

Mexico and Central America and trace its development and the directions of its migrations in recent times brings us to the conclusion that there are three sufficiently marked aggregations of plants to justify their being treated as so many distinct floral provinces, namely a northern, a central, and a southern; but they are not all of the same value, and the available data are inadequate to define them with exactitude.

The northern province is the focus of a xerophilous flora extending into the dry regions of South Mexico and into the territories north of Mexico.

The central province, disregarding the purely tropical and the xerophilous overlappings, is a mingling of northern and southern types which exhibit an extraordinarily rich production of local species, associated with about 12 per cent. of indigenous genera. The alpine flowering plants belong to genera of several categories, namely: such as are of wide distribution (and this is the largest); such as are peculiar to America, but do not extend south of Panama; such as are peculiar to America and find their northern limit in Mexico; such as are peculiar to America and extend both north and south of our limits; together with a very small percentage of quite local genera.

The southern province is an outlying portion of the American tropical flora, and in composition is almost limited to specific differentiations. The tropical element in our whole flora is more closely allied to that of eastern South America even than it is to that of the West Indies, and includes types of the former which are not known to reach the West Indies.

Alston's table of the distribution of the Central-American and Mexican mammals*, though necessarily drawn up on different lines, presents strikingly similar laws of distribution, especially when the possible and probable diverse means and agencies of dispersal of animals and plants are taken into consideration†. Thus there is a very small generic endemic element; a large specific endemic element; the northern and southern extensions are in much the same proportions; and the country is the centre of the families Procyonidæ and Geomyidæ. Further, with regard to the boundary between our central and southern provinces, Salvin points out‡ that there is a very decided change in the avifauna proceeding from Nicaragua to Guatemala; and it was upon his suggestion that it was adopted as the boundary in this work.

* *Biologia Centrali-Americana*. Mammalia: Introduction.

† It has not been thought desirable to enter in this essay into particulars and speculations on the means whereby plants have been, or may have been, dispersed, as the trustworthy data have been more than exhausted by various writers; and additional careful observations are necessary to carry us further.

‡ 'The Ibis,' 1872, p. 312.