

The first who collected *Centaurodendron* was not JOHOW, but BERTERO; still, B. did not discover it. Under the name of *Dendroseris micrantha*, BERTERO no. 1602! (Herb. Kew) there is one sheet with pieces of an old inflorescence of the latter together with a leaf of *Centaurodendron*.

JOHOW discovered this in July, 1892, and found it again in June, 1895; to judge from a specimen in his herbarium it was also gathered by SÖHRENS, probably in April, 1895, on the same occasion when S. found *Robinsonia thurifera*, for it lies together with this under the same name. I rediscovered it in August, 1908, and found the old inflorescence, just as JOHOW did, but there was no trace of new ones. From this I concluded that it flowers late in the summer or even in the autumn, and I expected to get flowers this time, but was cruelly deceived. For all I could do was to state that in certain years not a single specimen produces flowers, and that the year 1916—17 was one of them.

**Area of distribution:** Endemic in Masatierra; monotypic.

### *Dendroseris* D. Don.

The type of the genus is *D. macrophylla* D. Don, Phil. Mag. XI (1832) 388, collected in Masafuera by CUMING (Herb. Kew!). One year later DECAISNE, in Arch. de Bot. I (1833) 513, described the genus *Rea* Bert. ms., with the following species: *R. macrantha* Bert. et Dcne (Masatierra), *Berteriana* Dcne (Masatierra), *pinnata* Bert. et Dcne (Masatierra), *neriifolia* Dcne (Masatierra), *micrantha* Bert. et Dcne (Masatierra), *marginata* Bert. et Dcne (Masatierra: Portezuelo), *mollis* Bert. et Dcne (Masatierra: Portezuelo). In Comp. Bot. Mag. I. 32 HOOKER and ARNOTT reduced *Rea* to *Dendroseris*, listing the following species: *D. macrophylla* (with *R. macrantha* as syn.), *Berteriana*, *pinnata*, *neriifolia*, *micrantha*, *marginata* and *mollis*.

JOHOW, Estud., reduced these seven species to four, declaring *D. Berteriana* identical with *pinnata* and *marginata* with *macrophylla* and rejecting *D. mollis* altogether. Of this, only the leaves, described as »subincano-velutina» — glabrous in all the others — are known. There is no specimen in Kew, nor in Paris, and I have not been able to discover the type. JOHOW guessed that a stout specimen of *Gnaphalium citrinum* (= cheiranthifolium) or some other similar plant was mistaken for *Dendroseris*. This is hardly probable. In the locality given, Portezuelo, nothing like it is found, unless a young *Robinsonia* or *Rhetinodendron* was mistaken for a *Dendroseris*. With regard to BERTERO's ability as an observer, this is difficult to believe.

The treatment of *Dendroseris* in JOHOW's flora is not quite satisfactory; still, he is not to blame. He had no opportunity to see BERTERO's types, his own material was scarce; further, when HOOKER and ARNOTT reduced *Rea macrantha* to *D. macrophylla* they indicated the wrong course later followed by GAY and JOHOW. HEMSLEY pointed out the validity of *D. marginata*, but JOHOW brought this to *macrophylla*. He was equally critical against his own discoveries, for the peculiar *micrantha* from the coast rocks was only with hesitation classified even as a variety, v. *pruinata*. In the case of *D. Berteriana*,

II. Head smaller. Flowers whitish. Achenes not winged.

A. Stem simple, hollow. Receptacle fibrillose. Leaves pinnate.

Subgen. II. *Phoenicoseris* Skottsb.

1. Pinnae deeply bifurcate with linear segments.

*D. pinnata* (Bert. et Dcne) Hook. et Arn.

2. Pinnae  $\pm$  ovate, dentate.

a. Petiole winged, but not auriculate.

*D. pinnata* var. *insignis* (Bert.).

b. Petiole auriculate. .... *D. regia* Skottsb.

B. Stem branched, solid. Receptacle naked. Leaves entire.

Subgen. III. *Rea* (Bert. ex p.) Skottsb.

1. Leaf-margin minutely denticulate or entire. Ligule 5-dentate.

Sect. 1. *Eurea* Skottsb.

a. Leaves petiolate. Involucre funnel-shaped, c. 5 mm high.

+ . Leaves coriaceous, narrow lanceolate.

*D. neriifolia* (Dcne) Hook. et Arn.

+ + . Leaves chartaceous, ovate-lanceolate.

*D. micrantha* (Bert. et Dcne) Hook. et Arn.

b. Leaves sessile. Involucre campanulate, c. 10 mm high.

*D. pruinata* (Joh.) Skottsb.

2. Leaves densely dentate-serrate, very thin. Ligules deeply 5-cleft.

Sect. 2. *Schizoglossum* Skottsb. *D. gigantea* Joh.

BENTHAM and HOOKER FIL., Gen. plant. II. 219, describe the achene of the *Dendroseriidae* in the following terms: »Achaenia a dorso compressa sub-trigona v. 2—3-alata». This description fits the genus *Fitchia*, a genus not very near *Dendroseris*. The achene of *Thamnoseris* is unknown. The marginal achenes of *Dendroseris* are more or less compressed from the back, triangular in section, with two lateral and sometimes also with a ventral wing in *Eudendroseris*. But all the other achaenia in the head are compressed from the sides, and their wings in *Eudendroseris* are dorsal and ventral only. This dimorphism clearly stands in relation with the different position in the head. It is illustrated below, fig. 37.

133. *D. macrophylla* D. Don. — JOHOW, Estud. 70 p. p. min. — Fig. 37 a, m.

**Masafuera:** CUMING! DOWNTON! — On the walls of the canyons, also higher up on the ridges and on the top of the lofty coast cliffs in some places, scattered. Ravines above Q. Sanchez, solitary specimens; Q. de las Casas, rock ledges (fl.  $2\frac{3}{2}$  17, no. 362; also observed by JOHOW); Q. de las Vacas (also JOHOW); Q. Inocentes, some large trees on the cliffs c. 500 m; Q. Angosta, in the narrow gorge; Rodado del Sándalo, on the top of the cliff; Q. de la Lobería, some fine trees, c. 250 m.

There is a good illustration of this species in CURTIS, Bot. Mag. t. 6353. The specimens growing in the fissures on the canyon walls are small and seldom more than 2 or 3 m high; in more suitable places there are much larger ones, at least 5 or 6 m high and with a trunk 15 or perhaps 20 cm thick, so