to microscopical examination, many observers were struck with the great similarity between its composition and structure and that of the ancient chalk. I have already described the general character and the mode of origin of the great calcareous deposit which seems to occupy the greater part of the bed of the Atlantic. If we take a piece of the ordinary soft white chalk of the south of England, wash it down with a brush in water, and place a drop of the milky product on the slide of a microscope, we find that it consists, like the Atlantic ooze, of a large proportion of fine amorphous particles of lime, with here and there a portion of a *Globigerina* shell, and more rarely one of these shells entire, and a considerable proportion—in some examples coming up to nearly one-tenth of the whole—of 'coccoliths,' which are indistinguishable from those of the ooze. Altogether two slides—one of washed down white chalk, and the other of Atlantic ooze—resemble one another so clearly, that it is not always easy for even an accomplished microscopist to distinguish them. The nature of chalk can also be well shown, as has been done by Ehrenberg and Sorby, by cutting it into thin diaphanous slices, when the mode of aggregation of the different materials can be readily demonstrated.

But while successive observers have brought out more and more clearly those resemblances,—sufficiently striking to place it beyond a doubt that the chalk of the cretaceous period and the chalk-mud of the modern Atlantic are substantially the same,—a more careful investigation shows that there are very important differences between them. The white chalk is very homogeneous, more so perhaps than any other