water taken up by Schayer on his return from Van Diemen's Land (south of the Cape of Good Hope, in 57° latitude, and under the tropics in the Atlantic) show that the ocean in its ordinary condition, without any apparent discoloration, contains numerous microscopic moving organisms, which bear no resemblance to the swimming fragmentary silicious filaments of the genus Chætoceros, similar to the Oscillatoriæ so common in our fresh waters. Some few Polygastria, which have been found mixed with sand and excrements of penguins in Cockburn Island, appear to be spread over the whole earth, while others seem to be peculiar to the polar regions.*

We thus find from the most recent observations that animal life predominates amid the eternal night of the depths of ocean, while vegetable life, which is so dependent on the periodic action of the solar rays, is most prevalent on continents. The mass of vegetation on the Earth very far exceeds that of animal organisms; for what is the volume of all the large living Cetacea and Pachydermata when compared with the thickly-crowded colossal trunks of trees, of from eight to twelve feet in diameter, which fill the vast forests covering the tropical region of South America, between the Orinoco, the Amazon, and the Rio da Madeira? And although the character of different portions of the earth depends on the combination of external phenomena, as the outlines of mountains—the physiognomy of plants and animals—the azure of the sky—the forms of the clouds—and the transparency of the atmosphere—it must still be admitted that the vegetable mantle with which the earth is decked constitutes the main feature of the picture. Animal forms are inferior in mass, and their powers of motion often withdraw them from our sight. The

* See Ehrenberg's treatise *Ueber das kleinste Leben im Ocean*, read before the Academy of Science at Berlin on the 9th of May, 1844.

[Dr. J. Hooker found Diatomaceæ in countless numbers between the parallels of 60° and 80° south, where they gave a color to the sea, and also to the icebergs floating in it. The death of these bodies in the South Arctic Ocean is producing a submarine deposit, consisting entirely of the silicious particles of which the skeletons of these vegetables are composed. This deposit exists on the shores of Victoria Land and at the base of the volcanic mountain Erebus. Dr. Hooker accounted for the fact that the skeletons of Diatomaceæ had been found in the lava of volcanic mountains, by referring to these deposits at Mount Erebus, which lie in such a position as to render it quite possible that the skeletons of these vegetables should pass into the lower fissures of the mountain, and then passing into the stream of lava, be thrown out, unacted upon by the heat to which they have been exposed. See Dr. Hooker's Paper, read before the British Association at Oxford, July, 1847.]—*Tr.*