

ent the tow-net, which consists simply of a conical bag of muslin or bunting attached to an iron ring, is constantly open—descending, dragging along, and ascending. If worked on the surface, there is of course neither difficulty nor question; but if it be brought up from 500 fathoms, at which depth it has been towing for some time, the net may be supposed to contain chiefly the species living at that depth; but mixed with these there must be a considerable number of more superficial forms, some taken when the net was going down with its open mouth downward, and many more captured during its long ascent of half a mile through the upper layers. We can not, therefore, as yet say with certainty whether the surface species live in the deeper belts or not, but we are justified in concluding that species which are absent on the surface, and present only when a certain depth has been gained, are special to that and probably to greater depths. If, again, species differing both from those procured on the surface and at intermediate depths are found in the bottom deposits, it is a legitimate inference that these live below the zone of our deepest tow-net observations.

Now, if it be the case that ooze-forming foraminifera are confined to an upper layer of say not more than 500 fathoms in thickness, the supply of their shells, and consequently the supply of the red clay, which, according to our view, is to a great extent the product of their decomposition, must be pretty constant over the area where foraminifera abound; while, on the other hand, if the Radiolarians live at all depths in the sea, the number of their skeletons falling to the bottom at one place must increase with the increasing depth of the water; and it becomes quite intelligible that, in a bed which is being formed at the prodigious depth of five and a half nautical miles, the tests of the Radiolarians should so preponderate over the red clay as to entirely alter the character of the deposit. I must repeat, however, that it must not be supposed that these deep-sea formations which, from their general appearance, we put down on