

bility of Mr. Hemsley's instituting a closer comparison between the Mexican Flora and that of some tropical region in the Old World presenting as rich and varied a vegetation, and I indicated the British-Indian Flora as especially suitable, both on this account, and because the 'Flora of British India' was sufficiently advanced in respect of available published and unpublished materials to supply accurate data for such a comparison. And further it appeared to me that by availing himself, together with these materials, of the geographical data appended to every genus of phanerogamic plants contained in the recently-concluded 'Genera Plantarum,' Mr. Hemsley might very greatly advance that most instructive branch of phytogeography which originated independently and coincidentally in the minds of Humboldt and Brown, and to which the former gave the name of *Arithmetica botanices*.

Messrs. Godman and Salvin cordially responded to my suggestion, and I feel sure that the results embodied in the "Statistics of the Phanerogamic Flora of the World" (Introduction, pp. ix-lxi) will be received with gratitude by all botanists as a very valuable supplement to a work that owes its existence to those naturalists' travels, collections, learned labours, and munificence.

The tables at p. xv and following of the Introduction are particularly valuable, and give information previously unattainable. The areas compared are approximately within the same latitudes, 9° N. and 33° N., but separated by nearly 180° of longitude, the Asiatic in 70° to 95° E., the American 80° to 115° W. Each presents a hot, moist tropical, a temperate, and a frigid climate. It is impossible to find, in the Old and New Worlds respectively, two areas more similar as to physical features, or in which the vegetation of their respective continents is more fully represented; and yet the comparison of their Floras shows that, with an almost total diversity of species, genera, and of many natural orders, the proportion of monocotyledonous to dicotyledonous plants is nearly the same in each; that the number of natural orders is only 12 fewer in Mexico; that the number of species in each differs by only 2000 (11,626 in Mexico, 13,647 in India); that the average number of genera in each order is nearly the same in each (11 in Mexico and 13 in India); that the average number of species in each genus even more nearly coincides (6.4 in Mexico and 6.0 in India); and, more singular still, that the percentage of endemic species in each differs by only 2 per cent.

It is instructive to observe that these marked resemblances in proportions do not arise out of a resemblance in the elements from which they are derived; for, turning to the natural orders that contribute largest to the Flora of each area, they are very differently represented as to number of species in each. Compositæ, which take the first place in the Flora of the globe and of Mexico, are reduced to the sixth place in India. Leguminosæ, which are second to Compositæ alone, are second in both Mexico and India; but Orchideæ, which hold the third place in the world and in Mexico, are first in India; Rubiaceæ, the fourth in the world, are the seventh in Mexico and fifth in India; grasses are fifth in the world and in Mexico, but only third in India.