A range extension for Cryptandra pogonoloba (Rhamnaceae: Pomaderreae) and recognition of a new subspecies

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Abstract

Additional herbarium specimens of Cryptandra pogonoloba A.R. Bean have revealed that the species is more widely distributed in Queensland than described in Bean (2004) and that the indumentum on the leaves can vary considerably. A new subspecies, C. pogonoloba subsp. septentrionalis Kellermann, is recognised for distinct populations from northern Cape York Peninsula and the description of the typical subspecies is amended.

Introduction

Bean (2004) published new species of Cryptandra Sm. from Queensland, among them Cryptandra pogonoloba A.R. Bean. He described the species as being unique by having long erect simple hairs at the apex of the calyx lobes, floral bracts with an aristate apex and stipules that are placed on the upper side of the petiole. Further distinctive characters mentioned by Bean include a dense indumentum of stellate trichomes on the adaxial surface of the leaves, a condition relatively rare in Cryptandra, the species of which usually have a glabrous, near glabrous or papillose upper surface.

The most distinctive character of the species is the light brown floral bracts; these are broadly ovate and have a very prominent reddish midrib, which extends into an awn that considerably exceeds beyond the lamina (up to 1 mm). The midrib of the stipules is similar. In contrast to Bean (2004), where the stipules are said to be placed on the upper side of the petioles, they are correctly described as overlapping behind the petiole, as well as being fused below the attachment point of the petiole – a feature characteristic for the genus Cryptandra (Thiele & West 2004).

For this study, more herbarium specimens of the species than used by Bean (2004) were available from AD, BRI, CANB, MEL and NSW. This has greatly increased our knowledge of the range of the species, which was previously thought to occur only in Bulleringa National Park and surrounding areas (Bean 2004). Cryptandra pogonoloba extends from north-east of the Gregory Range to the Iron Range on northern Cape York Peninsula. It is one of the northernmost species of the genus. Examination of these specimens also revealed that the indumentum on the upper surface of the leaves of the species varies quite considerably.

While specimens from the type locality in Bulleringa National Park have a dense, grey indumentum of stellate hairs, this is not the case for specimens collected from other localities. The indumentum varies from medium to dense and from single, erect hairs to stellate hairs. Some collections have very short, erect hairs or densely papillose surfaces with intermediates between these two forms. Similar variation within one species is also found in C. tomentosa Lindl., where there is a gradient from densely...
pubescent to glabrous leaves, albeit that species has an indumentum of only simple hairs. Other species with densely pubescent upper leaf surfaces include *C. filiformis* A.R. Bean and *C. intratropica* W. Fitzg., but these species have a consistently dense indumentum.

Populations near Iron Range National Park and Pascoe River are smaller plants and have totally glabrous and smooth leaves, which are generally smaller than those of more southerly populations. They occur at lower altitude and are separated from the southern area of distribution by a gap of over 400 km. This contribution recognises this northern outlier as a distinct subspecies, *Cryptandra pogonoloba* subsp. *septentrionalis* Kellermann and amends the description of the typical subspecies with data from the additional herbarium material. Albeit geographically segregated from the typical subspecies, both taxa share unique diagnostic features that were already identified in the original description of Bean (2004), in particular the conspicuous awned bracts and stipules as well as the erect simple hairs at the apices of the sepals. It seems therefore appropriate to recognise the new taxon at subspecific level.

![Distribution map of Cryptandra pogonoloba subsp. pogonoloba (squares) and subsp. septentrionalis (circles) in Queensland. A white square indicates the type locality of subsp. pogonoloba in Bulleringa National Park.](image)

**Figure 1.** Distribution map of *Cryptandra pogonoloba* subsp. *pogonoloba* (squares) and subsp. *septentrionalis* (circles) in Queensland. A white square indicates the type locality of subsp. *pogonoloba* in Bulleringa National Park.

