

Cretaceous period," and that the "ooze" now forming at great depths in the North Atlantic is merely a continuation in time of the great and well-known deposit of the white chalk. The points of resemblance by which this is sought to be established, are these:—1. The Atlantic "ooze" is a whitish or grayish-looking mud containing about sixty per cent. of carbonate of lime, with from twenty to thirty per cent. of silica, and a variable quantity of alumina. When dry, and especially if consolidated, it would, therefore, approximate more or less closely in mineral composition and texture to white chalk. 2. The abyssal mud of the Atlantic is to a very large extent composed of the microscopic shells of *Foraminifera*, some of which are specifically identical with cretaceous forms; whilst, as shown by Mr. Lonsdale, the chalk is mainly composed of the debris of these minute organisms. 3. The Atlantic "ooze" contains numerous siliceous sponges, in many respects comparable with the sponges which are so characteristic of the Cretaceous period. 4. The Atlantic "ooze" contains numerous Echinoderms, especially sea-urchins and Crinoids, such as abounded in the chalk period; whilst one of the latter is referable to a Cretaceous type, hitherto believed to be extinct. 5. We have reason to suppose that the conditions under which the white chalk was formed, were very similar to those now present in the Atlantic at great depths.

On the other hand, as pointed out by Sir Charles Lyell and Mr. Prestwich, the difference between the Atlantic ooze and the white chalk are; to say the least of it, quite as numerous and as weighty as the resemblances:—1. The white chalk differs to an important extent from the "ooze" in mineral composition; for it is composed of from at least eighty up to as much as ninety nine per cent. of pure carbonate of lime. 2. Little stress can be laid upon the occurrence of identical species of *Foraminifera* in both deposits; for it is well known that such lowly-organized forms of life have an extraordinary power of persistence, surviving geological revolutions which are fatal to higher organisms. 3. The presence of some Cretaceous forms in the Atlantic ooze is far more than counterbalanced by the total absence of all those fossils which may be considered pre-eminently the fossils of the Cretaceous period; such as the various forms of *Cephalopoda*, especially the *Ammonitidae*, and the Bivalve Molluscs.

Mr. Prestwich, therefore, concludes that although it is probable