

A new species and a new combination in *Darwinia* (Myrtaceae) from Western Australia

By N. G. Marchant¹ and G. J. Keighery²

Abstract

Marchant, N. G. and Keighery, G. J. A new species and a new combination in *Darwinia* (Myrtaceae) from Western Australia. *Nuytsia* 3, 2: 179–182 (1980).

Darwinia wittwerorum sp. nov. is described and illustrated and a new combination, *Darwinia oxylepis* (Turcz.) comb. nov. is made. Both species occur in the Stirling Range National Park, south western Australia.

Introduction

Before publishing the results of a detailed study of relationships and variation in Stirling Range species of *Darwinia* it is necessary to describe a new species and make a new combination.

Quantitative data of the new species were obtained from measurements on a leaf, bract and flower sampled from each of forty individual plants. The term "floral tube" is used here rather than the term "calyx tube" adopted by Bentham (1867). In addition, the terms "calyx lobes" and "corolla lobes" are used in preference to "sepals" and "petals".

1. *Darwinia wittwerorum* Marchant et Keighery sp. nov.

Frutex 30–80 cm altus. *Folia* linearia-triquetra, 5–10 mm longa, acuta. *Capitulum* terminale, magnum, nutans; bractae exteriores involucrorum pluri-seriales; bractae interiores elliptico-obovatae, 18–21 mm longae, 6–9 mm latae. *Bracteolae* lineares, ad apicem concavo-spathulatae, acutae, 6–9 mm longae. *Tubus floralis* cylindricus, durus, 4–6 mm longus. *Calycis lobi* minuti, triangulares. *Lobi corollae* ovati, cremei, 3–4 mm longi. *Stamina* 10. *Staminodia* 10, linearia, \pm 1 mm longa. *Stylus* falcatus, 8–10 mm longus. *Ovula* 2.

Type: Erect plant to 75 cm tall, on red clayey sand with shrubs of *Eucalyptus cornuta*, near Talyuberlup, Stirling Range National Park, N. G. Marchant 77/305, 17 October 1977 (holo: PERTH, iso: MEL).

Erect, single-stemmed *shrub* 30–80 cm tall. *Leaves* scattered, linear-triquetrous, 5–10 mm long, less than 0.5 mm wide, apex acute; leaf scars persistent. *Inflorescence* ovoid, pendulous; *outer bracts* elliptic in lower half, linear above, cream; *inner bracts* elliptic-obovate, 18–21 mm long, 6–9 mm wide, cream in lower half, pink or rose pink in upper part. *Flowers* 5–9. *Bracteoles* 4, linear in lower half, concave spatulate in upper half, 6–9 mm long, 1–2 mm wide. *Floral tube* narrow, circular in cross section, with faint ribbing, 4–6 mm long. *Calyx lobes* minute, triangular, less than 0.25 mm long. *Corolla lobes* cream coloured, ovate, entire, 3–4 mm long. *Stamens* 10; filaments less than 1 mm long. *Style* falcate, bent towards centre of inflorescence, terete, 8–10 mm long. *Stigma* globose, minute, subtended by a 1–2 mm wide band of rigid hairs forming a cone-shaped brush. *Ovules* 2.

¹ Western Australian Herbarium, South Perth, Western Australia 6151.

² Kings Park and Botanic Garden, Perth, Western Australia 6000.

Chromosome number $n = 6$ Rye (1979).

Distribution: Restricted to low-elevation sites in the central part of the Stirling Range National Park, Western Australia.

Other Collections: (all from same general locality near Talyuberlup, Stirling Range National Park; collection number and date cited only) all at PERTH: *T. Hales* 5, 11 Sept. 1976; *T. Hales* 1, 22 Dec. 1974; *N. Marchant* 77/307, 17 Oct. 1977; *E. Wittwer* 2027, 11 Oct. 1977; *G. Keighery* 1821, 20 Oct. 1977.

Etymology: Named in honour of Magda Wittwer (28 August 1922–16 October 1977) and Ernst Wittwer, Superintendent of Kings Park and Botanic Garden, Perth.

