

rapidly decreased in number on the surface and at the bottom as we progressed southward. The proportion of their remains in the globigerina ooze near the Crozets and Prince Edward Island was comparatively small; and to this circumstance the extreme cleanness and the unusual appearance of being composed of *Globigerinæ* alone were probably mainly due. We found the same kind of ooze, nearly free from coccoliths and rhabdoliths, in what may be considered about a corresponding latitude in the north, to the west of Faröe.

The next seven soundings, extending along the section to a distance of about 1500 miles from Teneriffe, and at depths varying from 3150 to 2575 fathoms, are marked on the chart "red clay." According to our present experience, the deposit of globigerina ooze is limited in the open oceans—such as the Atlantic, the Southern Sea, and the Pacific—to water of a certain depth, the extreme limit of the pure characteristic formation being placed at a depth of somewhere about 2250 fathoms.

Crossing from these shallower regions occupied by the ooze into deeper soundings, we find universally that the calcareous formation gradually passes into, and is finally replaced by, an extremely fine pure clay, which occupies, speaking generally, all depths below 2500 fathoms, and consists almost entirely of a silicate of the red oxide of iron and alumina. The clay is often mixed with other inorganic matter, particularly with particles, graduating up to the size of large nodules, of peroxide of manganese; and in volcanic regions, or in their neighborhood, with fragments of pumice. The transition is very slow, and extends over several hundred fathoms of increasing depth; the shells gradually lose their sharpness of outline, assume a kind of "rotten" look and a brownish color, and become more and more mixed with a fine amorphous red-brown powder, which increases steadily in proportion until the lime has almost entirely disappeared. This brown matter is in the finest possible state of subdivision, so fine that when, after sifting it