

Melaleuca comosa A.R.Bean (Myrtaceae), a new species from western Queensland

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Summary

Bean, A.R. (2017). *Melaleuca comosa* A.R.Bean (Myrtaceae), a new species from western Queensland. *Austrobaileya* **10**(1): 70–73. A new species, *Melaleuca comosa* A.R.Bean is described and illustrated. It is known from a single location near Blackall in western Queensland.

Key Words: Myrtaceae, *Melaleuca*, *Melaleuca comosa*, new species, Australia flora, Queensland flora

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Introduction

In 1984, Rosemary Purdie made the first herbarium collection of an unusual *Melaleuca* species during field work for the Western Arid Region Land Use Study (WARLUS) project. This specimen could not be classified as it had only a few old fruits. In 1995, noted amateur collector Betty Ballingall visited the site and collected another specimen. This one unfortunately also lacked flowers and intact fruits. She nevertheless sent a duplicate to *Melaleuca* expert Lyn Craven, who tentatively identified it as *M. lasiandra* F.Muell. In the recent comprehensive book on the genus (Brophy *et al.* 2013), Ballingall's collection appears as an outlier on their distribution map for *M. lasiandra*. In 2014, Jenni Silcock and Boris Laffineur were able to procure some material bearing senescent flowers and young fruits. Her material is sufficient to confirm that this taxon differs significantly from *M. lasiandra*, and that it does not conform to any other named species. It is described here as a new species.

Materials and methods

This paper is based on examination and measurements of dried herbarium samples at BRI.

Taxonomy

***Melaleuca comosa* A.R.Bean sp. nov.** with similarities to *M. lasiandra*, but differing by the flaky-fibrous, non-papery bark, the shorter leaves with very dense oil glands, the flowers in monads, the glabrous stamens, and the stamen bundles only 3.5–4.5 mm long. **Typus:** Queensland. MITCHELL DISTRICT: 2.5 km SE of New Belton dam, Mt Marlow, 19 September 2014, J. Silcock JLS1650 & B. Laffineur (holo: BRI; iso: CANB, to be distributed).

Melaleuca sp. (Mt Marlow M.E.Ballingall MEB2737); (Bean 2016).

Shrub 2–4 m high, with dense rounded crown. Bark pale to dark grey, flaky-fibrous, not papery, persistent throughout. Branchlets terete to somewhat angular, brown to reddish-brown; hairs dense, white, spreading, eglandular. Leaves simple, entire, spirally arranged. Lamina elliptical to broadly obovate, 7–14.5 × 2.6–5.3 mm, 2.1–3.4 times longer than wide, veinless or with 1–3 veins sometimes faintly visible; oil glands very dense, c. 60 per mm²; hairs simple appressed, silky, 0.1–0.2 mm long, dense on young laminae, becoming glabrous with age; apex acute to mucronate, base cuneate, margins flat. Petioles well developed, 0.8–1.2(–1.4) mm long, flattened. Inflorescences spicate, spikes 15–25 mm long; rachis with dense erect white eglandular hairs; flowers in

monads, 5-(6)-merous, sessile, bracteoles not seen. Hypanthium ovoid-truncate, 2–2.5 mm long, with dense patent white hairs 0.3–0.9 mm long; sepals deltate, 1.2–1.3 mm long, densely hairy on outer surface, sparsely hairy on inner surface, readily deciduous; petals broadly obovate, *c.* 1.5 mm long, hairs present near base on outer surface, inner surface glabrous, oil glands apparently absent.

Stamens apparently white, in 5(–6) bundles, 8–16 stamens per bundle, bundles 3.5–4.5 mm long, filaments glabrous; anthers versatile, 0.4–0.5 mm long. Ovary 3-locular; summit of the ovary densely hairy; style 6–6.5 mm long, glabrous; stigma slightly expanded. Mature fruits globose-truncate to cupular, 3–3.5 mm long, 3.3–4 mm diameter, sessile, glabrous or glabrescent, valves of capsule enclosed or at rim-level. **Figs. 1–3.**



Fig. 1. *Melaleuca comosa*. A. branchlet with young infructescence $\times 3$; B. mature leaf with copious oil glands $\times 6$; C. staminal bundle $\times 16$; D. immature fruit $\times 12$; E. young developing leaf with silky indumentum $\times 12$. All from *Silcock JLS1650 & Laffineur* (BRI).



Fig. 2. A mature tree of *Melaleuca comosa*. Photo: J. Silcock.



Fig. 3. Bark of *Melaleuca comosa*. Photo: J. Silcock

Additional specimens examined: Queensland. MITCHELL DISTRICT: Mt Marlow Station in Belton paddock, 2.4 km SE along shot line from New Belton Tank, Apr 1995, *Ballingall* MEB2737 (BRI, CANB); Twickenham, second lease on Mt Marlow station, Jul 1999, *Burns* AZ11586 (BRI); c. 11 km WSW of Merrigal homestead, Apr 1984, *Purdie* 2086 (BRI).

Distribution and habitat: Known only from Mount Marlow station, about 180 km SW of Blackall in western Queensland. It grows on drainage channels in deeply gilgaied stony clay soils, adjacent to or with *Acacia cambagei* R.T.Baker.

Phenology: Unknown; the late remnants of flowers have been collected in September.

Affinities: The nearest relative is unknown. *Melaleuca comosa* is similar to *M. lasiandra*, but differs by the flaky-fibrous, non-papery bark, the shorter leaves with very dense oil glands, the flowers in monads, the glabrous stamens, and the stamen bundles only 3.5–4.5 mm long. *M. comosa* is superficially like *M. bracteata*, the only other *Melaleuca* species with non-papery bark from western Queensland. *M. comosa* differs by the unveined or 1–3-veined leaves (5–11-veined for *M. bracteata*), the hypanthium hairs 0.3–0.9 mm long (only c. 0.1 mm long for *M. bracteata*), the 8–16 stamens per bundle (15–25 for *M. bracteata*), flowers in monads (triads for *M. bracteata*), and the lack of persistent leaf-like bracts at the base of each triad.

Conservation status: The total known extent of occurrence for *Melaleuca comosa* is 5 km². The main population covers about 1 km², with outliers seen totalling about 0.1 km², giving a conservative area of occupancy estimate of 1.1 km². The total population is estimated at around 2,200 plants (J. Silcock pers. comm.). Based on the IUCN (2012) criteria, a conservation status of **Vulnerable** (D1 and D2) is proposed.

Etymology: The species epithet is from the Greek *comosus* meaning ‘hairy’, and is given in reference to the dense patent hairs on the flowering hypanthia.

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References

- BEAN, A.R. (2016). Myrtaceae (Leptospermoideae). In P.D. Bostock & A.E. Holland (eds.), *Census of the Queensland flora* 2016, Version 1.1. Queensland Department of Science, Information Technology and Innovation: Brisbane. <https://www.qld.gov.au/environment/assets/documents/plants-animals/herbarium/qld-flora-census.pdf>, accessed 5 February 2017.

- BROPHY, J.J., CRAVEN, L.A. & DORAN, J.C. (2013). *Melaleucas, their Botany, Essential Oils and Uses*. ACAIR Monograph No. 156. Australian Centre for International Agricultural Research: Canberra.
- IUCN (2012). *IUCN Red List Categories and Criteria, version 3.1*, 2nd ed. <https://portals.iucn.org/library/efiles/documents/RL-2001-001-2nd.pdf>, accessed 9 October 2016.