

endemic in Trinidad; *Dictyoxiphium* is a monotype ranging from Panama to New Granada and Venezuela; and *Danæa* is a distinctly characterized genus of about a dozen species, restricted to tropical America.

Proceeding to the extra-American distribution of the genera, no fewer than forty-two are widely diffused; the curious and well-marked *Anemia* is represented in South Africa by one species, *Hemitelia* in Australia by two or three species, and one of the South-American species is also found in South Africa.

Of the 545 species within our boundaries, 159 are endemic, and 293 others are restricted to America; in other words, nine elevenths of them do not extend beyond America. Ninety-three species have a wider range—seventy-four being widely diffused, ten African, one Asiatic, four Polynesian, three Galapagoan, and one has only been found in Tristan da Cunha and America.

A few more words respecting the distribution of ferns in Mexico and Central America. A glance at the Table, p. 200, is sufficient to convince us that the fern flora of the southern countries is still very imperfectly known, especially that of Costa Rica; though since our Tables were drawn up the number of species has been increased to 134 (see page 115 of this volume); and we may confidently assert that the better-explored Guatemala and South Mexico will yet yield a good many more novelties. The bulk of the 254 Guatemalan ferns in the Kew Herbarium were collected by Messrs. Godman and Salvin in a comparatively restricted area. Fournier states\* that the ferns of both slopes, Atlantic and Pacific, of the Mexican cordilleras are the same, with very few exceptions; indeed, he knew of only three from the Pacific side which were not found on the Atlantic; but then he had very few species from North Mexico, and not a single one from the western State of Sonora. Recent explorations have considerably augmented the number of North-Mexican ferns. Our enumeration contains 100, and Pringle and Palmer's subsequent collection would probably add four or five more. Considering the great falling off, in fact almost total absence, of orchids and other epiphytal plants in North Mexico, this number of ferns is at first a little surprising, because we are apt to associate them with moisture and shade. On examining the composition of this fern-flora this surprise will disappear, for it will be found that the genera *Notholaena*, *Cheilanthes*, and *Pellaea*, genera specially characteristic of dry regions, largely predominate. The prevalence of these genera in South Africa, Australia, &c., and their general distribution, is in similar regions. After these genera hard-leaved species of *Polypodium* and *Asplenium* are the most numerous; the five genera named furnishing six tenths of the species. For purposes of comparison, and to show that this peculiar flora extends northward into Arizona and the adjoining territories, it may be added that, out of seventy-one ferns enumerated by Engelmann† as inhabiting the United States territories west of 105°

\* Fournier, "Sur la distribution géographique des Fougères du Mexique," *Comptes Rendus*, lxxviii. 1869, pp. 1040–1042.

† In Rothrock's 'Botany of Arizona &c.'