to definite marine areas, whereas in reality the areas of distribution of the different species encroach so upon each other, that a division of this kind is hardly practicable. This is true, not merely of the altering flora of ocean-currents, but also of the attached flora along the coasts and on land. Unless the areas are exceedingly remote from one another, the forms common to the areas usually exceed those peculiar to each area. Cleve's types, on the contrary, have no species in common, and therefore do not record the species in any definite area, but merely group them in accordance with their conditions of existence. If we adopt his principles we can certainly obtain a biological division of the species that is satisfactory in the main; but when we come to details it will, in some cases, be difficult to decide whether a species is to be assigned to this or to that type.

Biogeographically, the pelagic algæ may be divided, firstly according to the latitudes in which they are distributed, which is generally tantamount to saying according to their need of warmth and light, and secondly according to their occurrence along the coasts or in the open sea. This latter classification gives us the most distinct boundaries, and we will therefore consider it first. There is a whole series of species which unmistakably belong to coastal waters, and occur there in myriads at definite seasons of the year. Out in the ocean we do not find them, except when salinities or other physical properties indicate that they must have drifted from the coast. These have been termed neritic on the suggestion of Haeckel. Opposed to them are the oceanic species, which belong to the ocean and float over profound depths, from which occasionally they are swept by the currents into coastal seas and there usually perish.

Haeckel.

Neritic species.

It is possible to imagine various reasons why the neritic species keep in the vicinity of the coasts. Some may derive benefit from the low or fluctuating salinities, which enable them to outstrip the more easily affected forms. Others, perhaps, require the abundant supply of nourishment from the land in order to grow and multiply as fast as such organisms should do. There may be other species, again, whose development-history makes it necessary for them to remain on the bottom at one stage of their existence, like the hydroid medusæ and all pelagic young-stages of littoral animals. Most of the neritic algæ have a bottom-stage, in so far as they form resting-spores