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PRASOPHYLLUM LITORALE A NEW SPECIES OF ORCHIDACEAE FROM SOUTH-WEST VICTORIA AND ADJACENT SOUTH AUSTRALIA

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Abstract

Prasophyllum litorale R. Bates, a species previously included under *P. frenchii* F. Muell. is described as new and a key is provided to distinguish it from related species.

Introduction

The presence of an apparently undescribed species of *Prasophyllum* near Portland in south-western Victoria was first brought to my attention by the late Collin and his wife Dorothy Woolcock of Portland in 1984. Photographs and material were subsequently sent by S. Forbes and D. Beardsell in 1985. Beaglehole (1980) had referred these plants to *P. rogersii* Rupp, a sub-alpine species from the east coast, but Beardsell and Forbes were doubtful of this determination. Examination of extensive collections including the types of *P. rogersii*, *P. hartii* R. Rogers and *P. frenchii* F. Muell. indicated that the Portland plants were indeed distinct. Together with C. & D. Woolcock and A.C. Beaglehole the author visited populations along the coast from Portland to Nelson in December 1985 and in December 1987, field work was carried out in the Barrington Tops, the type location of *P. rogersii*, as well as the New England area of New South Wales and sub-alpine areas of Victoria. The work showed that *P. rogersii* sens. strict. is endemic to the sub-alpine areas of New South Wales and Victoria, and that it does not extend to either south-western Victoria or Tasmania (Nicholls 1969, Jones 1988). The study revealed the presence of two undescribed taxa (previously referred to *P. rogersii*) on the New England Table Lands, showed that the Tasmanian material belongs to a separate undescribed taxon and indicates that *P. rogersii* is closely related to *P. frenchii*, but it needs more detailed research.

In January 1987 plants of the Portland taxon were found in the coastal sandhills at Picaninny Ponds, South Australia less than 500 metres from a large population of *P. frenchii* growing in boggy habitat. There were no intermediates and the plants of *P. frenchii* were considerably more advanced in flowering. In view of the different flowering times, habitat preference and constant morphological differences it became clear that two different, albeit very similar, species were involved. The coastal sandhill species is therefore described here.

***Prasophyllum litorale* R. Bates, sp. nov.**

P. frenchii F. Muell. affine sed spicis brevioribus densioribus, labello magiore base minus gibbosa apiceque crenulato et crispato et ovaria breviora paene globosa differt.

Holotype: Scenic Road, south of Portland, 7.xii.1983, C. & D. Woolcock 949 (MEL).

Plant robust, 20-40 cm tall; tuber sub-globose, about 1 cm diam., formed adjacent to plant base, stem below soil level with two cylindrical hyaline sheaths, the lower vestigial, the upper 1-3 cm long. *Leaf* hollow-terete, usually senescent at flowering, red basally, green above, 5-9 mm diam., apex lax. *Scape* largely enclosed within leaf, green, 4-8 mm diam. *Flowers* variously coloured in tones of green, red, purple, brown and cream, erect, numerous, in a short,

