called *Molasse*,) and of sandstone conglomerate (called *Nagel flue*, in Switzerland,) belong to this part of the tertiary formations. That some of these beds may be tertiary I will not deny; but I am fully convinced, that many beds called molasse, in Savoy, are covered by the Jura limestone and oolites, having repeatedly seen them in contact, and got specimens from each bed at the line of junction.*

* As the opinions of geologists have been much divided respecting the molasse, or soft sandstone, of Switzerland and Savoy, I shall here insert some observations upon it, given in the first volume of my Travels in the Tarentaise.

"The outer calcareous mountains on the western side of Savoy, all rest upon an immense formation of soft sandstone (molasse,) and are interstratified with it; and, so far from this sandstone being more recent than the limestone (as Saussure supposed,) it constitutes a considerable part of the bulk of these mountains that are