

1°·6 C. is maintained from a depth of 2000 fathoms to the bottom.

All the facts of temperature distribution in the Atlantic appear to favor the view that the entire mass of Atlantic water is supplied by an indraught from the Southern Sea, moving slowly northward, and interrupted at different heights by the continuous barriers which limit its different basins; but this involves the remarkable phenomenon of a vast body of water constantly flowing into a *cul-de-sac* from which there is no exit. When I suggested this view some years ago, I was asked, very naturally, how it was possible that more water could flow into the Atlantic than flowed out of it, and at that time I could see no answer to the question, although I felt sure that a solution must come some day. Now it seems simple enough; but in order to understand the conditions fully, I would ask my readers to recall the appearance of the Atlantic—and of the Pacific also, which is under exactly the same conditions—not on a map on Mercator's projection, where the northern and southern portions are necessarily greatly distorted, but on a terrestrial globe, or on such a representation of part of a globe as we have in the frontispiece to this volume. The earth may be divided into two halves, aptly called by Sir Charles Lyell the land and the water hemisphere, one of which contains the greater part of the ocean, while the other includes almost all the land, with the exception of Australia. On the globe one sees much more clearly than on a map that the Atlantic is a mere tongue, as it were, of the great ocean of the water hemisphere stretching up into the land. The Arctic Ocean, with which it is in connection, is, again, a very limited sea, and nearly land-locked. The North Pacific is another gulf from this water hemisphere, but one vastly wider and of greater extent; while the South Pacific is included within the water hemisphere.

Although from the meridional extension of the continents to the southward, the water of the Atlantic is, as I have shown,