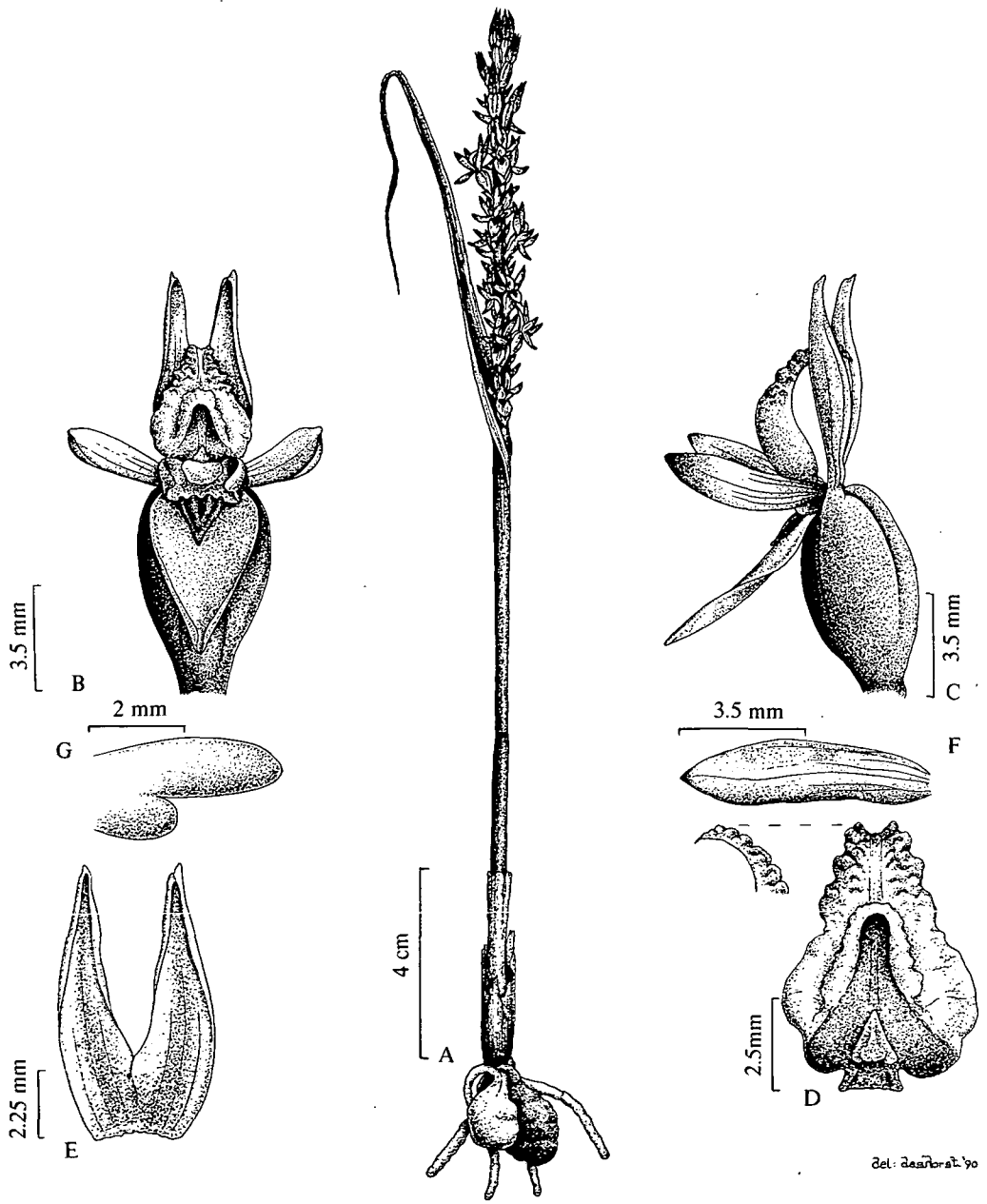


Fig. 1 *Prasophyllum litorale* R. Bates based on *R. Bates 4845*. A, whole plant; B, flower in front view; C, flower in side view; D, labellum; E, lateral sepal; F, petal; G, column appendages.

moderately to very dense sub-cylindrical spike. *Ovary* subsessile, globose to ovoid, 5 x 3 mm, wholly green or with purple-brown ribs, subtending bract quadrate-ovate, obtuse or acute, 1-2 mm long, 2 mm broad. *Dorsal sepal* ovate-lanceolate, 6-8 x 3-4 mm, green with broad red-brown central stripe, concave, horizontally placed or sloping up towards the shortly acute apex. *Lateral sepals* quite free, lanceolate, 6-8 x 2 mm, green, brown or red, thick-textured, margins incurved or inrolled, apex broad with a small tooth-like projection close to tip. *Petals* oblong, 5 x 1.5 mm, obtuse, falcate, pink, red-brown or brown with paler edges. *Labellum* short, 5 x 2-3 mm, recurved at 90° past the middle, on a short claw, base gibbous with a pyramidal nectary gland, lamina pink or lilac to creamy-white, crinkled and crenulate, expanded, apex obtuse and thrust through sinus of lateral sepals; callus plate a short, thick channelled, verrucose tongue glistening with nectar, yellow-green, occupying a quarter of the lamina. *Column*: appendages oblong, 2-3 x 1 mm, obtuse to truncate, pink or green, with short rounded, thick basal lobe; anther 2 mm high, red-brown, ovate, septate, the dividing membranes 3-partite, tip crassulate; stigmatic plate short, stigma deeply set; rostellum very short; caudicle 0.2 mm long.

