

## ***Grevillea hystrix* (Proteaceae), a poorly known species from sandplain country in Western Australia's Coolgardie bioregion**

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### **SHORT COMMUNICATION**

The new species of *Grevillea* Knight (Proteaceae) described below was first collected from an area of sandplain near Koolyanobbing by William Muir in 2013 as part of industry-funded survey work. It was recognised as an undescribed species the following year upon examination of material donated to the Western Australian Herbarium, and subsequently was targeted by Herbarium staff for further collections and observations. Despite extensive areas of sandplain habitat in the region, it remains known from only a single population.

***Grevillea hystrix* R.W.Davis, *sp. nov.***

*Type:* east from Koolyanobbing, Western Australia [precise locality withheld for conservation reasons], 30 September 2017, *J.A. Wege & K.A. Shepherd* JAW 2036 (*holo:* PERTH 08961093; *iso:* MEL, NSW).

*Grevillea* sp. Koolyanobbing (W.P. Muir WPM 3344), Western Australian Herbarium, in *FloraBase*, <https://florabase.dpaw.wa.gov.au/> [accessed 14 November 2017].

Low, compact, non-lignotuberous *shrub* 40–60 cm high, 30–100 cm wide, with spreading to gently arching branches. *Stems* terete; young branches with dense, long, silky, white hairs to 1.5 mm long. *Leaves* rigidly twice-tripartite, rarely tripartite (the primary lateral and terminal lobes simple to tripartite), 5–8 mm long, 8–10 mm wide, spreading, shortly petiolate, single to clustered on short-shoots (appearing fasciculate), with sparse, long, biramous, appressed hairs to 1.2 mm long; lobes linear, 3–7 mm long, 0.6–0.7 mm wide, sharply pungent; margins tightly revolute to the midvein or nearly so. *Conflorescences* 6–10-flowered, outline of flower cluster 30–40 mm long, 40–60 mm wide, decurved, terminal to sub-terminal, sessile or with a short peduncle to 2 mm long; floral rachis 8–10 mm long. *Flowers* zygomorphic, saccate at base, predominately red with the inner surface of the perianth limb near the stamen cream; pedicels 2.5–3.5 mm long, sericeous; torus 0.6 mm wide, transverse; perianth ovoid, 6–6.5 mm long, 2.5–3 mm wide at the base; tepals loosely sericeous on outer surface, glabrous on inner surface; tepal limbs revolute, the dorsal limbs 5–5.5 mm long, 0.4–0.8 mm wide, free for most of their length, the two ventral limbs 3.5–3.8 mm long, 0.2–0.3 mm wide, mostly fused; dorsal suture extending nearly to the base; stamens pale yellow; nectary conspicuous, ligulate, extending ventrally 0.2–0.3 mm from the torus, abruptly reflexed *c.* halfway along its length, the apical margin truncate-denticulate; pistil red with prominent green apex, 21–25 mm long; ovary sub-sessile (with a

stipe to 0.2 mm long), ovoid, 0.9–1 mm long, 0.8–0.9 mm wide, densely sericeous; style glabrous or with scattered spreading hairs; pollen presenter 1–1.2 mm long, 0.7–0.8 mm wide, convex, oblique (at *c.* 45°), the margins wavy. *Follicles* pale green-brown, 9–12 mm long, *c.* 4 mm wide, 6–6.5 mm deep, obloid to ellipsoid, glandular hairs intermixed with scattered, appressed, biramous hairs. *Seeds* 7.7–8 mm long, 2.9–3.1 mm wide, oblong to narrowly elliptical, smooth, concavo-convex, with a narrow, yellowish, convolute wing which is wider, more convolute and stronger yellow at one end, forming a possible elaiosome to 0.7 mm long; inner surface vulviform, the central elliptic portion flat, with margins raised on both sides. (Figure 1)

*Diagnostic features.* *Grevillea hystrix* can be distinguished from all other members of the genus by the following combination of characters: a low shrub to 1 m high, with densely hairy, spreading to gently arching branches; leaves twice-tripartite, to 8 mm long, the lobes sharply pungent; pedicels 2.5–3.5 mm long; perianth red, 6–6.5 mm long, glabrous on the inner surface.

*Specimens examined.* WESTERNAUSTRALIA: [localities withheld for conservation reasons] 13 Aug. 2017, R.D. Davis 12809 & A. Brown (PERTH); 25 Sep. 2013, W.P. Muir 3344 (PERTH).

*Phenology.* Flowering from late August to early October; fruiting has been recorded in September and October.

*Distribution and habitat.* *Grevillea hystrix* is currently known from one population in the Coolgardie bioregion. It occurs in low open shrubland on gently sloping sandplains on yellow clayey sand, and is associated with *Triodia* sp., *Melaleuca cordata*, *Thryptomene* sp., *Chrysitrix distigmatosa* and *Melichrus* sp. Bungalbin Hill (F.H. & M.P. Mollemans 3069) (Figure 1A).

*Conservation status.* *Grevillea hystrix* is listed by Smith and Jones (2018) as Priority One under Conservation Codes for Western Australian Flora, under the name *G.* sp. Koolyanobbing (W.P. Muir 3344). The only known population of *G. hystrix* consists of approximately 20 plants, many of which appeared to be senescing or dying. Some of the plants appeared to be reshooting from older stems (Figure 1B).

*Etymology.* The epithet is from the Latin *hystrix* (porcupine) and refers to its fiercely spinescent leaves.

*Vernacular name.* Porcupine Grevillea.

*Notes.* *Grevillea hystrix* shares characteristics with the *Pteridifolia* group (Makinson 2000) and taxa in ‘*Grevillea* section 35’ (Olde & Marriott 1994), particularly with *G. secunda* McGill., a species that occurs mostly in the western parts of the Great Victoria Desert with an outlier west of Menzies. It differs from this species in having leaves twice-tripartite (*cf.* bipinnatipartite to pinnatipartite), and shorter (5–8 mm long vs 40–90 mm long) with mostly shorter lobes (3–7 mm long vs 5–40 mm long). Similarly, the new species shares affinities with *G. batrachioides* F.Muell. ex McGill., which is a threatened and restricted species occurring near Mt Lesueur. The new species differs in being a low shrub 40–60 cm high (*cf.* shrub to 2 m high), with shorter pedicels (2.5–3.5 mm long vs 7–15 mm long) and shorter pistil (21–25 mm long vs 30–38 mm long).

Although not in the same group, *G. neodissecta* I.M. Turner, which occurs south and east of the Parker Range between Forrestania and Norseman, shares some similarities with the new species. *Grevillea*





Figure 1. *Grevillea hystrix*. A – habitat with plant *in situ* in the foreground; B – one of many senescing plants observed at the time of the type gathering; C – flowering branch showing the short, fasciculate leaves; D – inflorescence detail, note the pungent leaves; E – top and bottom view of seeds. Photographs by J.A. Wege (A–C) from J.A. Wege 2036 & K.A. Shepherd and R. Davis (D, E) from R.D. Davis 12809 & A. Brown (D) and W.P. Muir 3344 (E).

*hystrix* differs from this species in having shorter leaves (5–8 mm long vs 10–25 mm long), shorter pedicels (2.5–3.5 mm long vs 10–15 mm long), and a shorter perianth (6–6.5 mm long vs 8–15 mm long) with hairs on the outside (*cf.* with both glandular and simple hairs on the outside) and no hairs on the inside (*cf.* bearded on the inside about the level of the ovary).

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