

Backhousia oligantha (Myrtaceae), a new species from Queensland

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Summary

Bean, A.R. (2003). *Backhousia oligantha* (Myrtaceae), a new species from Queensland. *Austrobaileya* 6(3): 533–536. A distinctive new species of *Backhousia* is described and illustrated. It is diagnosed against related species and notes on habitat and conservation status are provided.

Keywords: *Backhousia*, Myrtaceae, taxonomy, Queensland, Australian flora.

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Introduction

Backhousia is a small genus of trees and shrubs endemic to Australia. Most of the accepted species were described before 1910. J.W. Vickery added *B. anisata* in 1941, a rare species from New South Wales with a very strong aniseed smell to the leaves. Wilson *et al.* (2000) found that *B. anisata* differs significantly from all other *Backhousia* species, and placed it in a new monotypic genus *viz. Anetholea* Peter G. Wilson.

Guymer (1988) described *B. kingii*, a species reasonably widespread in south-eastern Queensland. The species described here as *B. oligantha* has been known for about two decades, but lack of adequate fertile material has, until now, prevented its formal naming. In a survey of essential oils of *Backhousia* (Brophy *et al.* 1995), the oils of *B. oligantha* were found to be most similar to those of *B. bancroftii* F.M.Bailey & F.Muell., but on morphological grounds, *B. oligantha* is most closely related to *B. kingii* Guymer.

Taxonomy

***Backhousia oligantha* A.R.Bean sp. nov.** affinis *B. kingii* autem cortice laevigata nitida, foliis angustioribus, inflorescentiis 3-floribus, pedunculis brevioribus differt.
Typus: Queensland. WIDE BAY DISTRICT: 0.7 km SW of Mt Biggenden, WSW of Biggenden, 17 November 2001, A.R. Bean 18024 & J. Randall (holo: BRI; iso: CANB, K, MEL, MO, NSW).

Backhousia sp. (Stony Creek P.I.Forster 37B) in Henderson (2002).

Backhousia sp. (Didcot P.I.Forster PIF12617) in Brophy *et al.* (1995).

Tree to 12 metres high, or sometimes shrubby, rarely procumbent; all forms producing prostrate vegetative self-layering shoots. Bark deciduous throughout, smooth, quite shiny, pink, white or grey in colour. Branchlets terete, puberulent. Juvenile leaves opposite, elliptical to lanceolate, very shortly petiolate, laminae 4–8 mm long, 2–3.5 mm wide. Adult leaves opposite, discolorous; petioles 2–3 mm long; laminae elliptical, 12–22 mm long, 4.5–7 mm wide, apex obtuse, base cuneate; midvein depressed above, raised below, leaf venation obscure on upper surface, visible on lower surface, with 4–6 pairs of lateral veins, proximal pairs at low angle to midrib, tertiary venation not visible; intramarginal vein complete or present on distal half of lamina only; margin flat or recurved; oil glands dense and conspicuous on both surfaces. Indumentum uniform throughout (branchlets, petioles, laminae, pedicels and calyces), comprising erect to somewhat adpressed uniseriate white trichomes up to 0.15 mm long, dense on branchlets, young leaves, pedicels and calyces, but sparse to absent on fully expanded leaves. Inflorescences axillary or supra-axillary, comprising single 3-flowered (rarely 1-flowered) cymes. Peduncle 1–3 mm long; bracteoles brown, caducous, acute, c. 0.5 mm long; pedicels filiform (0.25–0.3 mm diameter when dried), 4–8 mm long. Flowers white. Hypanthium campanulate, 1.6–2.0 mm long;

calyx lobes 4, with a smaller and a larger pair (opposite each other), the smaller ones 1.0–1.3 mm long, 1.2–1.5 mm wide; the larger 1.5–2.3 mm long, 1.5–1.6 mm wide; all obtuse, persistent. Petals 4, 1.2–2.3 x 0.8–1.7 mm, deciduous, shortly clawed, recurved, margin erose. Stamens 32–40, in two whorls; filaments of variable length within a single flower, between 1.5–4.0 mm long; anthers basifixed, dehiscent by longitudinal slits. Style glabrous, 3.9–4.3 mm long, stigma tapered; ovary glandular-punctate, puberulent, 2-locular, with 3 or 4 ovules per loculus, arranged around an axile placenta. Fruits indehiscent, c. 1.8 mm long, c. 2.5 mm diameter excluding persistent calyx lobes. Seeds 2–4 per loculus, 1.3–1.5 mm long, yellow-brown, with rounded outer surface and flat sides. **Fig. 1.**

