

A new species of *Darwinia* (Myrtaceae) from the Perth Region, Western Australia

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Abstract

Marchant, N. G. A new species of *Darwinia* (Myrtaceae) from the Perth Region, Western Australia. Nuytsia 5(1): 63-66 (1984). A new species, *Darwinia apiculata*, from near Kalamunda, suburban Perth, Western Australia, is described and illustrated. It belongs to sect. *Genetyllis* (DC.) Benth. and is similar to *D. helichrysoides* (Meisn.) Benth. and *D. oederoides* (Turcz.) Benth., differing in its habit, bracts, bracteoles, calyx lobes and corolla lobes. *Darwinia apiculata* is known only from the type locality.

The genus *Darwinia* Rudge (Myrtaceae) is currently being revised by the author. This new species is described in order to validate its inclusion in the projected handbook on the "Flora of the Perth Region" the boundaries of which are defined by Marchant & Perry (1981).

Darwinia apiculata N. G. Marchant, sp. nov. (Figure 1)

Frutex rotundatus 40-50 cm altus. *Rami* juveniles foliis manifeste decurrentibus. *Folia* dispersa; *petiolus* 0.2-0.3 mm longus; *lamina* lineari-triquetra, apicem versus irregulariter ciliolata, apiculata. *Involucri bracteae exteriores* anguste ovatae, longe acuminatae, 8-10 mm longae, superficie abaxiali basi gibbosae. *Involucri bracteae interiores* anguste ovatae, longe acuminatae, triquetrae, 10-15 mm longae, superficie adaxiali profunde concava. *Flores* 4-8. *Bracteolae* 2, cymbiformes. *Tubus floralis* prominenter 5-costatus. *Calycis lobi* late ovati usque obovati. *Corollae lobi* trullato-ovati. *Stamina* 10. *Staminodia* 10, anguste triangulares. *Ovula* 2.

Typus: Uncleared area west of Alpine Rd, west of Kalamunda, 31°58'S, 116°02'E, Western Australia, 17 Oct. 1982, N. G. Marchant 82/111 (holo: PERTH; iso: CANB, K).

Densely branched, rounded *shrubs* 40-50 cm tall. Young *branches* slender, red, with prominent, decurrent leaf bases. *Leaves* scattered; *petioles* erect, 0.2-0.3 mm long; *laminae* horizontally spreading, linear-triquetrous, adaxial surface convex with a raised keel, 3-5 mm long on young stems, 5-6.5 mm long on mature stems, irregularly ciliolate towards apices, acute, apiculate. *Inflorescences* fusiform in bud, becoming ovoid or broadly ovoid, cernuous. *Floral leaves* patent, pale green, petiole 0.5-1 mm long, lamina narrowly ovate, acuminate, 6.5-8 mm long, abaxial surface gibbous at the base. *Outer involucral bracts* narrowly ovate, long acuminate, 8-10 mm long, abaxial surface gibbous at the base, adaxial surface with narrow, lateral wings near the base, upper part triquetrous and sparsely ciliolate. *Inner involucral bracts* narrowly ovate, long acuminate, triquetrous, 10-15 mm long, green, yellow-green or yellow and red, ciliolate, abaxial surface gibbous at the base, adaxial surface deeply

