

Australia). If the term Empire is applicable to the primary divisions, that of Kingdoms may be accepted for the secondary. I have a few observations to offer upon these seven kingdoms:—

I. *The north temperate Kingdom of the Old World.*—This coincides with the Palæarctic zoological region of Dr. Sclater, with the exception that it includes Greenland, the Flora of which, as I have elsewhere shown, is more European than American. In detail of circumscription, it, with this exception, follows exactly the sinuous course traced for it by Wallace in the third chapter of 'Island Life.'

In attaching greater importance than do Mr. Hemsley and other botanists to the difference between north temperate Floras of the Old and New Worlds, I am influenced by a somewhat close study of the elements of each, together with impressions gathered from journeys in both continents. I am aware that such impressions are often quite untrustworthy, and must be so if not supported by adequate data derived from a comparison and contrast of the plants constituting the Floras of the two areas.

The chief arguments for the uniting these kingdoms into one are the prevalence of coniferous and cupuliferous and other trees of the same genera in both, that a considerable number of other genera are common to both, and that the Floras of their higher latitudes are practically one. But it would not be difficult to give examples of similar tropical features which prevail over the continents of the Old and New Worlds, and which might with much reason be adduced in favour of uniting them into one region, reinforced as the argument would be by the great number of genera (more by far than is usually supposed) that are common to the tropics of the Old and New Worlds. Having regard to the composition of the Flora of the two northern temperate regions, if the Floras of their middle and southern temperate latitudes are taken into account, the botanical differences between them appear to me far to outweigh the resemblances. Of the forest-trees scarcely one is conspecific with an Old-World one. Of the 10,000 (or thereabouts) known temperate North-American flowering plants not more than 700 are common to Europe, and these include upwards of 150 water and marsh plants of more or less mundane distribution; and there are nearly fifty natural orders in temperate America that are wanting in Europe. Again, taking Boissier's 'Flora Orientalis' as a standard of comparison with that of temperate North America, I find that of 1100 oriental genera less than 400 are American, and of about 9500 species less than 350 are American. In Gray's 'Flora of the Eastern United States,' of nearly 2300 species not 370 are European. In Coulter's 'Flora of the Rocky-Mountain Region,' out of about 1800 species about 300 alone are European, and of the Californian Flora of 2700 species there are not 230 European.

But these statistical data, important as they are, are far less so than what is supplied by the genera and species themselves. The generic, tribal, and specific differences between the Liliaceæ, Labiataæ, Scrophularineæ, Umbelliferæ, Onagraceæ, Leguminosæ,