

they belong to types of the widest dispersion, which may have been introduced through the agency of man, direct or indirect; whilst others are maritime plants which owe their presence to the action of the sea. In treating of the origin of the flora of St Helena, we should, therefore, exclude this modern element and confine ourselves to the facts relating to the ancient element. Sir Joseph Hooker,<sup>1</sup> with practically the same facts before him (for the small accession of species in the present work could in no way modify them), was of opinion that, on the whole, the affinities of the flora were with the South African. "From such fragmentary data," he says, "it is difficult to form any exact conclusions as to the affinities of this flora, but I think it may safely be regarded as an African one, and characteristic of Southern extra-tropical Africa. The genera *Phylica*, *Pelargonium*, *Mesembryanthemum*, *Osteospermum* [*Tripteris*] and *Wahlenbergia* are eminently characteristic of Southern extra-tropical Africa, and I find amongst the others scarce any indication of an American parentage, except a plant referred to *Physalis*" [*Mellissia*].

In arriving at this conclusion Sir Joseph Hooker does not appear to have specially considered the arboreous *Compositæ*, some of which find equal or closer affinities among American types. They number nine species, and are here referred to five genera. At a later date, Mr Bentham, in his admirable essay on the *Compositæ*,<sup>2</sup> set forth his views of the relationships of the St Helena forms in the following words: "The expiring flora of the isle of St Helena is as remarkable in *Compositæ* as in other orders, in its distant connections. Although nearer to Africa than to any other continent, those denizen *Compositæ* which bear evidence of the greatest antiquity have their affinities for the most part in South America, whilst the colonists of a more recent character are South African. Seven endemic species<sup>3</sup> are known—*Commidendron*, four species, and *Melanodendron*, *Petrobium*, and *Psiadia*, one species each.<sup>4</sup> All, except one species of *Commidendron*, have more or less of the insular arborescent character. *Commidendron* and *Melanodendron* are among the woody Asteroid forms exemplified in the Antarctic-American *Chiliotrichium*, in the Andine *Diplostephium*, and in the Australasian *Olearia*. *Petrobium* is one of three genera, remains of a group probably of great antiquity, of which the two others are *Podanthus* in Chili and *Astemma* in the Andes. The *Psiadia* is an endemic species of a genus otherwise Mascarene, or of Eastern Africa, presenting a geographical connection analogous to the St Helena *Melhania* with the Mascarene *Trochetia*."

From the foregoing it would seem that the ancient element in the indigenous vegetation is the remnant of a flora that was formerly spread over a wide area, and is now only represented in isolated distant spots; and that certain types of this flora, the

<sup>1</sup> Lecture on Insular Floras, reprint, p. 7.

<sup>2</sup> Notes on the History, Classification, and Geographical Distribution of the *Compositæ*, *Journ. Linn. Soc. Lond.*, (Botany) vol. xiii. p. 563.

<sup>3</sup> Including the annual *Tripteris burchellii*, there are ten endemic species.

<sup>4</sup> The two very remarkable species of *Senecio* are not taken into account.