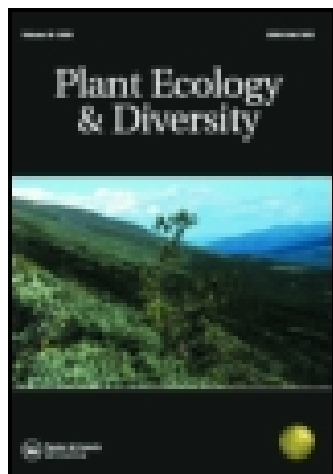


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On *Drosera Banksii*, R.Br.

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given is Pettycur in Fife. A specimen from that locality is in the Herbarium of the Royal Botanic Garden, Edinburgh, with Don's name attached.

In June of this year the plant appeared in considerable quantity in the neighbourhood of Edinburgh, in a locality where there is no reason to suppose that it is truly native. The localities given for England—old walls, waste places, dry fields—would suggest that there also the plant is usually a casual.

Of the three forms of the species given in Sowerby, Don's specimen seems to be var. *α*, *genuina*; the recent specimens agree with var. *β*, *laxa*, with regard to the habit of the plants, length of capsule, and number of stamens. The glandular hairs usually present on the calyx are, however, absent.

ON *DROSERA BANKSII*, R.BR. By DR. MORRISON.

When examining the Australian species of *Drosera* in the Melbourne Herbarium a short time ago, I found a specimen of unusual interest labelled thus, in the handwriting of the late Baron von Mueller:—" *Drosera Banksii*, R.Br., Port Darwin, 1890. Maurice Holze." As the only specimen of this species hitherto recorded is that originally collected during Cook's voyage by Banks, at the mouth of the Endeavour River, Northern Queensland, and now preserved in the herbarium of the British Museum, an account of the Port Darwin specimen should be of interest to botanists, especially as the plants are evidently in more perfect condition than the type specimen. *Drosera Banksii* was first described in 1824 in De Candolle's "Prodromus,"¹ with R. Brown as the author of the name. In 1848 Planchon² published a full description of the plant from the type specimen, as also did Bentham³ subsequently; and Bailey,⁴ in his "Queensland Flora," has evidently had to rely on the published descriptions without having other specimens to

¹ De Candolle, "Prodromus," i. p. 319 (1824).

² "Ann. Sci. Nat.," ser. 3, ix. 291 (1848).

³ "Fl. Austral.," ii. 469 (1864).

⁴ "The Queensland Flora," part ii., p. 550 (1900).

examine or record. Lastly, Mr. James Britten¹ published, in 1900, a figure of the plant, copied from a sketch by Sydney Parkinson, taken during the voyage, and evidently from a living specimen. The Port Darwin specimen comprises three plants, each apparently complete, with root, stem, and flowers, measuring in total length—one 6·7 cm., with 24 or 25 leaves; another 6 cm., with 27 or more leaves; and the third 3·3 cm. A detailed description of these specimens is here given:—

Stem erect, slender, rather weak, continuing to grow out after production of raceme at its upper part. Root system well developed, and without a bulb; a number of strong fibres descending obliquely, some branching and showing smooth-walled hairs. Leaves numerous, scattered along stem from base to summit, none in the axile, largest at base of inflorescence and diminishing downwards; petioles slender, sparingly pubescent, up to 5 mm. in length, thick at base, and attenuated in upper half, attached close to truncate margin of lamina, which is suborbicular, thin in texture, and under 1 mm. diam., excluding the glandular hairs on its margin; stipules persisting during flowering on upper half of stem, slightly attached to base of petioles, but otherwise free, scarious, brownish, lanceolate, with a long filiform or flagellate point of nearly equal length, and a few shorter lacinate teeth on the sides, the whole 1 mm. long. A unilateral raceme, between 3 and 4 cm. in length, is produced at the upper part of the leafy stem, which continues to grow out and produce a terminal flower; it is leaf-opposed, pedunculate, bears three flowers without bracts, and is furnished with slender, fusiform, smooth, appressed peltate hairs, the lower end being produced considerably below the attachment. Pedicels 2·5 mm. to 4 mm. in length; sepals ovate-lanceolate, obscurely toothed, villous, not exceeding 1·5 mm.; petals twice as long, apparently white; anthers broader than long; styles three, about 1 mm. in length, forked near the base, and sometimes a branch again bifurcate, the long branches tapering, stigmatic to near the fork; ovary broadly ovoid; seeds ovoid, black, smooth, 1 mm. long.