**Taxonomy**

Cryptandra pogonoloba

Shrubs 0.2–2 m high, not spinescent, with a dense grey or rusty indumentum of stellate and simple hairs on young stems, soon glabrous or persisting on older stems of current season’s growth; leaves alternate or in fascicles. Stipules persistent, scarious, triangular or ovate, 1.2–2.3 mm long, attenuate or acicular, connate around the base of the petiole, overlapping behind petiole, sparsely to moderately pubescent on midrib and margin, or glabrous. Petioles 0.2–0.8 mm long. Leaf blades narrowly elliptic or linear with recurved or revolute margins, 2.3–9 mm long, 0.4–1.2 mm wide, entire; base obtuse; apex acute or apiculate with a dark mucro; lower surface usually not visible, densely grey-stellate-hairy, midrib visible or not visible, with sparse to moderate simple hairs; upper surface glabrous and smooth, or papillose or tuberculate, or covered with a moderate to dense indumentum of simple or stellate hairs. Inflorescence axillary, appearing terminal at tip of branchlets, consisting of 1–5 flowers in dense heads or clusters. Bracts 4–9, persistent, broadly ovate or obovate, 1–2.9 mm long, 1–1.9 mm wide, ciliate, awned, light brown; abaxial side sparsely to moderately pubescent on midrib or glabrous, adaxial side glabrous; cilia 0.3–0.6 mm long; awn protruding up to 1 mm beyond lamina. Flowers sessile or subsessile, white or cream. Hypanthium tube 0.6–0.8 mm long, 1.7–2.8 mm in diameter, covered with small dense stellate hairs. Sepals erect, 1–1.3 mm long, persistent on fruit, with an indumentum of small dense stellate hairs and long erect simple hairs towards apex. Petals erect, cucullate, 0.5–0.7 mm long. Anthers 0.3–0.4 mm long. Disc a sinuate ring, densely stellate-pubescent. Ovary inferior, 3-carpellate; summit densely stellate-hairy. Style 0.5–0.9 mm long, entire, glabrous. Schizocarp broadly obovoid, 1.8–2.4 mm long, dark brown, splitting into 3 dehiscent fruitlets; apex obtuse, torus in middle third or slightly higher. Seeds 1.1–1.4 mm long, reddish brown, ±uniformly coloured; aril pale yellow or pale orange, translucen.

Key to subspecies

1 Upper leaf surface with papillae or tubercles, or simple or stellate hairs; leaves (1.4–) 3–9 mm long, 0.5–1.2 mm wide, recurved or revolute; lower surface or at least midrib partly visible; flowers solitary or in clusters; between Mt Windsor and the Gregory Range, southern Cape York Peninsula.......................... subsp. pogonoloba

1: Upper leaf surface glabrous, smooth; leaves 2.3–4.5 mm long; 0.4–0.6 mm wide, strongly revolute; lower surface and midrib usually concealed; flowers always solitary; near Pascoe River, northern Cape York Peninsula...... subsp. septentrionalis

Cryptandra pogonoloba subsp. pogonoloba

Illustration: A.R. Bean, Austrobaileya 6: 932 (2004), Fig. 7, photograph.

Shrubs 0.5–2 m high. Petiole (0.2–) 0.3–0.9 mm long. Leaves narrowly elliptic, (1.4–) 3–9 mm long, 0.5–1.2 mm wide, recurved or revolute; lower surface or at least midrib partly visible, upper leaf surface strongly papillate or tuberculate or covered with a medium to dense indumentum of simple and/or stellate hairs. Bracts and stipules glabrous or with hairs along the midrib. Bracts 1.4–1.9 mm wide. Flowers solitary or in clusters of up to 5 flowers especially at branch apices.

Distribution & habitat: The taxon grows in sandy soil on sandstone ridges and slopes in eucalypt woodlands. It occurs from Mt Windsor and Daintree National Park to the Gregory Range (Fig. 1) from 170–1200 m of altitude.
Figure 2. Holotype of Cryptandra pogonoloba subsp. septentrionalis Kellermann (C.H. Gittins 1801, NSW 393160).
Cryptandra pogonoloba


Notes: The lower measurement for petiole and leaf length are due to one specimen from the southern end of distribution, *C. Kahler C530 & C. Appelman*, which appears to be a small-leaved form. The leaves, however, are densely pubescent. Herbarium sheets seen and annotated by A.R. Bean are indicated with an asterisk in the following listing.


Cryptandra pogonoloba subsp. septentrionalis Kellermann, subsp. nov.

A subspecie typica habitu minore, foliis brevioribus, lamina lineari et valde revoluta, superficie glabro laevique differt.

Holotype: Qld, Cook District, 35 miles [56 km] from Wenlock on Iron Range Rd, July 1968, *C.H. Gittins 1801*; NSW 393160 (Fig. 2). Isotypes: BRI AQ410452, CANB 359070.

Small shrubs 0.2–0.5 m high. Petiole 0.2–0.3 mm long. Leaves linear, 2.3–4.5 mm long, 0.4–0.6 mm wide, strongly revolute; lower surface and midrib usually concealed, upper leaf surface glabrous, smooth. Bracts and stipules always glabrous. Bracts 1–1.5 mm wide. Flowers always solitary.

Distribution & habitat: The subspecies occurs in heath and scrubland or open woodland with heathy understorey on sandy soil over laterite. Collections are only known from areas near Pascoe River, E of Sir Willam Thompson Range, and Iron Range National Park (Fig. 1). It is recorded from 60–120 m above sea level.

Phenology: Flowers recorded in July; fruits July–Sep.

Etymology: The epithet is derived from the Latin *septentrionalis* (northern) and alludes to the distinctly northern distribution of the subspecies.

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References
