

throwing the light of past history on the puzzle of existing relations, and by analysing the various limits of range, and the various modes of dispersal, which hinder or help the diffusion of organisms.

Since the publication of Wallace's book there have been many detailed studies of particular groups, *e.g.* of fishes by Günther; many detailed studies of particular regions, *e.g.* of the Philippines by Semper; and many criticisms relating both to the regions and the factors recognized by Wallace.

The study of the geographical distribution of plants began with Humboldt (1805), who not only described the peculiar "Physiognomik" of various regions, but sought an explanation of the peculiarities by reference to climate and soil —two undoubted factors which botanists have never ignored and have often exaggerated.

Phyto-Geo-
graphical
Regions.

At the meeting of the British Association at Cambridge in 1845 Forbes directed attention to the importance of past geological changes, insulations, changes of level, &c., in relation to the distribution of plants.

Another important factor was indicated by Unger in 1852, who was the first to connect the present distribution of plants with that of previous ages as disclosed in the rock record. In 1855 Alph. de Candolle expounded the same idea, as Engler has also done in more recent years with conspicuous success.

As in regard to animals, so with plants, numerous suggestions have been made as to the mapping out of the earth, the various "systems", as they are called, differing from one another in emphasizing different factors.

Humboldt classified according to geographical zones and sea-level, and Meyen followed him in this simple method.

Schouw (1823) introduced a new idea of taking statistics as to the relative predominance of particular types in different areas, distinguishing the *Cinchona* realm, the *Magnolia* realm, and so on to the number of twenty-five, many of which have been confirmed as natural by subsequent workers.