The division of the genus *Drosera* into two main sections,

¹ "Journ. of Bot.," vol. xxxviii. p. 207, pl. 410 B. (1900).

as followed by Bentham, recommends itself by the separation of those species furnished with bulbs from all the others that have fibrous roots. The vegetative organs of large groups of species must be considered of prime importance for purposes of classification, when they show such marked differences, as observed in *Droseras*, seeing that they are specially adapted to the primary needs of the plants. In this case, however, in addition to the contrast between the bulbous and fibrous roots, there is a very apparent distinction between the styles of the bulbous forms as a whole and those of the section *Rorella*, these organs being multifid in the one series, and simple or only slightly divided in the other, with very few exceptions on either side. For the primary division of the genus the character of the root, and to a less extent of the styles, is taken; but the organs made use of for the further subdivision—stem, leaves, and flowers—are applied to an unequal degree in the two sections, the vegetative organs being of greater importance in *Ergaleium*, while in *Rorella* those of the reproductive system come more into force. In *Ergaleium* the styles are more uniform, and the stem and leaves show greater variability; but in *Rorella* the stem and leaves are varied to a less extent, while the styles and inflorescence generally are more heterogeneous and furnish the characters required for the formation of smaller groups.

The fibrous roots and bifurcated styles of *Drosera Banksii* seem, therefore, to forbid any doubt as to its position, namely, in section *Rorella*, near *D. indica*, a species with an elongated leafy stem, though without stipules, which are found in the majority of the species of the section, and possibly in all except those of annual duration. The transference of *D. Banksii*, with its elongated stem and stipules, to *Rorella*, would consolidate rather than confuse the arrangement, seeing that some caulescent species comprised in the Cape flora are already in that section, and have mostly, though not all, well-developed stipules. The division of the whole genus, according to the root-system, thus establishes two parallel series of similar extent, each comprising groups of forms, more or less comparable with those of the other series.

There is a marked resemblance, from various points of

view, between *D. bulbigena* in the Ergaleium section and *D. Banksii*, the size and general aspect of the two species being similar; but while the root of one bears a bulb, that of the other is fibrous. The stem and leaves seem alike; but in the one stipules are absent, and the lowermost leaves are reduced to scales; while in the other stipules are present, and the leaves, though reduced in size towards the base, retain their leaf-like character. The slightly divided styles of *D. myriantha*, and in some degree also of *D. bulbigena*, detach these two species from the other cauline forms in section Ergaleium, and bring them into juxtaposition with *D. Banksii* in the opposite series. The somewhat abrupt diminution in size, and the withered condition of the leaves of the lower third of the stem, observed in the Port Darwin specimens of *D. Banksii*, may be due to submersion or dense shade, or some other unfavourable condition affecting the lower part of the stem. It is possible, however, that they may represent a previous season's growth of the plant, but no evidence of a dormant bud is apparent. The stipules in these specimens are not so caducous as they appear to have been in those originally collected at the Endeavour River by Banks, persisting as they do on all of the well-developed leaves of the upper half of the stem, even when the flowers in the raceme were well advanced. The peculiar position of the inflorescence is constant in all the plants so far observed. The raceme, which is usually terminal in caulescent forms, is in this species lateral or leaf-opposed, though larger than the continuation of the stem beyond its base, and appearing at first sight to be itself the main axis. This formation seems to be of the same type as that seen in the small group of bulbous species, including *D. stolonifera* and others.

It is interesting to note how the presence of a bulb in species of *Drosera* is associated with the absence of stipules and the reduction of the lower leaves to scales; the latter condition, it may be remarked, occurring in the rosette forms as well as in the caulescent. The function of the dormant bud among the leaves above ground in the Rorella section is transferred to the bulb in Ergaleium. The elongated distant petioles, with small stipules, of *D. Banksii*, however, do not seem well fitted for the protection of such a bud;

but the necessity for it does not exist in the perpetual summer of the Tropics, as it does in temperate climates, with their strongly contrasted seasons in which either a cold winter or a hot and arid summer necessitates special provision for the safety of the plant. In tropical countries, neither bulb nor dormant bulb may be required; and, as a matter of fact, no bulbous species are found in those regions, with the exception of *D. peltata*, which ranges from its home in Tasmania and Australia to Java, Ceylon, India, and southern China.