Concluding Remarks.

In the Introduction I have given a sketch of the structure of the Actiniaria, and also at the same time a short summary of the most important morphological results furnished by the Challenger material; all that remains is for me to discuss how far the results of the Challenger expedition have furthered our knowledge of the manner in which the group in question is distributed. I have therefore made out a tabular survey (p. 130) of the Actiniæ described and their habitats, and have also stated whether or not they are new species and genera. It follows, of course, that I have only enumerated as new, such species as have been actually described for the first time by Moseley and myself, whilst I have included among the known animals those forms to which, since we know their anatomy more thoroughly, it has been necessary to give new names, especially new generic names.

The table in question gives no determinate results as to the geographical distribution of the animals; it was, indeed, evident from the first that the Challenger material was neither sufficient nor suitable for this purpose. The number of hauls made by the dredge was utterly disproportioned to the vast tracts traversed by the ship in her voyage round the world; the individual faunatic regions especially have been very irregularly examined. As the ship was mostly on the high seas, the coasts, which would have furnished the richest spoils, were of necessity almost entirely neglected, and in this way we only find one littoral species in the list.

On the other hand, we must take into special consideration the manner in which the Actiniæ are distributed in the different depths of sea. How far is the number of the Actiniæ diminished by the increase of the depth? How far does the deep-sea fauna vary from the fauna of the coasts and the shallows? Has life in the depths exercised, as in other cases, a visible influence on the organisation of the animal? These are questions which may be partially solved from the tolerably wide range of material furnished by the Challenger collection.

As a rule the number of the Actiniæ decreases as the depth increases; up to the present they have not been observed even in the Challenger expedition at a depth of over 2900 fathoms, though the decrease does not take place so rapidly as might be expected. In proof of this I contrast the results given by the hauls with the dredge in 10–500 fathoms, with those in 500–2900 fathoms. The net was let down ninety-seven times in depths of 10–500 fathoms, and eleven times with some result, *i.e.*, with the capture of some twenty specimens distributed over thirteen different species. There were one hundred and sixty-five hauls with the dredge at depths of 500–2900 fathoms, fourteen of these furnished about sixty specimens, representing twenty-one different species. These numbers cannot of course be compared off hand, as the hauls made by the dredge in great depths