

## Crystal clear: *Dampiera prasiolitica* (Goodeniaceae), a distinctive new Western Australian species with translucent sepals

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### SHORT COMMUNICATION

The new species described below is currently only known from a single herbarium specimen (Figure 1) collected in 2011 from south-east of Mt Walton in the Coolgardie bioregion. Only one plant growing near a gravel pit was observed, and the surrounding vegetation had been burnt a few years previously. Recent searches of this site and surrounding areas have failed to relocate this species suggesting that it might be a short-lived disturbance opportunist, proliferating following a disturbance such as fire and then declining over time like many other members of Goodeniaceae (Sage 2003). Alternatively, it could be a relatively long-lived but genuinely rare species. In either case, it may be many years before additional collections are made, particularly given the region is remote and relatively inaccessible, so we have decided to describe this species despite the limited material. While this is not optimal taxonomic practice, we believe that its distinctive translucent sepals and unique corolla indumentum put its novel status beyond doubt, and that its description will improve the chances of its rediscovery in the wild.

*Dampiera prasiolitica* Hislop & K.A.Sheph., *sp. nov.*

*Type*: north of the Trans-Australia rail line [south-east of Mt Walton], Western Australia [precise locality withheld for conservation reasons], 22 September 2011, *D. Angus* DA 268 (*holo*: PERTH 08358966).

*Dampiera* sp. Jaurdi (*D. Angus* DA 268), Western Australian Herbarium, in *FloraBase*, <https://florabase.dpaw.wa.gov.au/> [accessed 14 February 2019].

Multi-stemmed *perennial herb*, *c.* 0.3 m high, 0.2 m wide, with white to grey, shortly stalked to  $\pm$  sessile stellate hairs, 0.25–0.5 mm diam. *Stems* terete, without grooves, with an indumentum of sparse to moderately dense stellate hairs 0.25–0.4 mm diam. *Leaves* alternate, sessile, glabrous; blade narrowly elliptic to narrowly obovate, 8.7–26 mm long, 1.4–3.3 mm wide, slightly concave adaxially or  $\pm$  flat, often distinctly rugose, base attenuate to  $\pm$  cuneate, apex obtuse to subacute, margin entire. *Inflorescence* of multi-flowered, terminal and axillary racemes, appearing leafy on account of the large, leaf-like bracts; raceme axes with sparse to moderately dense stellate hairs 0.25–0.3 mm diam. *Bracts* leaf-like, narrowly ovate, 6.6–9.2(–19) mm long, 1.8–3.3 mm wide, glabrous, with prominent venation and pale margins. *Pedicels* very short in bud, elongating to at least 6 mm long in flower, bracteolate, with a dense indumentum of stellate hairs. *Bracteoles* 2, opposite or subopposite, inserted about halfway along the pedicel, glabrous, narrowly elliptic to narrowly ovate, to 5 mm long, 1.5 mm wide.

*Sepals* imbricate, broadly ovate, 2–3 mm long, 1–2 mm wide, apex obtuse but sometimes  $\pm$  apiculate; outer surface translucent, pale green with dense to moderately dense stellate hairs 0.2–0.5 mm diam. towards the base becoming scattered towards the apex. *Corolla* c. 11 mm long, white, probably with a yellow throat, outer surface with a dense indumentum of stellate hairs 0.3–0.35 mm diam.; abaxial lobes all of similar size and shape, elliptic to obovate, c. 8 mm long, c. 5.5 mm wide; connate part of abaxial lobes to c. 4.5 mm long; wing c. 2 mm wide, with an irregularly crenate margin; adaxial lobes  $\pm$  falcate and longitudinally recurved, c. 8 mm long, c. 4.5 mm wide; auricle maroon to purplish when dry, c. 1.5 mm long, 1 mm wide; full-length wing c. 2 mm wide present on outer edge, inner edge wing only present immediately above the auricle; calli present. *Style* c. 4 mm long (including indusium), purplish when dry; indusium c. 0.7 mm wide. *Ovary* unilocular, c. 2 mm long, with a dense indumentum of stellate hairs 0.3–0.5 mm diam.; ovule basifixed, straight, linear, c. 1.5 mm long. *Fruit* and seed unknown. (Figure 1)

*Diagnostic features.* This species is unique within *Dampiera* R.Br. due to the following combination of characters: rugose leaves; broad, imbricate, pale green sepals that are somewhat translucent; a white corolla; and an indumentum of shortly stalked or  $\pm$  sessile stellate hairs on the stems, sepals and outer corolla.

*Phenology.* The only known specimen was collected in mid- to late September and is in early flower.

*Distribution and habitat.* Currently only known from a single location north-east of Southern Cross, near the boundary of Jaurdi Conservation Park in the Coolgardie bioregion of the Eremaean Botanical Province (Western Australian Herbarium 1998–). It was found growing in yellow sand and gravel over granite associated with *Allocasuarina corniculata*, *Gyrostemon racemiger*, *Acacia sibina*, *Eucalyptus leptopoda* and *Calytrix creswellii*.

*Conservation status.* This species is currently listed by Smith and Jones (2018) as Priority One under Conservation Codes for Western Australian Flora, under the name *D. sp. Jaurdi* (D. Angus DA 268). Efforts to relocate the plant at the type locality in September 2017 and October 2018 were unsuccessful. Future surveys should focus on areas within a 50–100 km radius that have been recently disturbed, for example through road works, mining activity or fire.

