

The fauna becomes more uniform over a larger area, and is manifestly one of which the shallower water fauna of some colder region is to a great extent a lateral extension. Going still deeper, the severity of the cold increases until we reach the vast undulating plains and valleys at the bottom of the sea, with their fauna partly peculiar and partly polar—a region the extension of whose extreme thermal conditions only approaches the surface within the arctic and antarctic circles.

We have as yet very little exact knowledge as to the distance to which the sun's light penetrates into the water of the sea. According to some recent experiments which will be referred to in a future chapter, it would appear that the rays capable of affecting a delicate photographic film are very rapidly cut off, their effect being imperceptible at the depth of only a few fathoms. It is probable that some portions of the sun's light possessing certain properties may penetrate to a much greater distance, but it must be remembered that even the clearest sea-water is more or less tinted by suspended opaque particles and floating organisms, so that the light has more than a pure saline solution to contend with. At all events it is certain that beyond the first 50 fathoms plants are barely represented, and after 200 fathoms they are entirely absent. The question of the mode of nutrition of animals at great depths becomes, therefore, a very singular one. The practical distinction between plants and animals is, that plants prepare the food of animals by decomposing certain inorganic substances which animals cannot use as food, and recombining their elements into organic compounds