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**A NEW SOUTH AUSTRALIAN SPECIES OF *PULTENAEA*
(FABACEAE, MIRBELIEAE)**

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Abstract

Pultenaea insularis J.Z. Weber is described from Kangaroo Island, South Australia supplemented by an illustration of a flowering branch and analytical drawings.

Only recently a few specimens collected by Mrs B.M. Overton of this species came to my attention and it was immediately realised that it is distinct.

Pultenaea insularis J.Z. Weber, *sp. nov.*

P. insularis I. Holliday *et al.*, Kangaroo Island's Native Pl., p. 19, fig. (1994), *nom. nud.*

Caulis et ramis tenuis, prostratus, pubescens, ad nodos stoloniferus; folia dispersa, lamina lanceolata, 2.5–6 mm longa, scabrida; flores axillares, quoque singularis in pedunculis elongatis; calyx 5-fidus labiis subaequalis, bracteolis 2, tubo insidentibus; corolla papilionacea, 4–5 mm longa, flavescens; germen sessile, dispermum; stylus subulatus, ascendens; stigma simplex, minuta.

Type: *M. Jusaitis* & *J. Val* [Black Hill Native Flora Park No. 38], 3.xii.1992, Beyeria Conservation Park (35°48'S, 137°35'E), Kangaroo Island (holo.: AD 99237298; iso.: CANB, MEL, NSW).

Spreading to prostrate shrub with wiry branches to 60 cm high, rooting at nodes, with woody branches 0.5–2 mm thick, green to reddish-brown, pubescent with antrorse hairs when young, puberulous when older. *Leaves* petiolate, alternate to trimerous, crowded to 1–5 mm apart along the branches; *stipules* paired, clasping triangular, 1.5–2 mm long, glabrous, broadly membranous, medially costate, light to dark brown, often partly united by hyaline margins above the petiole; *petiole* short, cylindrical, c. 0.5 × 0.3 mm, glabrous to stiff-ciliate, light-green; *lamina* elliptical, 2.5–6 × 1.5–3 mm, margin flat or recurved to revolute, with tip mucronate and recurved, green to dark-green, sometimes with a reddish tint, upper surface puberulous to scabrous with antrorse appressed white hairs, midrib distinct below. *Flowers* pedunculate, solitary, 4–5 mm long, mainly towards the apex of branches. *Peduncle* filiform, 10–16 × c. 0.2 mm, densely covered with stiff white hairs, erect when flowering, extending in length and curving downwards as the fruit matures. *Bracteoles* two, attached at the base of calyx and clasping, narrow-lanceolate to almost acicular, 1.5–2 mm long, costate, almost leathery, brown, with few appressed white hairs. *Calyx* narrow-campanulate, c. 0.3 mm long, green with red lines corresponding with the centre of each of 5 acuminate teeth, maturing brown, outside white-pubescent with antrorse appressed hairs; upper 2 lobes broader, triangular and united for half their length, lower 3 longer than the tube, narrow-triangular, tapering into filiform tips; calyx tube glabrous inside. *Corolla* in bud vivid red, later predominantly yellow; *standard* obcordate, c. 5 × 6 mm, notched centrally, strongly reclinate and spreading at nearly right angles to the keel, slightly folded in the centre, with involute margins, yellow except the reddish midline and centre, claw narrow, c. 1.5 mm long; *wings* obovate-spathulate, c. 5 × 2 mm, bright yellow, auriculate, suddenly contracted into c. 1 mm long claw; *keel* rather shorter than wings, asymmetrically obovate, obtuse, c. 4.5 mm long, auriculate above the distinct c. 1 mm long