*Etymology.* The epithet refers to the distinctive, pale green, translucent sepals that resemble prasiolite, a leek-green form of quartz crystal that is rarely found in nature.

*Vernacular name.* Coolgardie *Dampiera*.

*Affinities.* The rugose leaves, broad, imbricate sepals, racemes of white flowers, and unusual corolla indumentum make *D. prasiolitica* a highly distinctive species. In terms of the infrageneric classification of Rajput and Carolin (1992: 35), it fits within sect. *Linschotenia* (Vriese) Benth. on the basis of its racemose inflorescences, terete stems and more or less woody basal parts. However, its corolla indumentum, which consists of more or less sessile, white to grey stellate hairs, is not only unique within this section but dissimilar to any of the five diagnostic types illustrated for the genus (Rajput & Carolin 1992: 6, Figure 23). Species of *Dampiera* with racemose inflorescences usually have very reduced bracts. In contrast, the bracts in *D. prasiolitica* are large and leaf-like; distinguished from the leaves by their prominent venation and pale margins. Its broad, imbricate and translucent sepals are also apparently unique within the genus. Molecular sequencing would be helpful in determining allied species.

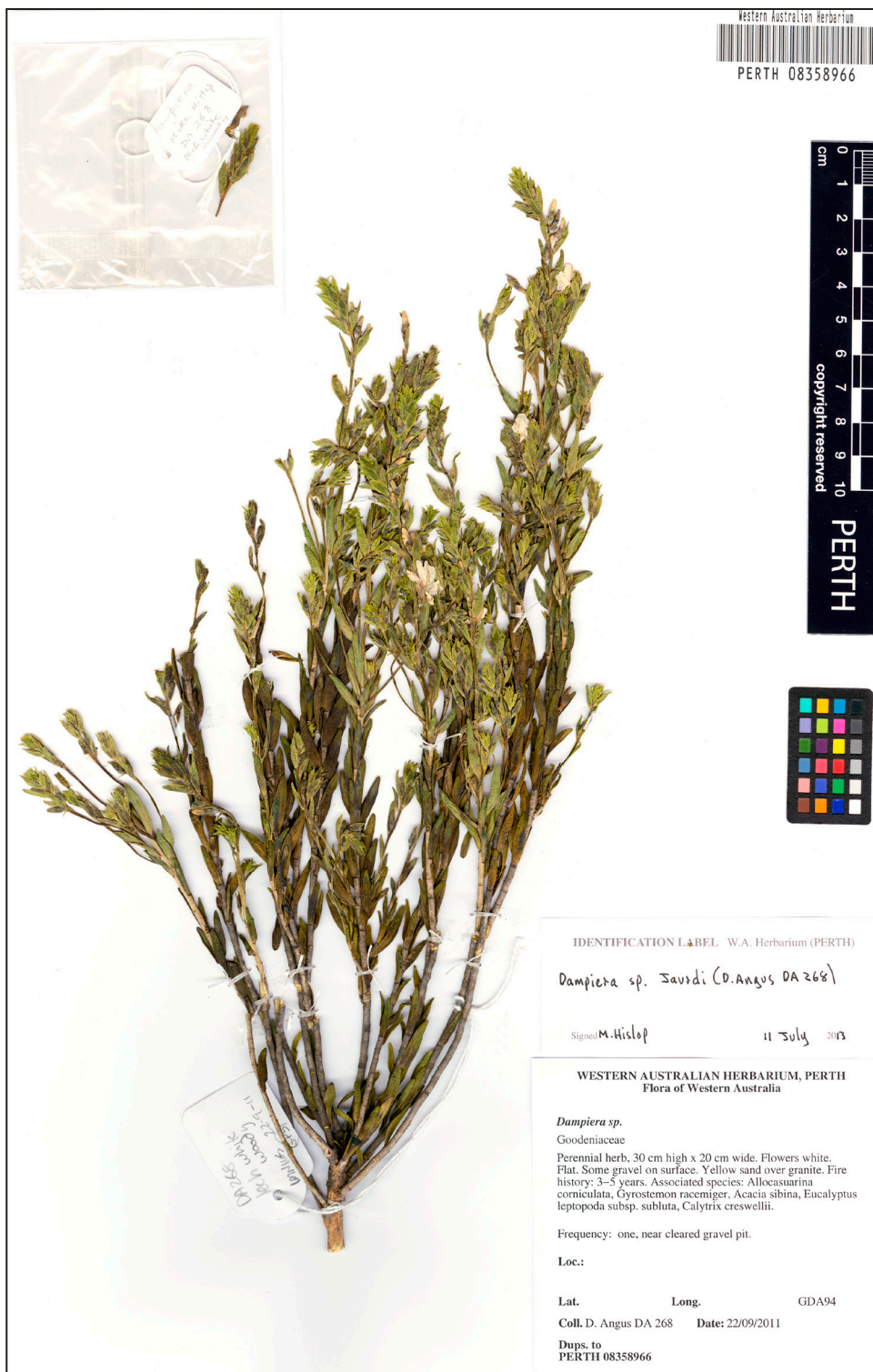


Figure 1. Holotype of *Dampiera prasiolitica*, locality withheld for conservation reasons (*D. Angus* DA 268, PERTH 08358966).

*Notes.* This species may be a disturbance opportunist as it was found near a gravel pit in an area that had been burnt in the previous 3–5 years.

Because the number of flowers available on the type are few, the floral measurements given in the above description will need to be updated if further material becomes available for study.

### Acknowledgements

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