

what limits others are restricted, may be gathered from the various tables and paragraphs in the Appendix, more especially from those paragraphs on the distribution of the more prominent natural orders (vol. iv. pp. 235 to 282), and from the analysis of a sample of the mountain vegetation (p. 298); but it may be of interest to illustrate this further by a few examples, selecting such groups as are spread over the tropical, or subtropical, and temperate parts of the country.

Foremost among the types not extending into Chili are the Melastomaceæ; but their absence can hardly be explained by climatal conditions alone. The large genus *Cuphea*, which ranges from the south-eastern states of North America to Uruguay and Chili, is represented in the last country by only one species (*C. spicata*), which covers nearly the whole area of the genus. *Fuchsia* extends from Mexico to Magellan's Straits, is represented in San Domingo by two species, and by three or four species in Brazil, and it reappears in New Zealand. The Turneraceæ are essentially temperate and subtropical plants of the western side of the continent, yet there are a few species in Brazil and Buenos Ayres. The specially characteristic Cactaceæ are spread all over South America and the West Indies, though they do not inhabit all districts. Their northern extensions are given in detail in the fourth volume, page 247. The Bromeliaceæ are spread all over South and Central America and the West Indies, and penetrate the south-eastern states of North America. The more tropical Cyclanthaceæ, Marcgraviaceæ, Vochysiaceæ, and Myrtaceæ-Lecythideæ are mainly eastern South American, though they are also represented in Central America; and the distribution of such genera as *Tropæolum*, *Baccharis*, *Coccoloba*, *Lacistema*, *Roupala*, *Lisianthus*, *Hyptis*, *Philodendron*, *Anthurium*, *Brassia*, *Dichæa*, *Epidendrum*, *Oncidium*, and many others proves that we have to deal with one large primary region. Epiphytal orchids generally are local, or occupy relatively small geographical areas, yet many of the American species have a considerable range. A list of thirty Mexican species with their distribution is given in the fourth volume of this work (p. 270), and it may be added here that about eighty of the Mexican species extend to the West Indies, and upwards of 100 to South America, many of the species being the same in the three areas, as is apparent from the fact that 800 out of 938 are endemic in Mexico. So far as the distribution is known, a larger number of the Mexican species reach Brazil than Peru. Approximately the numbers are:—Colombia (New Granada and Ecuador) seventy-five species; Peru twenty-two; Guiana forty-five; and Brazil thirty-six*.

Wallace divides his neotropical zoological region, which corresponds to our South-American region, into four subregions, namely a Mexican, an Antillean, a Brazilian,

* In the discussion on the northern limits of epiphytal orchids in Mexico (vol. iv. p. 269) the improbability of *Meiracyllium gemma* and *Odontoglossum madrense* being North Mexican was advanced, though in consequence of the habitat being given as Sierra Madre they were so recorded. It appears, however (Veitch, *Odontoglossum*, p. 51), that they were found in the neighbourhood of Colima, in about 19° N. lat., and far from the Sierra Madre, in Durango, where Seemann collected.