

matter, in solution and in suspension. Its sources are obvious. All rivers contain a considerable quantity. Every shore is surrounded by a fringe which averages a mile in width, of olive and red seaweed. In the middle of the Atlantic there is a marine prairie, the 'Sargasso sea,' extending over three millions of square miles. The sea is full of animals, which are constantly dying and decaying. The amount of organic matter derived from these and other sources by the water of the ocean is very appreciable. Careful analyses of the water were made during the several cruises of the 'Porcupine' to detect it and to determine its amount, and the quantity everywhere was capable of being rendered manifest and estimated, and the proportion was found to be very uniform in all localities and at all depths. Nearly all the animals at extreme depths—practically all the animals, for the small number of higher forms feed upon these—belong to one sub-kingdom, the Protozoa; whose distinctive character is that they have no special organs of nutrition, but absorb nourishment through the whole surface of their jelly-like bodies. Most of these animals secrete exquisitely formed skeletons, some of silica, some of carbonate of lime. There is no doubt that they extract both these substances from the seawater; and it seems more than probable that the organic matter which forms their soft parts is derived from the same source. It is thus quite intelligible that a world of animals may live in these dark abysses, but it is a necessary condition that they must chiefly belong to a class capable of being supported by absorption through the surface