

constitute a prominent part of the vegetation, and specially characterize the dry districts. Such highly characteristic Mexican orders as the Cactaceæ, Labiatae (*Salvia*), Amaryllidaceæ (*Agave* and *Furcraea*), Aroideæ (*Anthurium*, *Philodendron*), and Liliaceæ (*Yucca* and *Dasylyrion*) are as numerous in species as they are prominent in the scenery

Turning to the Australian flora we find almost complete agreement between the numerical strength of the natural orders in species, and their degrees of domination in the composition of the vegetation. The Leguminosæ stand at the head with upwards of a thousand species, including the highly characteristic phyllodineous Acacias, numbering three hundred species, and prominently pervading the whole country. Next come the Myrtaceæ, to which belong *Eucalyptus* (120 species), *Melaleuca* (100 species), *Verticordia*, *Calycotrix*, and *Darwinia*, with thirty-five species each; followed by the Proteaceæ (*Grevillea*, *Hakea*, *Banksia*), Compositæ (*Olearia*, *Helichrysum*), Cyperaceæ, Gramineæ, Orchideæ, Epacrideæ, Euphorbiaceæ, Goodeniaceæ, and Rutaceæ.

Similar conditions obtain in the Cape Flora, and a person possessing a fair knowledge of plants can, from statistics alone, form some conception of the nature and composition of the vegetation.

Before leaving this part of the subject it may not be amiss to mention the fact that the vegetation of different districts of a country may present more striking diversities and much more abrupt transitions than does the whole flora of one country as compared with that of another. Within a few yards the whole character of the vegetation often changes, owing to differences in the substratum of the soil and other causes. Mr. Salvin was particularly impressed by this fact in Guatemala, where, in travelling, you often literally step from an oak-forest into a pine-forest, with the carpet and canopy (epiphytes, &c.) of vegetation equally as different in character as are the pines and oaks themselves.

#### THE PRIMARY BOTANICAL REGIONS OF THE WORLD CONSIDERED IN THEIR RELATIONS TO THE ZOOLOGICAL REGIONS.

Very various are the divisions and subdivisions of the world proposed by different botanists and zoologists who have written on the geographical distribution of plants and animals; but the comparisons instituted here will be with the zoological regions originally defined by Dr. Sclater\*, and subsequently adopted, with slight modifications, by other eminent zoologists, notably by Mr. Wallace in his very elaborate treatise on the present distribution of animals, more especially of the mammals. For convenience, his table of regions† and subregions is reproduced here, as it is more intelligible than

\* Journ. Linn. Soc., Zool. vol. ii.

† The Geographical Distribution of Animals, 1876, i. p. 81.