The distinguishing features include the stout habit, short scape, the very short often globose ovary, the reduced floral bracts, the succulent short broad floral segments, the globular flowers with their variable colours, free and spreading sepals, crisped and crenulate labellum and broad-oblong column appendages. The habitat of *P. litorale* is also quite distinct.

Similar species include *P. frenchii* which has longer ovaries, a more gibbous labellum base and a much smaller labellum lamina which is not crisped and crenulate; *P. diversiflorum* differs in its narrower flowers, laterally compressed labellum and more intricate callus plate; *P. rogersii* differs in its less voluminous labellum, shorter thicker labellum callus, consistently smaller, duller flowers with longer bidentate lateral sepals. All these species must be closely related and were it not for their very different habitat preferences they could easily be regarded as one highly variable species. *P. litorale* is sometimes almost sympatric with *P. frenchii*, but whereas the latter occurs in boggy sites in dark black loams, *P. litorale* favours dry sand over red loam.

Flowering

Late November to early January but not requiring disturbance to facilitate flowering. The blooms emit a sweet honey fragrance, and individual flowers last only 3-7 days.

Distribution and ecology

Occurs in south-western Victoria from Portland west to Port Macdonnell in South Australia. It is confined to the coastal sandhills often in sight of the sea, in dry sand overlying moisture retentive loams. Sympatric species include *Acacia longifolia* var. *sophorae*, *Olearia axillaris* (shrubs), *Poa poiiformis*, *Isolepis nodosa*, *Leptocarpus brownii* and *Agrostis billardieri* (grasses and sedges) with *Swainsona lessertiifolia*, *Convolvulus erubescens* and *Dianella revoluta*. The introduced grass *Lagurus ovatus* was noted at all sites.

Conservation status: 2VCi (after Briggs & Leigh 1989).

Etymology

From Latin *litoralis*, pertaining to the sea-shore, since the species appears to be restricted to the coastal sandhills.

Specimens seen

VICTORIA: Scenic Drive, S Portland, 17.xii.1984, R. Bates 4845 (AD); Discovery Bay Coastal Park, SE Eel Creek crossing, 30.xi.1981, A.C. Beauglehole 13 70046 and C. & D. Woolcock (MEL); Nelson Bay, 25.xi.1983, A.C. Beauglehole 75437 (MEL); Glenelg River mouth, track E, near Ocean Beach, 26.xii.1983, S.J. Forbes & A.C.

Beaglehole 76020 (MEL); Bridgewater lakes, 7.xii.1983, C. & D. Woolcock W948 (Priv. Herb.)

SOUTH AUSTRALIA: Sandhills N Piccaninny Ponds, 2.i.1987, R. Bates 8724 (AD).

Key to species similar to *P. litorale*

- 1. Column appendages hatchet-shaped; labellum laterally compressed *P. diversiflorum*
- 1. Column appendages not hatchet-shaped; labellum not laterally compressed 2
- 2. Labellum crisped, very crenulate, voluminous; flower spike short and dense; plants of coastal sandhills *P. litorale*
- 2. Labellum not crisped, not or only slightly crenulate, not voluminous; flower spike if short not dense, or if dense not short; plants not in coastal sandhills 3
- 3. Apical or recurved portion of labellum at least half the size of the base; plants sub-alpine *P. rogersii*
- 3. Apical or recurved portion of the labellum less than half the size of the base; lowland plants *P. frenchii*

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