

Descending in the systematic scale to the lowest term of the series, the differences between the elements of the two Floras become greater and greater, until genera are reached; thus, as Mr. Hemsley shows, only 25 to 26 per cent. of these are common to the two regions. As yet data do not suffice to ascertain the exact number of species common to India and Mexico, but it may not exceed 600 of the 25,273 which is approximately the sum of the species of both Floras.

It is not my purpose to discuss the nature or origin of the unexpected likenesses and expected unlikenesses that Mr. Hemsley has shown to exist between the Floras of Mexico and India: of these the former are due to causes which have influenced vegetation as a whole; the latter to more or less local causes. As an illustration of what I mean, I would say that the conditions which have resulted in monocotyledons maintaining their numerical position of one to four or thereabouts of dicotyledons in the globe and in all large areas thereof are, in the present state of science, inscrutable; but that the comparatively low number of Compositæ in India is explicable by the intrusion into India of the Malayan Flora, which is abnormally deficient in Compositæ. Not that this offers any real solution of this latter phenomenon, which lies much deeper. It must be shown whether the intrusive Malayan Flora found in India a Flora already deficient in Compositæ, or whether it prevailed over and displaced the pre-existing native Compositæ; and it must also be shown why the Malayan Flora is deficient in this ubiquitously dominant element of all other floras, whether tropical, temperate, or frigid, insular or continental, humid or arid.

It would be very interesting to know whether any of the larger divisions of the animal kingdom present phenomena comparable with those derived from large remote botanical areas. It may be supposed that the great unconformity that exists between the geographical regions of plants and those of animals, as traced out by the most competent of zoologists, and which unconformity is so strongly, and as I think rightly, insisted upon by Mr. Hemsley, is opposed to such a parallelism existing; but I do not see the force of this objection if, as I think, the problems presented by these "Arithmetics" are deeper than those of regional distribution.

Another point of resemblance between the Floras of Mexico and India is that each is botanically as well as geographically a *næud*. The lofty mountains in each are continuations from more temperate latitudes in the north, favouring an immigration of temperate species which have retained their characters in the higher elevations and become modified or been extinguished in the lower. In each Rosaceæ, oaks, and Coniferæ of northern forms descend into the tropics, even to 3000 feet elevation, whilst palms ascend to 8000; and in each epiphytic orchids abound, ascending in cool temperate regions to 8000 feet and upwards.

Perhaps the most striking case of parallelism in the Floras of tropical America and Asia, as prominently put forward by Mr. Hemsley, is that in each so many temperate types, especially oaks and *Pinus* proper, are continued far into the tropics, but cease at