

seas by ordinary means, to depths of from 300 to 400 fathoms, and they found, contrary to the general impression of the British school, that at these depths there was no lack of animal life, and that further, many of the animal forms were new and unfamiliar, while many showed a much closer relation to the inhabitants of the seas of former geological periods than to the marine fauna of the present day.

In the year 1868, when the question was thus undecided, Dr. Carpenter and I, looking at the matter chiefly as one of scientific interest, but at the same time fully recognizing the practical importance of many of the results of such an investigation, induced the Council of the Royal Society to apply to the Admiralty to place means at our disposal to go into the whole question of the physical and biological conditions of the seabottom in the neighborhood of the British Islands, but beyond the range of ordinary boat work. The Admiralty assented, and, in the autumn of 1868, through about two months of wretched weather, we knocked about in the *Lightning*, a somewhat precarious little gun-boat, between Scotland and Färoe.

Nine tolerable days fortunately checkered the uniformity of the heavy weather, and on these we registered some remarkable results.

We found that there was abundance of animal life at the bottom of the sea to a depth of 600 fathoms at least, and that the life there was not confined to the more simply organized animals, but extended very irrespectively through all the invertebrate classes, and even included some true bony fishes. We found that the general character of the fauna at these depths was not such as to indicate a mere gradual disappearance of the known fauna of the British ocean, but was in many respects peculiar, and presented many characters in common with the faunæ of older times. We found that, instead of having a constant and universal temperature of 4° C. beyond a certain depth, as had previously been very generally supposed to be