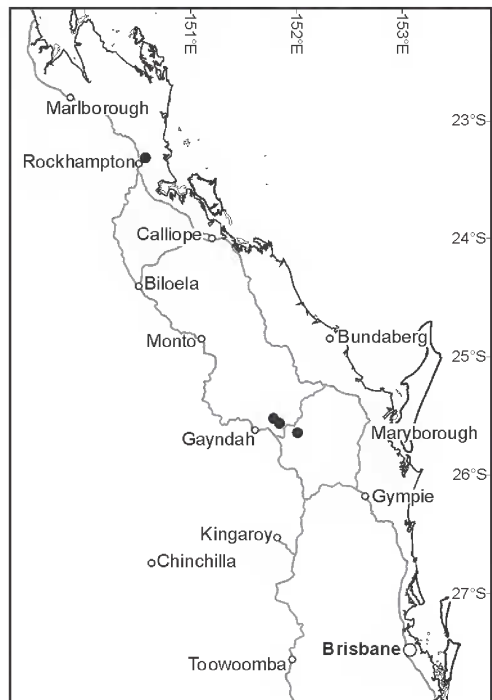
Specimens examined: Queensland. PORT CURTIS DISTRICT: Berserker Wilderness, Mount Archer, Rockhampton, Jun 2000, *Brushe* JB2301 et al. (BRI); same locality, Mar 2002, *Brushe* s.n. (BRI). WIDE BAY DISTRICT: 0.7 km SW of Mt Biggenden, WSW of Biggenden, Nov 2001, *Bean* 18027 & *Randall* (BRI, NSW); Stony Creek, 4 km E of Didcot, Biggenden shire, Oct 1982, *Forster* PIF37B (BRI); Stony Creek, 4 km E of Didcot, Jan 1993, *Forster* PIF12617 (BRI, NSW); headwaters of Stony Creek, Didecot, Aug 1979, *Young* 343 & *Randall* (BRI); The Bluff, Mount Walsh, S of Biggenden, Aug 1979, *Young* 299 & *Randall* (BRI); c. 1 km SW of Mt Biggenden, Feb 1991, *Young* 651 & *Randall* (BRI).

Distribution and habitat: *B. oligantha* is largely confined to the Biggenden area of south-eastern Queensland, with an outlier on Mt Archer outside Rockhampton on the central Queensland coast (**Map 1**). It inhabits Araucarian microphyll vine-forest, and associated tree and shrub species include *Archidendropsis thozetiana*, *Alectryon diversifolius*, *Canthium odoratum* and *Gossia bidwillii*.

Phenology: Flowers are recorded for November; fruits are recorded for February.

Notes: *B. oligantha* is most closely related to *B. kingii* (both have inflorescences in umbel-like cymes, flowers 4-merous, calyx lobes of two sizes, pedicels filiform and similar venation). It differs from *B. kingii* by the smooth shiny bark, narrower leaves, 3-flowered inflorescences, and the shorter peduncles.

B. oligantha and *B. angustifolia* F.Muell. sometimes occur in the same general locality,



Map 1. Distribution of *Backhousia oligantha*.

but *B. oligantha* inhabits rockier, more exposed sites with shallower soil.

The recent collection from Mt Archer by Joy Brushe (cited above) was made from a number of plants, including prostrate wind-shorn shrubs through to well-developed trees. These specimens showed a clear transition from small juvenile leaves to larger adult leaves. Sterile specimens from Mt Walsh match the juvenile Mt Archer specimens. The Didcot specimens (also sterile) have leaves that are larger and lanceolate in shape, but they are tentatively included within this species as they share the distinctive bark character.