Darwinia wittwerorum sp. nov. is distinguished from the other so-called "Mountain Bells" by its linear-triquetrous leaves, ovoid inflorescences, small inner bracts and shorter style length. It is similar to *Darwinia lejustyla* (Turcz.) Domin from which it is separated by the following characters. Quantitative characters are based on 80 samples of *D. wittwerorum* and 200 of *D. lejustyla*.

	<i>D. lejustyla</i>	<i>D. wittwerorum</i>
inflorescence	campanulate	ovoid
inner bract colour	pink or red	cream and pale pink
inner bract length	19–31 mm, mean = 24.6 mm	18–21 mm, mean = 19.8 mm
number of flowers/inflorescence	7–12, mean = 9.1	5–9, mean = 6.5
style length	15.5–22 mm, mean = 17.7 mm	8–10 mm, mean = 9.3 mm

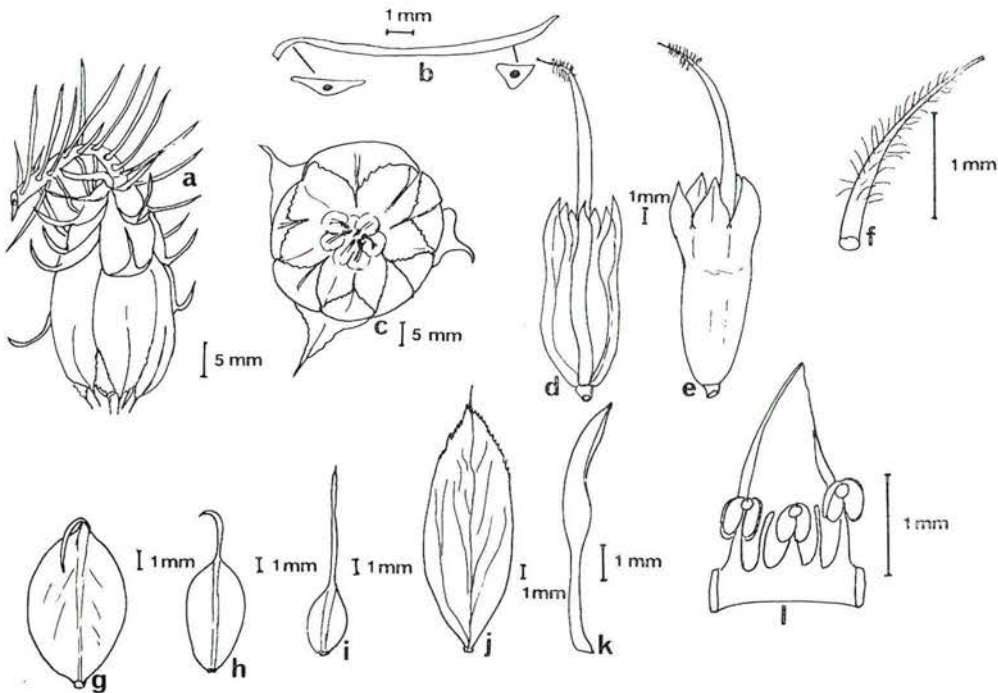


Figure 1. *Darwinia wittwerorum* sp. nov. a—Inflorescence, side view. b—Leaf, side view with proximal and distal transverse sections. c—Inflorescence from below. d—Flower with bracteoles. e—Flower with bracteoles removed. f—Distal part of style. g—Bract from inner part of involucre. h—Bract from outer part of involucre. i—Outermost involucral bract. j—Innermost involucral bract. k—Bracteole. l—Stamens and staminodia. All from N. G. Marchant 77/305.

The two species are allopatric. Some populations of *D. lejustyla* are known to be only 15 km away from recorded localities of *D. wittwerorum*.

2. *Darwinia oxylepis* (Turcz.) Marchant et Keighery comb. nov.

Basionym: *Genetyllis oxylepis* Turcz., Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg. 10: 324 (1852). *Type*: J. Drummond 5th collection no. 100 (holo: KW n.v., iso: K, MEL).

