and sandy mud, generally calcareous and ferriferous. This double effect is exhibited, with more or less distinctness, in all the great valleys of the centre and south of France. The valley of the Garonne is, in respect to these phenomena, classic ground, as it were.

As we leave the little city of Muret, three successive levels will be observed on the left bank of the Garonne. The lowest of the three is that of the valley, properly so called; while the loftiest corresponds to the plateau of Saint-Gaudens. These three levels are distinctly marked in the Toulousean country, which illustrates the diluvial phenomena in a remarkable fashion. The city of Toulouse reposes upon a slight eminence of diluvial formation. The flat diluvial plateau contrasts strongly with the rounded hills of Gascony and Languedoc. They are essentially constituted of a bed of gravel, formed of rounded or oval pebbles, and again covered with sandy and earthy deposits. The pebbles are principally quartzose, brown or black externally, mixed with portions of hard "Old Red" and New Red Sandstone. The soft earth which accompanies the pebbles and gravel is a mixture of argillaceous sand of a red or yellow colour, caused by the oxide of iron which enters into its composition. In the valley, properly so called, we find the pebbles again associated with other minerals which are rare at the higher levels. Some teeth of the Mammoth, and *Rhinoceros tichorhinus*, have been found at several points on the borders of this valley.

The small valleys, tributary to the principal valley, would appear to have been excavated secondarily, partly out of diluvial deposits, and their alluvium, essentially earthy, has been formed at the expense of the Tertiary formation, and even of the diluvium itself. Among other celebrated sites, the diluvial formation is largely developed in Sicily. The ancient temple of the Parthenon at Athens is built on an eminence formed of diluvial earth.

In the valley of the Rhine, in Alsace, and in many isolated parts of Europe, a particular sort of *diluvium* forms thick beds; it consists of a yellowish-grey mud, composed of argillaceous matter mixed with carbonate of lime, quartzose and micaceous sand, and oxide of iron. This mud, termed by geologists *loess*, attains in some places considerable thickness. It is recognisable in the neighbourhood of Paris. It rises a little both on the right and left, above the base of the mountains of the Black Forest and of the Vosges; and forms thick beds on the banks of the Rhine.

The fossils contained in diluvial deposits consist, generally, of terrestrial, lacustrine, or fluviatile shells, for the most part belonging