

The Gault attains a thickness of about 100 feet on the south-east coast of England. It extends into Devonshire, Mr. Sharpe considering the Black Down beds of that country as its equivalents. It shows itself in the Departments of the Pas-de-Calais, the Ardennes, the Meuse, the Aube, the Yonne, the Ain, the Calvados, and the Seine-Inférieure. It presents very many distinct mineral forms, among which two predominate: green sandstone and blackish or grey clays. It is important to know this formation, for it is at this level that the Artesian waters flow in the wells of Passy and Grenelle, near Paris.

The *glaucous* chalk, or Upper Greensand, which is represented typically in the departments of the Sarthe, of the Charente-Inférieure, of the Yonne and the Var, is composed of quartzose sand, clay, sandstone, and limestone. In this formation, at the mouth of the Charente, we find a remarkable bed, which has been described as a submarine forest. It consists of large trees with their branches imbedded horizontally in vegetable matter, containing kidney-shaped nodules of amber, or fossilised resin.

The *Turonian* beds are so named because the province of Touraine, between Saumur and Montrichard, possesses the best-developed type of this strata. The mineralogical composition of the beds is a fine and grey marly chalk, as at Vitry-le-François; of a pure white chalk, with a very fine grain, slightly argillaceous, and poor in fossils, in the Departments of the Yonne, the Aube, and the Seine-Inférieure; granular tufaceous chalk, white or yellowish, mixed with spangles of mica, and containing Ammonites, in Touraine and a part of the Department of the Sarthe; white, grey, yellow, or bluish limestone, inclosing Hippurites and Radiolites. In England the Lower Chalk passes also into Chalk Marl, with Ammonites, and then into beds known as the Upper Greensand, containing green particles of glauconite, mixed, in Hampshire and Surrey, with much calcareous matter. In the Isle of Wight this formation attains a thickness of 100 feet. The *Senonian* beds take their name from the ancient *Senones*. The city of Sens is in the centre of the best-characterised portion of this formation; Epernay, Meudon, Sens, Vendôme, Royau, Cognac, Saintes, are the typical regions of the formation in France. In the Paris basin, inclusive of the Tours beds, it attains a thickness of upwards of 1,500 feet, as was proved by the samples brought up, during the sinking of the Artesian well, at Grenelle, by the borings.

In its geographical distribution the Chalk has an immense range; fine Chalk of nearly similar aspect and composition being met with in all directions over hundreds of miles, alternating in its lower beds