Genetyllis meisneri Kipp., J. Linn. Soc. (Bot.) 1: 49 (1856) pro parte as to Drummond 5: 100, nom. illeg. *Darwinia meisneri* Benth., J. Linn. Soc. (Bot.) 9: 179 (1865) '*meisneri*', nom. illeg.—based on *G. meisneri* Kipp.

Drummond's 5th collection number 100 cited by Kippist under *G. meisneri* is the same number as the type collection of *G. oxylepis*; the former name is therefore illegitimate. The additional Drummond collection cited by Kippist (5th collection no. 101) was commented on by him; he stated that it "... seems to be merely a less luxuriant state of the same plant, with more thinly scattered leaves, and paler bracts and flowers; but I have been unable to detect any difference of structure sufficiently important to justify its separation as a distinct species". (Kippist 1856). In his 1852 paper Turczaninow described *Genetyllis lejustyla* (the original spelling has been retained in accordance with Article 73.5, 1978 International Code of Botanical Nomenclature), based on J. Drummond's 5th collection no. 101. This species was transferred to *Darwinia* by Domin in 1923 as *Darwinia lejustyla* (Turcz.) Domin. The present authors regard *D. lejustyla* and *D. oxylepis* as distinct species.

Neither Kippist nor Bentham appears to have seen the paper published by Turczaninow in 1852 which included descriptions of several species of *Genetyllis*. Even in 1865 and 1867 Bentham did not make reference to *G. oxylepis* or, in fact, to any other species described by Turczaninow in that paper.

The distinction between *D. lejustyla* and *D. oxylepis* was recognised by Drummond himself in a letter reporting his explorations in the Stirling Range area, published by Hooker, (Drummond 1849):

"Along with it¹ on Mongerup², I found a species with heath-like leaves, a bright scarlet involucre inclosing dark purple flowers³. On Congineerup⁴ I found two large-bracted species of the genus; one with thyme-like, ciliated leaves and the bracts which form the involucre ciliated⁵; the other with heath-like leaves and bracts, without ciliae⁶; the bracts of both are rose-coloured".

Darwinia oxylepis and *D. lejustyla* can be distinguished on a number of characters. *Darwinia oxylepis* is a taller shrub with longer leaves, larger, acute-tipped, scarlet outer bracts, larger bracteoles as well as larger flowers; it is recorded only from a small area near Mondurup in the western part of the Stirling Range. *D. lejustyla* is more widespread in the eastern part of the range from Warrungup and Tolls Peak to Ellen Peak.

References

- Bentham, G. (1865). Notes on the Genera *Darwinia* Rudge and *Bartlingia* Ad. Brongn. J. Linn. Soc. (Bot.) 9: 179, '1867'.
 Bentham, G. (1867). "Flora Australiensis", Vol. 3. (London: L. Reeve).
 Domin, K. (1923). New Additions to the Flora of Western Australia. Vestn. Kral. Ceske Spolecn. Nauk, Tr. Mat.-Prir. 2: 78, '1921-1923'.

¹ *D. macrostegia*.

² Mondurup, which Drummond climbed from the N.W. side, where *D. oxylepis* is now known to occur.

³ *D. oxylepis* (J. Drummond 5th coll., n. 100).

⁴ Bluff Knoll.

⁵ *D. squarrosa* (presumably J. Drummond 5th coll., n. 99).

⁶ *D. lejustyla* (presumably J. Drummond 5th coll., n. 101).

- Drummond, J. (1849). Letter to G. Leake. *J. Bot. (Hooker)* 1: 248.
- Kippist, R. (1856). Notice of two apparently undescribed species of *Genetyllis*, from S.W. Australia. *J. Linn. Soc.(Bot.)* 1: 49, '1857'.
- Rye, B. (1979). Chromosome number variation in the Myrtaceae and its Taxonomic Implications. *Austral. J. Bot.* 27: 565.
- Turczaninow, N. (1852). Myrtaceae xerocarpicae, in Nova Hollandia A cl. Drumond lectae et plerumque in collectione ejus quinta distributae, determinatae et descriptae. *Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg* 10: 323, 324.