Conservation status: *B. oligantha* has a peculiar growth habit, where prostrate vegetative shoots are abundantly produced. These shoots layer themselves opportunistically, eventually giving rise to a new stem. In this way, a large colony may be produced, all derived from a single genotype. At the type locality there are 100–200 stems, but only about 6 clumps, and hence possibly as few as 6 individuals. The Mt Archer population is

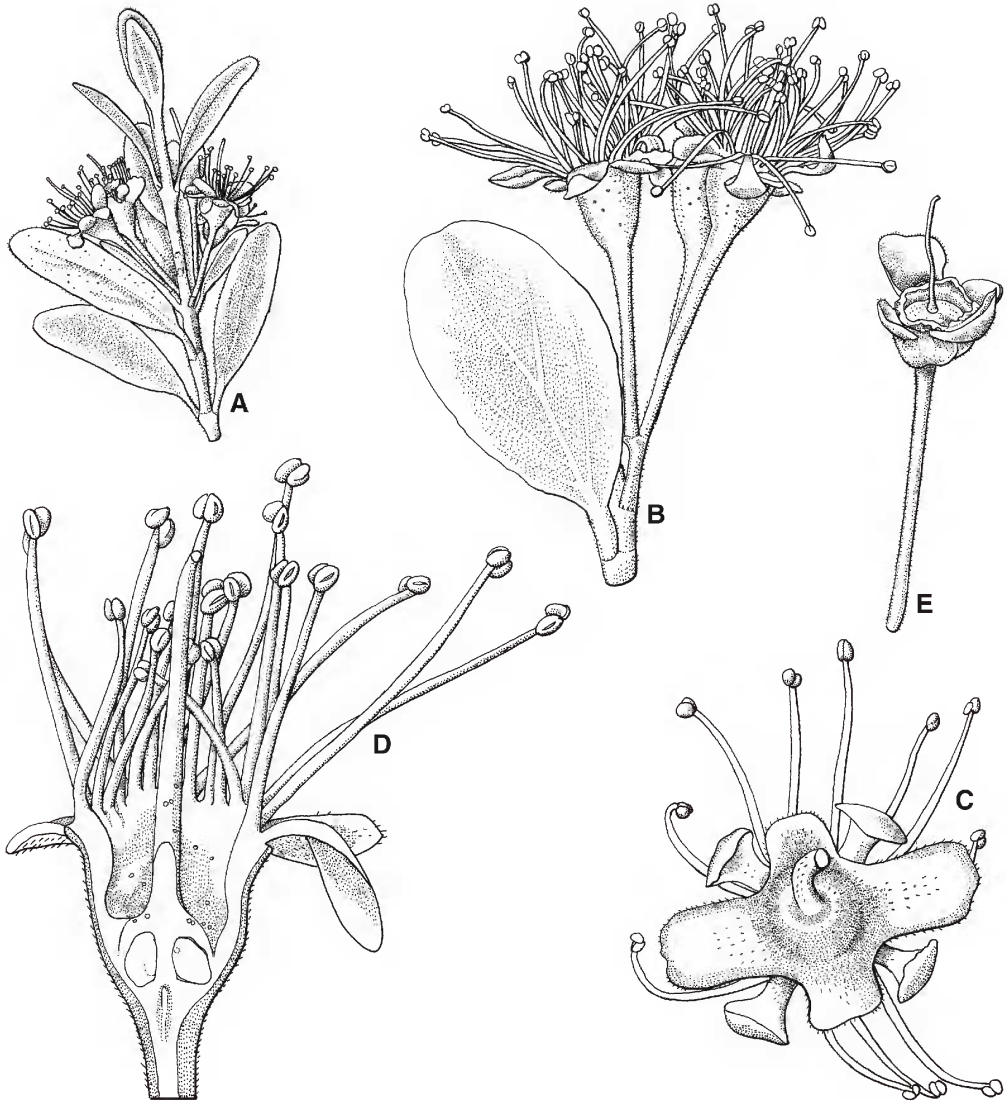


Fig 1. *Backhousia oligantha*. A. flowering branchlet $\times 2$. B. unit inflorescence $\times 4$. C. underside of flower, showing unequal sepals and recurved petals $\times 8$. D. half-flower $\times 12$. E. young fruit $\times 4$. A, *Bean 18027 & Randall*; B-D, *Bean 18024 & Randall*; E, *Young 651 & Randall* (all BRI). Del. W. Smith.

of similar size (J. Brushe, pers. comm.). There are two small populations on Mt Walsh, each with 5 or 6 stems (P. Young, pers. comm.) and a single shrubby population at Didcot with several hundred stems covering less than a hectare (P. Forster, pers. comm.). Applying the guidelines of the IUCN (Anon. 2001), a status of “Vulnerable” is recommended, (VU D1+D2).

Etymology: From the Greek *oligos* meaning few, and *anthos* meaning flower. This is in reference to the (1–) 3-flowered inflorescences. No other *Backhousia* species has so few flowers per inflorescence.

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