

cliffs we have the chalk in its very purest form, and that in various parts of the world it assumes a very different character, and contains carbonate of lime in very different proportions. Mr. Prestwich instances a bed 28 to 30 feet thick of the white chalk (Terrain Senonien) of Touraine, in which carbonate of lime is entirely absent.

There can be no doubt whatever that we have forming at the bottom of the present ocean, a vast sheet of rock which very closely resembles chalk; and there can be as little doubt that the old chalk, the cretaceous formation which in some parts of England has been subjected to enormous denudation, and which is overlaid by the beds of the tertiary series, was produced in the same manner, and under closely similar circumstances; and not the chalk only, but most probably all the great limestone formations. In almost all of these the remains of foraminifera are abundant, some of them apparently specifically identical with living forms; and in a large number of limestones of all ages Dr. Gümbel has detected the characteristic 'coccoliths.'

Long before commencing the present investigation, certain considerations had led me to regard it as highly probable that in the deeper parts of the Atlantic a deposit, differing possibly from time to time in composition but always of the same general character, might have been accumulating continuously from the cretaceous or even earlier periods to the present day. This view I suggested in my first letter to Dr. Carpenter urging the exploration of the seabed; and from the first it has had the cordial support of my colleague, whose intimate acquaintance with