

## ***Gompholobium glabristylum* (Fabaceae), a new native pea from montane habitats in Stirling Range National Park**

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### SHORT COMMUNICATION

In their revision of *Gompholobium* Sm. (Mirbelieae: Fabaceae), Chappill *et al.* (2008) noted that populations of *G. villosum* (Meisn.) Crisp from the Stirling Range differed from the typical form of the species in a number of respects. Recent field observations together with herbarium-based research have indicated that they should be recognised as a distinct species, described below, 118 years after it was first collected by Alexander Morrison in 1902.

***Gompholobium glabristylum* C.F. Wilkins & Sandiford, *sp. nov.***

*Type:* Stirling Range Drive, Western Australia [precise locality withheld for conservation reasons], 26 October 2016, C.F. Wilkins, E.M. Sandiford & K.A. Shepherd CW 2513 (*holo:* PERTH 08858306; *iso:* CANB, K, MEL).

*Gompholobium* sp. Stirling Range (C.F. Wilkins *et al.* CW 2513), Western Australian Herbarium, in *FloraBase*, <https://florabase.dpaw.wa.gov.au/> [accessed 28 March 2018].

Erect to spreading *shrub* 0.25–1 × 0.6–1 m, not viscid. *Branchlets* with a dense indumentum of spreading, straight or wavy, white hairs to 0.8 mm long, glabrescent with age. *Stipules* absent. *Leaves* digitately divided into 3 straight leaflets, with a sparse to moderately dense indumentum of spreading, straight hairs to 0.6 mm long, glabrescent with age; petiole absent; petiolules 0.5–1.1 mm long. *Leaflets* narrowly linear, (4.5–)7–15(–23) × 0.6–1 mm, concolorous, mid-green to grey-green, verrucose; bases attenuate, margins tightly revolute hiding underside (abaxial surface) of leaf; apices sub-acute and straight, apiculum 0.2–0.5 mm long. *Flowers* lateral on branchlets, mainly solitary in upper axils, rarely 2 per axil. *Peduncles* 1–1.5 mm long, with a dense indumentum of spreading, straight hairs to 0.6 mm long. *Pedicels* 1.8–6.3 mm long, with a sparse or dense indumentum of spreading, straight or wavy hairs to 0.8 mm long. *Bracts* persistent, narrowly ovate to ovate, 1.6–3.1 × 0.6–1.1 mm, with moderately dense spreading, straight hairs *c.* 0.5 mm long on entire abaxial surface. *Bracteoles* 1 or 2, persistent, inserted towards base of pedicel, narrowly ovate to narrowly elliptic, 1–2.4 × 0.3–0.6 mm, with moderately dense hairs to 0.6 mm long. *Buds* ellipsoid to obovoid, 5–5.5 × 3–3.6 mm, outer surface red-brown to maroon, with a dense indumentum of spreading, straight hairs to 1 mm long, with tips of

calyx lobes fused; apiculum straight, *c.* 0.15 mm long. *Hypanthium* 0.7–1 mm long. *Calyx* indumentum as for buds, total length 5.4–7.5 mm, with adaxial lobes fused at base for 1.8–3 mm, asymmetrical, with one straight edge, 3.5–4.5 × 1.5–2.9 mm, the abaxial lobes fused at base for 1.2–2.3 mm, symmetrical, 4.2–4.5 × 1.5–2.1 mm. *Standard* with a claw 1.2–2.1 × 0.7–1.3 mm, lamina broadly ovate, 6.6–14.6 × 10–18.2 mm, without auricles, bright pink to pinkish mauve on both surfaces, eye broader than long, pale greenish yellow or creamy yellow with dark pink border, emarginate with indentation 0.6–3 mm deep; *wings* straight, narrowly obovate, 8–11.8 × 3.5–4 mm including claw, bright pink or reddish pink, the apex obtuse; *keel* 6.7–10.5 × 3.5–5.3 mm including claw, dark reddish pink. *Stamens* with red filaments, 5.3–9.7 × 0.2–0.3 mm; anthers sub-basifixed, narrowly ovoid, uniform in size, 0.6–0.7 × 0.35–0.5 mm, yellow with a narrow, red connective. *Gynoecium* with a stipe 0.2–0.4 mm long; *ovary* 2.8–3.1 × 0.8–1.3 mm, with a dense indumentum throughout of spreading, straight hairs *c.* 0.6 mm long; *style* 4–9.3 × 0.35–1 mm, glabrous; ovules 2. *Fruit* ellipsoid, 7.5–8 × 7.5–8 mm, with moderately dense, white hairs to 1 mm long throughout, funicles *c.* 4.1 mm long. *Seeds* brown, glabrous, *c.* 3 × 2 mm, rim aril present. (Figures 1, 2A, B)

*Diagnostic features.* *Gompholobium glabristylum* can be differentiated from other species in the genus with pink standard petals by the following combination of characters: a glabrous style, hairy outer calyx, bright pink standard petal, and digitately divided leaves with three, linear, straight leaflets.

