Cryptandra monticola (Rhamnaceae), a new species from the Pilbara region of Western Australia

B.L. Rye and M.E. Trudgen

Western Australian Herbarium, Department of Conservation and Land Management,
PO Box 104, Como, Western Australia 6152

Abstract

Rye, B.L. and Trudgen, M.E. *Cryptandra monticola* (Rhamnaceae), a new species from the Pilbara region of Western Australia. Nuytsia 10 (2): 307-310 (1995). A new species, *Cryptandra monticola* Rye & Trudgen, is described and illustrated. It is the only *Cryptandra* species known from the Pilbara region of Western Australia.

Introduction

The new species described here is the only member of the genus *Cryptandra* known from the Pilbara region of Western Australia. Most *Cryptandra* species occur in the south-western part of the State, although there is one species, *C. intratropica* W.Fitzg., recorded in the Kimberley region (Wheeler 1992). However, the Kimberley species has an atypical inflorescence and will probably be transferred to a new genus (K. Thiele pers. comm.).

The Pilbara species was apparently first collected in 1974 from Mt Bruce in the Karijini National Park. In 1991, it was given the phrase name *Cryptandra* sp. *Mt Meharry* (*S. van Leeuwen* 682) and placed on the Priority Flora List with a conservation code of Priority 3*. Since then, the species has been found from more populations over a wider geographical range and is no longer considered to be at risk. It has therefore been removed from the Priority Flora List.

Taxonomy

Cryptandra monticola Rye & Trudgen, sp. nov.

Folia omnino dense pubescenta; bracteis per florum circum 6, manifeste ciliatis; floribus dense pubescentibus, in fasciculo capituloideo aggregatis; parte libera tubi floralis ultra 1 mm longa; seminis atro rubro-brunneis.

* Definitions of the conservation codes currently being used by the Western Australian Department of Conservation and Land Management are given at the end of each "Nuytsia" issue.

Typus: 8.1 km NE of Mt Windell, 17 km ESE of Karijini National Park Headquarters, Western Australia, 4 August 1991, *S. van Leeuwen* 927 (*holo:* PERTH 02842866; *iso:* CANB, MEL).

Shrub erect or spreading, 0.5-1.5 m high; indumentum of fine clear-translucent hairs. *Branchlets* not spinescent. *Young stems* densely stellate-hairy at first and usually also with longer simple hairs, becoming glabrous. *Stipules* persistent, each pair shortly united at the base on abaxial side of petiole, 1.3-2.5 mm long, acuminate to long-attenuate, hairy outside at least along midvein, long-ciliate. *Petioles* 0.4-1.3 mm long, densely hairy. *Leaf blades* usually linear or narrowly oblong, sometimes narrowly obovate to elliptic, 3-6.5 x 1-2.5(3.5) mm, the margins recurved, with a short erect mucro often obscured by hairs, which form a point-like terminal tuft, pale green or greyish green; lower surface densely hairy but often only the midvein visible between the recurved margins, the midvein with many long simple hairs; upper surface densely stellate-hairy, with simple antrorse hairs 0.4-0.7 mm long at first, often loosing most of the long hairs with age. *Floral bracts c.* 6 per flower, ovate or broadly ovate, 1-3.5 mm long, acute or shortly acuminate, often hairy inside on distal half along the midvein, prominently ciliate, the cilia 0.3-0.8 mm long; outer surface densely hairy along the midvein, becoming less densely hairy towards margins. *Flowers* usually 4-12 per branchlet, in a close head-like cluster 6-13 mm wide, white. *Floral tube* 1.7-2.4 mm long (enlarging to 3-3.5 mm in fruit), the basal 0.6-1.0 mm adnate to the ovary and distal 1.1-1.4 mm free, minutely stellate-hairy throughout but more densely so on adnate portion of tube, sometimes also with a few long simple hairs. *Sepals* 1.3-1.7 mm long, minutely stellate-hairy throughout and with simple antrorse hairs 0.3-0.5 mm long towards apex. *Petals c.* 0.7 mm long, the claw *c.* 0.2 mm long. *Disc* united to the base of ovary, densely stellate-hairy, undulate at first, becoming a smooth circular shape in fruit. *Ovary* 3-celled, densely stellate-hairy; hairs *c.* 0.3 mm long. *Style* 1.3-1.6 mm long, usually with a few stellate hairs at base, glabrous above, with 3 small stigmatic lobes at the apex. *Schizocarp* about half inferior, 2.5-3.5 x 1.8-2.2 mm, concealed within the floral tube, stellate-hairy on the superior portion, separating into 3 crustaceous fruitlets which dehisce along the distal half of the outer surface and the full length of the inner surface. *Seeds* 1.6-2.3 x *c.* 1.0 mm, dark red-brown with a blackened base; aril 3-lobed, translucent. (Figure 1A-E)

