

south-east is impressed on the summits (*caps*), and in the direction of the principal hills. In one word, no country can afford more instruction respecting the last revolutions, which have terminated the formation of the present continents."

Though chalk is the foundation rock of the country, for a considerable extent round Paris, being covered by tertiary strata, it rises to the surface only in a few situations. The total thickness of the tertiary strata over the chalk, as given in an ideal section of the country, is nearly five hundred feet.\*

Many of the tertiary beds in the Paris basin are not found elsewhere, and therefore cannot be taken as types of other tertiary formations; and the lower bed, called the plastic clay, is but very imperfectly developed near Paris. In attempting to generalize the tertiary formations, a difficulty presents itself, if we are to class them by their zoological characters; for some of the formations, which in certain situations, contain, exclusively, the remains of marine animals, present, in other places, river or lake shells, with wood and the bones of land animals. It is, therefore, probable, that while the waters in one lake or basin might be saline, those in another lake might be fresh; and two cotemporaneous formations may hence contain very different organic remains.

The tertiary strata in England and in the north of France, may be arranged under four divisions, which are given below: after describing these, the more recent tertiary strata, called by some French geologists Quaternary, will be noticed in the following Chapter.

## TERTIARY FORMATIONS.

- |   |   |   |
|---|---|---|
| 1. Lower Marine Beds.   | - | { Sometimes intermixed with<br>freshwater beds. |
| <i>a</i> Argillaceous and Sandy deposits, Plastic Clay, Sand, London Clay |   | { <i>Argile et Grès tertiaires à lignites.</i>  |
| <i>b</i> Lower Marine Limestone   |   | <i>Calcaire grossier.</i>                       |

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\* The following ascending series of beds of the Paris basin was first given as a correct account of their succession: more extended observations have proved that the position of No. 3, or the Calcaire siliceux, is higher in the series.

1. Plastic Clay and Lower Sand.
2. Calcaire grossier.
3. Calcaire siliceux and Sandstone.
4. Gypseous Marl.  
Gypseous with Bones.  
Upper gypseous Marl.
5. Sandstone and Sand without Shells.  
Upper Marine Sandstone.  
Millstone without Shells.
6. Freshwater Limestone, including Marls, and Millstone, with freshwater Shells.
7. Alluvial Soil, ancient and modern, including Pebbles, Pudding-stone, Black Earth (*les marnes argilleuses noires*), and Peat.