*Selected specimens.* WESTERN AUSTRALIA: [localities withheld for conservation reasons] 17 Oct. 1962, *T.E.H. Aplin* 2092 (PERTH); 31 Oct. 1994, *S. Barrett & B. Hammersley* 256 (PERTH); 1 Oct. 1995, *S. Barrett* 436 (PERTH); 17 Nov. 2016, *S. Barrett* 2242 (PERTH); Oct. 1990, *J.A. Chappill* JAC 1408 (PERTH); 13 Dec. 2005, *J.A. Cochrane, S. Barrett, R. Hartley & J. Patane* JAC 5556 (PERTH); 24 Nov. 2006, *J.A. Cochrane, J. Giles & B. Davis* JAC 6167 (PERTH); 15 Oct. 1996, *M.D. Crisp & W. Keys* MDC 8951 (CANB, PERTH); 9 Oct. 1962, *A.R. Fairall* 482 (PERTH); 12 Nov. 1961, *A.S. George* 3126 (PERTH); 23 Oct. 1991, *W. Greuter* 23169 (PERTH); 7 Oct. 1902, *A. Morrison s.n.* (PERTH); 27 Oct. 1959, *R.D. Royce* 6052 (PERTH); 29 Oct. 2015, *E.M. Sandiford* 2146 (PERTH); 26 Oct. 2016, *C.F. Wilkins, E.M. Sandiford & K.A. Shepherd* CW 2515 (PERTH); 11 Oct. 2000, *J.F. Smith* JFS 53 (PERTH); 27 Sep. 1966, *P.G. Wilson* 4198 (CANB, K, PERTH).

*Phenology.* Flowering from September to November. Fruiting in December.

*Distribution and habitat.* Restricted to Stirling Range National Park where it grows on mountain slopes and summits in heath or thicket, in brown sandy loam over quartzite, siltstone or sandstone.

*Conservation status.* Listed as Priority Two under Conservation Codes for Western Australian Flora (Smith & Jones 2018), under the name *G. sp.* Stirling Range (C.F. Wilkins et al. CW 2513). This species appears to be a narrow-range endemic of Stirling Range National Park, although further survey is required to determine whether it is more widespread.

*Etymology.* The epithet is from the Latin *glabri-* (glabrous-) and *stylus* (style).

*Vernacular name.* Beardless Pea.

*Affinities.* *Gompholobium glabristylum* is morphologically allied to *G. villosum*. Both species have a hairy outer calyx, petals of pinkish shades, and digitate leaves with three, linear leaflets; however, unlike *G. villosum*, *G. glabristylum* has a glabrous style (*cf.* bearded), straight leaflets (*cf.* slightly recurved) and tends to have longer leaflets ((4.5–)7–15(–23) mm long *cf.* (4.5–)6.5–8.5(–12) mm). Its flowers are



Figure 1. *Gompholobium glabristylum*. A – habitat in the Stirling Range; B – habit and bright pink flowers (E.M. Sandiford 2146). Photographs © C.F. Wilkins (A) and E.M. Sandiford (B).



Figure 2. A – *Gompholobium glabristylum* flowers showing bright pink standard with creamy yellow eye, reddish pink wings and keel, and hairs on outer surface of calyx (C.F. Wilkins et al. CW 2516); B – *G. glabristylum* showing glabrous style (arrowed), straight leaves and developing fruits (C.F. Wilkins et al. CW 2513); C – *G. villosum* showing the bearded style, slightly recurved, shorter leaves and hairs on outer surface of calyx (E.M. Sandiford 2293). Photographs © E.M. Sandiford.

smaller (with a calyx 5.4–7.5 mm long *cf.* 7.5–11 mm long), with bright pink rather than paler purple-pink petals and with the eye of the standard broader than long and creamy yellow or greenish yellow in colour (*cf.* slightly longer than broad and yellow and white). *Gompholobium villosum* occurs in the Whicher Range–Busselton–Nannup area and from Denmark to Quaalup, including the Porongurup Range and plains south of the Stirling Range, but is not found in the Stirling Range National Park.

*Gompholobium glabristylum* shares pink to purple-pink flowers with *G. scabrum* Sm., a widespread species that also occurs in the Stirling Range, but this latter species can be differentiated by its glabrous rather than hairy outer calyx. *Gompholobium confertum* (DC.) Crisp, another widespread species that also occurs in the Stirling Range, has purple flowers but its leaves are simple rather than digitately divided.

*Identification.* The key to *Gompholobium* in Chappill *et al.* (2008) can be updated as follows:

**39.** Calyx hairy

**39a.** Style bearded; leaflets (4.5–)6.5–8.5(–12) mm long, slightly recurved  
(WA: Whicher Range, Denmark to East Mount Barren) ..... **G. villosum**

**39b.** Style glabrous; leaflets (4.5–)7–15(–23) mm long, straight (WA: Stirling Range) ..... **G. glabristylum**

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### References

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