

addition to the above provinces, there are several others not yet well determined in the Pacific Ocean and elsewhere. There are, however, many species which range through several of these geographical regions of subaqueous vegetation, being common to very remote countries; as, for example, to the coasts of Europe and the United States, and others, to Cape Horn and Van Diemen's Land, the same plants extending also for the most part to the New Zealand sea. Of the *species* strictly antarctic (excluding the New Zealand and Tasmanian groups) Dr. Hooker has identified not less than a fifth part of the whole with British Algæ!

It must always be borne in mind, that the distinctness alluded to between the provinces, whether of subaqueous or terrestrial plants, relates strictly to *species*, and not to forms. In regard to the numerical preponderance of certain forms, and many peculiarities of internal structure, there is usually a marked agreement in the vegetable productions of districts placed in corresponding latitudes, and under similar physical circumstances, however remote their position. Thus there are innumerable points of analogy between the vegetation of the Brazils, equinoctial Africa, and India; and there are also points of difference wherein the plants of these regions are distinguishable from all extra-tropical groups. But there is a very small proportion of the entire number of species common to the three continents. The same may be said, if we compare the plants of the United States with that of the middle of Europe: the species are distinct, but the forms are often so analogous, as to have been styled "geographical representatives." There are very few *species* of phænogamous plants, says Dr. J. Hooker, common to Van Diemen's Land, New Zealand, and Fuegia, but a great many *genera*, and some of them are confined to these three distant regions of the southern hemisphere, being in many instances each severally represented by a single species. The same naturalist also observes that the southern temperate as well as the antarctic regions, possess each of them representatives of some of the genera of the analogous climates of the opposite hemisphere; but very few of the species are identical unless they be such as are equally diffused over other countries, or which inhabit the Andes, by the aid of which they have evidently effected their passage southwards.

*Manner in which plants become diffused. — Winds.* — Let us now consider what means of diffusion, independently of the agency of man, are possessed by plants, whereby, in the course of ages, they may be enabled to stray from one of the botanical provinces above mentioned to another, and to establish new colonies at a great distance from their birthplace.

The principal of the inanimate agents provided by nature for scattering the seeds of plants over the globe, are the movements of the atmosphere and of the ocean, and the constant flow of water from the mountains to the sea. To begin with the winds: a great number of seeds are furnished with downy and feathery appendages, enabling them, when ripe, to float in the air, and to be wafted easily to great