

Allusion has been made to the southward extension of elements of the Flora of the northern region through the great mountain-ranges to the southern limits of vegetation, and indications where there are remains of it on the mountains within the tropics and in south temperate countries. Sir Joseph Hooker's reports on the vegetation of Clarence Peak, Fernando Po, of the Cameroons mountains, and of Kilima-njaro are among the most important of the later contributions to the literature of this subject\*.

*The African Region.*

The phytogeographical essays last referred to afford some most interesting details of the relationships and apparent migrations of the components of the vegetation of the great African region, which is here understood to comprise the whole of Tropical and South Africa, Madagascar, Mauritius, Bourbon and the contiguous groups of islets, and the Cape Verde Islands—Madeira and the Canaries being regarded as a province of the Mediterranean subregion of the Northern region. Ascension, St. Helena, Tristan da Cunha, and Amsterdam and St. Paul Islands, though presenting some curious anomalies in their vegetation, may be regarded as appanages of the African region, or they might be left unattached to any primary region. Excepting the Compositæ, the affinities of the flora of St. Helena are distinctly African; and *Phylica nitida*, the only tree, or even shrub more than a trailer, in the other two groups of islands, is Mascarene†. Instead of arctic and temperate climates there are in this region tropical and temperate climates; yet botanically, as well as geographically, this is one of the most compact of the primary regions, and naturally divides into three subregions, namely:—Tropical Africa, South Africa, and Madagascar and adjacent islands. Eastern and Western tropical Asia should only be regarded as provinces of one Flora, as will presently be demonstrated.

Besides remote connections with the Northern, American, and Australasian regions, there is a very intimate connection of the African with the Indian region, traceable from the Cape up the eastern side of the continent to Abyssinia and by way of Socotra, Southern Arabia, Persia, and Afghanistan to the Panjab and Gangetic plain, and less distinctly southward into the Deccan peninsula, with a few extensions into the Malayan peninsula and archipelago; and notwithstanding the presence in the Madagascar subregion of such eminently Asiatic types as *Nepenthes*, *Lagerstræmia*, and a few others hitherto not found in continental Africa, it is evident that the interchange between Africa and Asia is far greater than between Madagascar and Asia, whether we consider tropical or temperate types. As might be expected, among the species common to India and Africa, those characteristic of a dry climate largely preponderate. On this

\* See Journ. Linn. Soc., Bot. vi. p. 1, vii. p. 171, xiv. p. 141, and xxi. p. 392.

† For a full account of the botany of these islands, see Botany of the 'Challenger' Expedition, i. part 2, and Introduction.