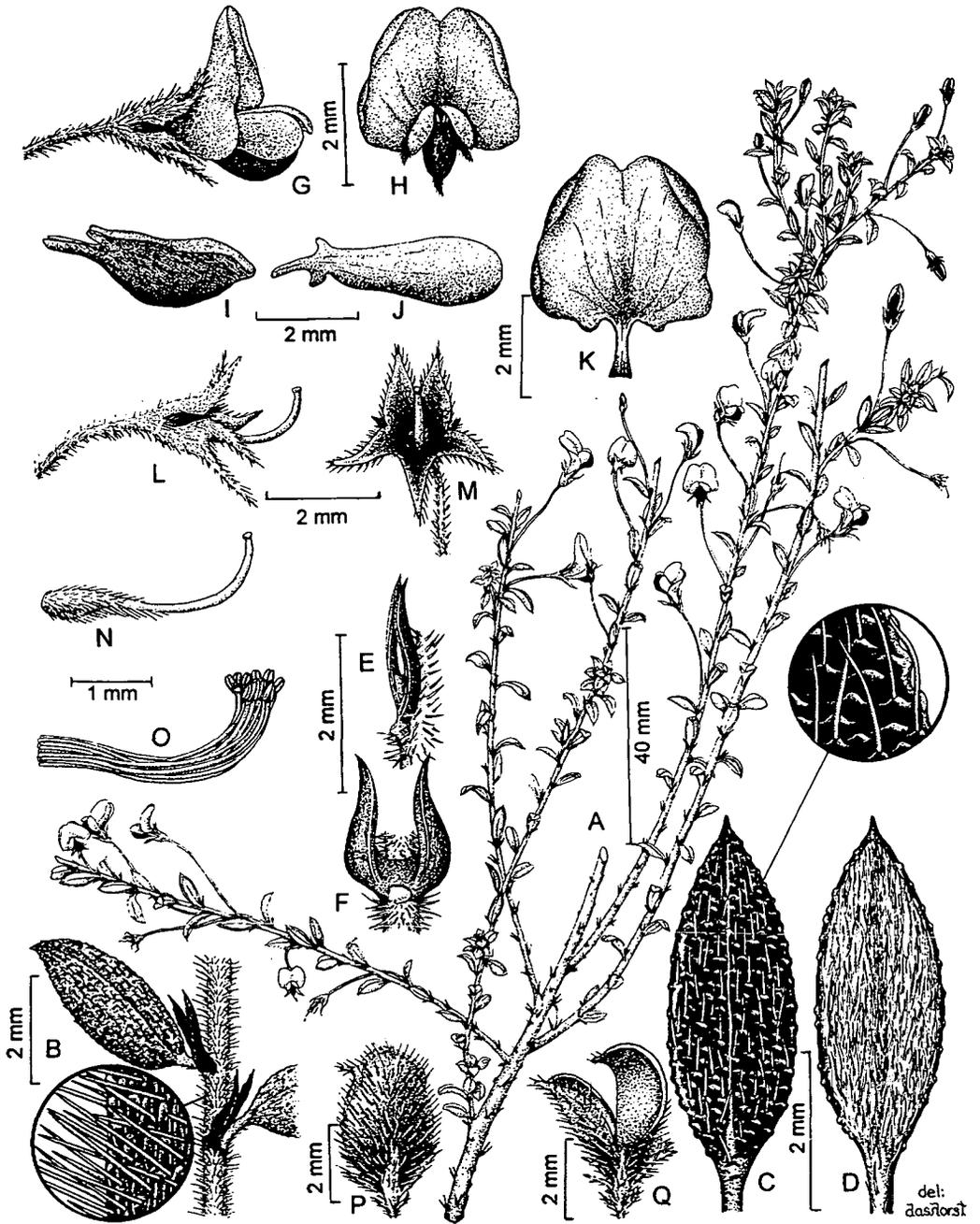


Fig. 1. *Pultenaea insularis*. A, habit; B, section of branch; C, leaf from above; D, leaf from below; E, F, stipules; G, side view of flower; H, flower in front view; I, keel; J, wings; K, standard; L, M, calyx with bracteoles; N, ovary with style; O, stamens; P, fruit; Q, dehiscent fruit. (A–O, based on Jusaitis & Val s.n. AD 99237298; P, Q, Overton 2239 (AD).)

claw. *Stamens* 10; *filaments* free, filiform, 4–5 mm long; *anthers* ovoid, c. 0.5 mm long, basifixed. *Ovary* laterally compressed-ovoid, c. 1 mm long, gradually tapering into the ascending c. 2 mm long style; *stigma* terminal, minute; *ovary* and base of style white antrorse-villous. *Pod* compressed-ovoid, c. 4 × 2 mm, pubescent, maturing brown to dark-brown, dehiscing longitudinally and halves twisting laterally, finally deciduous with the calyx and peduncle. *Seed* not seen.

Comments

Plants flower profusely from November to December. The flowers are held upright and are presumably insect pollinated. In fruiting stage the peduncle curves down and lowers the pod.

The name refers to its origin from Kangaroo Island.

Only one colony of c. 600 plants was observed in Beyeria Conservation Park of 184 ha where it was found in disturbed scrub. It was growing on sandy-clay soil in open forest of *Eucalyptus* sp. and *Melaleuca* sp. which has had several partial clearances by chaining or burning. Prostrate and semiprostrate clumps are often matted around tree trunks up to 50 cm high or scrambling in high grasses.

P. insularis is similar to *P. pedunculata* Hooker in regard to its wiry filiform but stiff branches, the roots produced along the branches, the stiff antrorse pubescence, the clasping broadly membranous stipules, the long filiform peduncles and the shape of the flower. It differs, however, because *P. pedunculata* commonly has larger flowers (to 8 mm long), longer narrow-lanceolate to narrow-elliptic leaves (5–12 × 2–3 mm) and nearly glabrous lamina ending in long-mucronate to an almost pungent straight tip.

P. pedunculata has not been found on Kangaroo Island, but occurs in similar habitats on Eyre Peninsula, in Southern Lofty and South-Eastern regions of South Australia as well as in New South Wales, Victoria and Tasmania.

Conservation status: Known only from a single locality in Beyeria Conservation Park where several hundred plants occur; suggested status 2VC.

Key to species

Flowers 4–5 mm long, solitary; leaves elliptical, 2.5–6 mm long, tip mucronate and recurved *P. insularis*
 Flowers 4–8 mm long, sometimes twin; leaves narrow-lanceolate to narrow-elliptic, 5–12 mm long, tip acute, almost pungent, straight..... *P. pedunculata*

Specimens of *P. insularis* examined were found in the same locality:

* SOUTH AUSTRALIA: Beyeria Conservation Park, *B.M. Overton* 1624, 10.xi.1991; *B.M. Overton* 1625, 22.xi.1991 & *B.M. Overton* 2299, 28.iii.1993.

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References

- Leigh, J.H. & Briggs, J.D. (1992). Threatened Australian Plants (Australian National Parks & Wildlife Service: Canberra).
- Thompson, J. (1961). Papilionaceae, *Pultenaea*. *Contr. N.S.W. Nat. Herb.* 101.1: 46–79.
- Willis, J.H. (1972). A Handbook to Plants in Victoria 2: 259–273 (Melbourne University Press).
- Weber, J.Z. (1986). In Jessop, J.P. & Toelken, H.R. (eds). Flora of South Australia edn 4, 2: 672–687. (Govt Printer: Adelaide).
- Western, P.H. (1992). In Harden, G.J. (ed.) Flora of New South Wales 2: 481–497. (New South Wales University Press: Kensington).