shells. The total thickness of the beds of *calcaire grossier*, near Paris, is about ninety feet.

No beds of limestone resembling the *calcaire grossier* of Paris, are found in the tertiary strata of England. The *calcaire grossier* in the departments of La Dordogne and La Gironde, and other parts of France, presents a considerable difference from that in the Paris basin. In Hungary, extensive strata of the *calcaire grossier* have been described by M. Beudant; they are, in every respect, analogous to the strata in the Paris basin, both in their mineral and zoological characters. The lower beds also are intermixed with shelly sand, and green particles, which bear a close resemblance to the shelly depositions in the plain of Lombardy. M. Humboldt thinks he discovered, in some parts of South America, a formation similar to the *calcaire grossier*.

*Calcaire siliceux* is composed of limestone, sometimes grey and compact, and sometimes tender and white: it is penetrated by silex in every direction, and in all its parts. According to the early opinion of M. Brongniart, the *calcaire siliceux* occupies the place of the *calcaire grossier* where the latter is wanting; others regard it as an upper formation above the middle gypsum. Some of the beds of the *calcaire siliceux* furnish mill-stones, and contain river shells. In this bed, the silicate of magnesia was discovered by M. Brongniart. The siliceous infiltrations sometimes form plates of chalcedony, and mammillated concretions of chalcedonic chert, coloured red, violet, and brown.

*Gypseous Marl* and *Gypsum*.—This remarkable formation occurs in detached hills along the course of the rivers Marne and the Seine; it is supposed to have extended originally as one continuous bed from east to west, twenty five leagues in length and eight in breadth: its greatest thickness is about two hundred feet.

The gypsum formation consists of alternating beds of gypsum and argillaceous and calcareous marl, which are regularly arranged, and preserve the same order of succession wherever they have been examined. The gypsum forms three distinct masses. The lowest consists of thin strata of gypsum, containing crystals of selenite, which alternate with strata of solid calcareous marl, and with argillaceous shale. The middle is like the lowest mass, except that the strata of gypsum are thicker, and the beds of marl are not so numerous; it is chiefly in this mass that fossil fish are found. The uppermost mass is the most remarkable and important of all; it is in some parts more than seventy feet thick; there are but few beds of marl in it; the lower strata of gypsum in this mass have a columnar structure: the gypsum is pure, and finely granular; it has a light yellowish brown colour, which might perhaps more properly be called a dirty white. In this upper mass of gypsum, the skeletons and scattered bones of birds and unknown quadrupeds are discovered; sometimes, they are found in the solid gypsum, and some-