

Among the remaining exclusively American genera within our limits we may mention the broad-leaved *Pharus* (Paniceæ), *Tripsacum*, next *Euchlæna* in Maydeæ, *Luziola* in Oryzeæ, *Hilaria* in Zoysieæ, *Bouteloua* in Aveneæ, *Monanthochloe*, *Dissanthelium*, *Orthoclada*, *Zeugites*, and *Uniola* in Festuceæ, and *Chusquea* and *Guadua* in Bambusæ; nearly all of them very distinct genera.

With regard to the extra-American distribution, fifty-nine of the genera and thirty-six of the species are widely spread. Four genera, namely, *Antheophora*, *Olyra*, *Trachypogon*, and *Ctenium*, are only represented in Africa; *Olyra* by one species, probably the common American *O. latifolia*. *Distichlis thalassica* is common on the coast of South-eastern Australia, but not recorded from elsewhere in the Old World. In conclusion, the interrupted distribution of *Phleum alpinum* merits notice. This grass inhabits the Peak of Orizaba at 10,000 to 12,000 feet; the Andes of Chili to Fuegia; the alpine and arctic regions of North America, Europe, and Asia.

Filices and other Vascular Cryptogams.

The distribution of the genera and species of sporiferous plants is generally much wider than that of seminiferous plants, being limited apparently by climatal conditions only; and where the conditions are favourable, as in some regions of Mexico and Guatemala, in New Zealand, and other parts of the world, large numbers are found in comparatively small areas. A considerable degree of humidity is, of course, one of the indispensable conditions for the majority of ferns, but, as will presently be shown, certain genera affect dry regions. We allude now more particularly to the ferns. Taking the genera as circumscribed in Hooker and Baker's 'Synopsis Filicum,' there are, including a few recent new ones, about eighty, forty-eight of which are represented in Mexico and Central America, and forty-one of them in South Mexico alone, where the number of species known is 380. On the same basis, the total number of species of Ferns now known is, as Mr. J. G. Baker informs us, approximately 3000; and our total is 545; so that South Mexico and Guatemala together shelter one sixth of the species of the whole world.

As previously explained (vol. iii. p. 589), Fournier monographed the Mexican ferns. Here, as in the grasses, he founded a large number of species which are not recognized as such in this work. Thus, for Mexico alone he defined 605 species against our 545 for Mexico and Central America together. However, with the exception of species, we obtain very similar results. Out of his 605, 178 were peculiar to Mexico; and of the 427 common to Mexico and other regions, 230 were found in the Andes, 139 in the West Indies, 59 in Venezuela and Guiana, and 117 in Brazil, most of them as far south as Rio Janeiro.

Of the forty-eight genera within our boundaries only one, the monotypic *Llavea*, is endemic, and only three others, namely, *Hypoderris*, *Dictyoxiphium*, and *Danæa*, are peculiar to America. Besides the Nicaraguan *Hypoderris*, there is one other species