

about 1,200 feet thick in Dorsetshire, Hampshire, &c. The Lower Chalk usually contains no flints and, as already stated, is somewhat marly at the base, while the Upper Chalk is interstratified with many beds of interrupted flints. These are of irregular form, and lie in layers in the lines of bedding. A great proportion of them are stated by Dr. Bowerbank to be silicified Sponges, which often inclose other organic bodies, such as shells, fragments of Belemnites, &c.; others of large size, called Paramoudras, which are rare, stand vertically across the beds. These sometimes resemble, in general form, the large cup-shaped sponges of the Indian Ocean *Alcyonium*, or Neptune's cup.

As a whole, the Chalk dips gently from its western escarpment to the east and south, and round the Wealden area to the south and north, underlying the Tertiary strata of the Hampshire and London basins, and reappearing with precisely the same characters on the coast of France. Its area in Europe and Asia is immense. In the north of Ireland, between Belfast and the Giant's Causeway, there are patches of very hard Chalk on the coast, overlaid by columnar basalt of Miocene age. The great superincumbent pressure of these masses of igneous rocks has hardened the chalk, and therefore they have not, as is usually supposed, been altered by the heat of overflowing lavas, except possibly for an inch or two at the immediate point of junction, but this is somewhat foreign to our present subject. Traces of Chalk and Upper Greensand occur at Bogin-garry, &c., in Aberdeenshire. These consist partly of chalk flints, partly of sandstone, possibly in place, and sufficient to show that Cretaceous rocks, which have been removed by denudation, probably once spread over that country. Cretaceous strata, discovered by Mr.