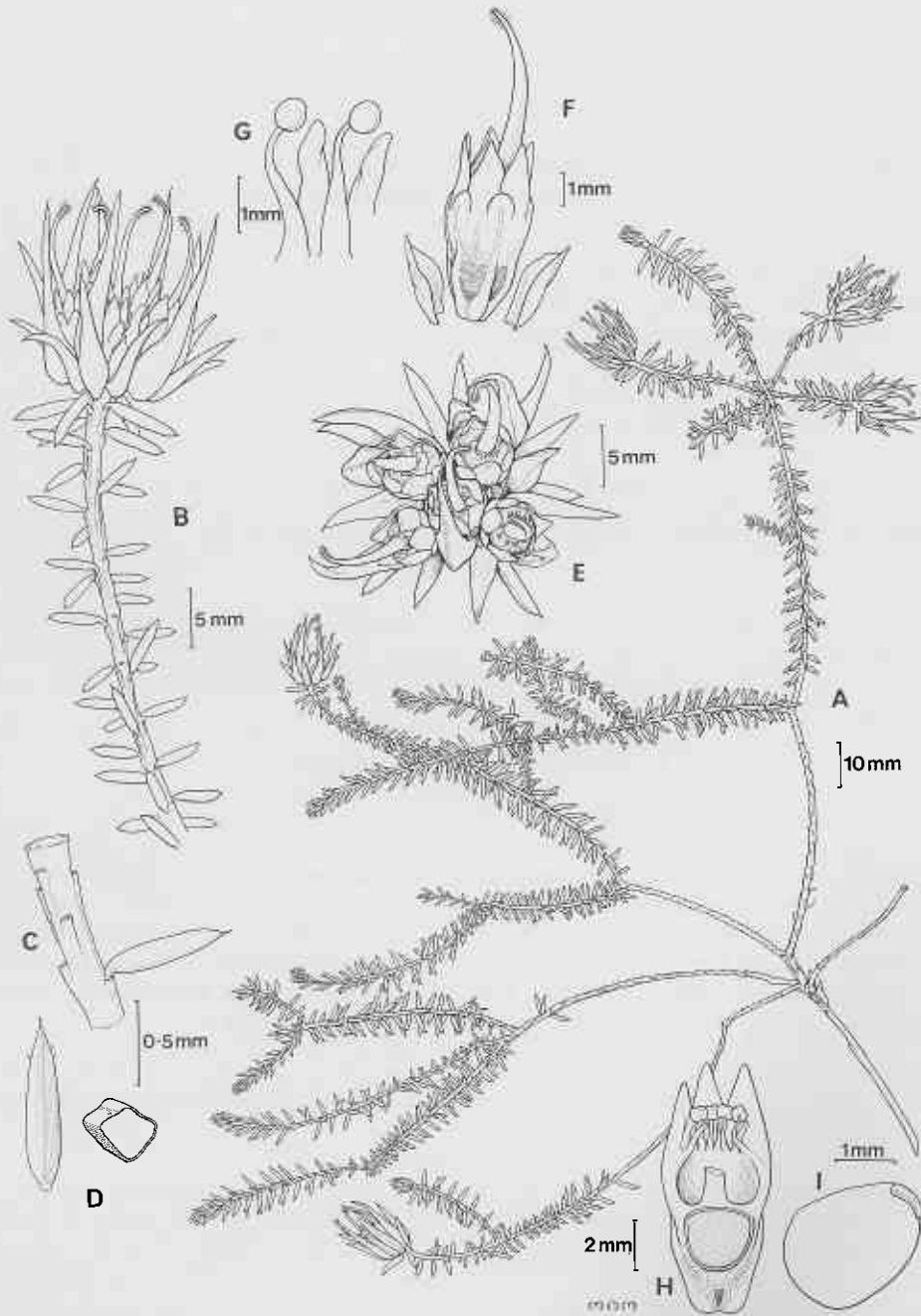


Figure 1. *Darwinia apiculata*. A—Habit. B—Portion of branch showing inflorescence. C—Enlarged portion of branch showing decurrent leaf bases. D—Single leaf and transverse section. E—Inflorescence (viewed from below) showing floral leaves, involucral bracts and five flowers. F—Single flower and two bracteoles. G—Two stamens and two staminodes. H—Fruit in longitudinal section showing single seed. I—Embryo showing turgid radicle and appressed plumule.

All drawn from living material.

concave. *Flowers* 4-8. *Bracteoles* 2, cymbiform, ovate when opened out, 3-4 mm long, 1.5-2.5 mm wide, acuminate. *Floral tubes* obconical, 2.5-3 mm long, with 5 prominent costae which continue into the calyx lobes; intercostal regions with 1 or more minute horizontal ridges and wrinkles; lower part brown; upper part yellow-green. *Calyx lobes* broadly ovate to broadly obovate, 1 mm long, 1 mm wide, entire, obtuse. *Corolla lobes* trullate-ovate, 2.5-3 mm long, 1.5-2.5 mm wide, acute, entire; *margins* slightly involute. *Stamens* 10; *filaments* slightly dilated at base, fused to staminodes in lower part, free part less than 1 mm long; anthers ovoid. *Staminodes* 10, alternating with the stamens, narrowly triangular, as long as the staminal filaments. *Style* falcate, introrse, slightly dilated at the middle, 6-9 mm long, red. *Style end* tapering to a truncate apex which is subtended by a 1 mm wide band of diffuse hairs. *Ovules* 2. *Fruits* apparently rarely developed, indehiscent, with all dried floral parts attached; *floral tube* slightly enlarged, hardened, pale-coloured. *Seeds* 1, rarely 2, exalbuminous; testa thin. *Embryo* consisting almost entirely of the turgid radicle 0.6-0.8 mm diameter; *plumule* sub-apical, appressed to radicle, consisting of a pair of minute, terminal cotyledons c. 0.1 mm long and a slightly flattened hypocotyl c. 0.3 mm long.

Distribution. Known only from a single locality west of Kalamunda, suburban Perth, where it occurs sporadically over 5-6 ha.

Habitat. Under dry sclerophyll woodland of Jarrah (*Eucalyptus marginata*) and thickets of *Dryandra sessilis* on a level, lateritic soil c. 250 m above sea level.

Affinities. *Darwinia apiculata* belongs to sect. *Genetyllis* which is characterised by short calyx lobes and flowers in simple, terminal heads. It superficially resembles *D. helichrysoides* (Meisn.) Benth. and *D. oederoides* (Turcz.) Benth. The three species are easily distinguished by the characters given in Table 1.

Table 1. Distinguishing features of *D. apiculata* and two allied South-western Australian species of *Darwinia*.

	<i>D. apiculata</i>	<i>D. helichrysoides</i>	<i>D. oederoides</i>
<i>Habit</i>	densely branched, 40-50 cm tall	sparsely branched, 20-45 cm tall	sparsely branched, prostrate
<i>Inner involucrel bracts</i>			
<i>length</i>	10-15 mm	20-26 mm	13-16 mm
<i>apex</i>	acuminate	acute	acute
<i>Bracteoles</i>	3-4 mm x 1.5-2.5 mm	6-7 mm x 6-7 mm	12-15 mm x 2-2.5 mm
<i>Calyx lobes</i>			
<i>shape</i>	broadly ovate-broadly obovate	ovate	triangular
<i>length</i>	1 mm	2.5-3.5 mm	1 mm
<i>Corolla lobes</i>			
<i>shape</i>	trullate-ovate	trullate-ovate	triangular
<i>apex</i>	acute	obtuse	obtuse

Conservation status. (Leigh, Briggs & Hartley 1981). Endangered. *Darwinia apiculata* is known only from 5-6 ha. of uncleared, partly disturbed Crown Land with a total estimated population of 150-200 individual plants.

Etymology. The specific epithet refers to the distinctly apiculate leaves.

Acknowledgements

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References

- Leigh, J. H., Briggs, J. D. & Hartley, W. (1981). "Rare or Threatened Australian Plants." (Austral. Natl. Parks & Wildl. Serv., Special Publication 7: Canberra.)
- Marchant, N. G. & Perry, G. (1981). A checklist of the vascular plants of the Perth Region, Western Australia. W. Austral. Herb. Res. Notes No. 5:111-134.