Selected specimens examined. WESTERN AUSTRALIA: East Prong, Mt Tom Price, 10/7/1980, *K. Atkins* 694 (KARR); top of Mt Nameless, 31/7/1980, *K.A. Atkins & P. Wurm* 708 (KARR); Mt Bruce, 6/7/1978, *C. Dawe* 42 (PERTH); *c.* 3.6 km N of Mt Hilditch, 7/5/1995, *M.E. Trudgen* 12522 (PERTH); south slopes of Mt Ella, 19/5/1995, *M.E. Trudgen* 12733 (PERTH); Mt Meharry, 19/4/1990, *S. van Leeuwen* 682 (PERTH); Mt Robinson, 1.3 km W of the summit, 20/9/1990, *S. van Leeuwen* 735 (PERTH); 2.5 km E of Shovelanna Hill, eastern end of Ophthalmia Range, 29/5/1992, *S. van Leeuwen* 1264 (PERTH); Mt Shiela, 27/9/1994, *S. van Leeuwen* 1847 (KARR); Mt Meharry, 10/6/1984, *S. van Leeuwen* 24 & *J. Turner* (PERTH); Mt Bruce, 17/8/1974, *J.H. Willis* (PERTH).

Distribution. Occurs in the Eremaean Botanical Province of Western Australia, extending from Mt Shiela and Mt Nameless in the Hamersley Range east to about 50 km east of Newman. (Figure 1F)

Habitat. Occurs at altitudes of 800 m or more, most commonly in sheltered sites on south-facing slopes. Sometimes occupies more exposed sites, but in those situations the populations are small.

Flowering period. April-August. Fruits July-September.

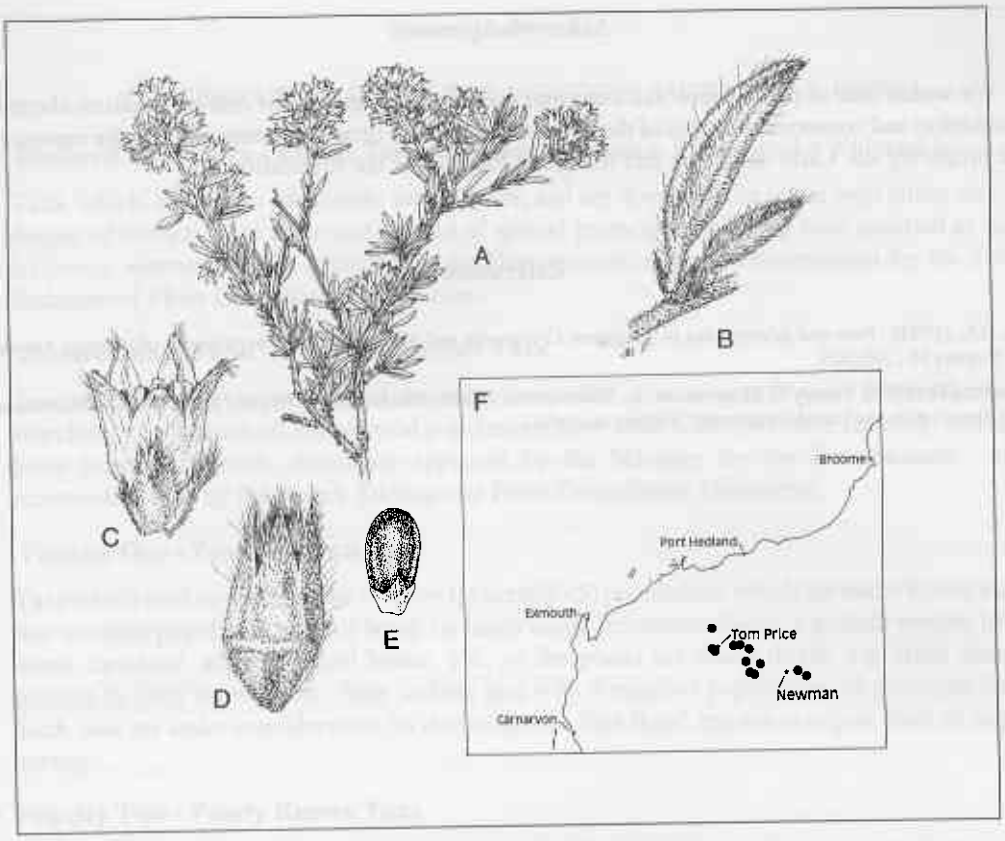

Figure 1. *Cryptandra monticola.* A- flowering branch (x1), B - stipules and leaf undersurface (x6), C - flower and bracts (x7), D - schizocarp (x6), E - inner surface of seed and aril (x8), F - distribution map. Drawn from *S. van Leeuwen* 24 & *J. Turner* (A-C) and *J.H. Willis* 17/8/1974 (D,E).

Conservation status. This species is now known from about fifteen locations with a range of over 350 km. Owing to the relatively inaccessible sites it occupies, most of its populations have probably never been visited by botanical collectors. The species appears to be fairly well protected in this habitat, and it occurs in at least one large national park.

Etymology. From the Latin *mons,* mountain and *-cola,* inhabitant, the species being restricted to high locations, including the two highest mountains in Western Australia.

Affinities. Although it is quite typical of the genus *Cryptandra*, the new species does not appear to have any very close relatives. It can be distinguished readily from the atypical long-pedicellate Kimberley species, *C. intratropica*, by its densely clustered, sessile or subsessile flowers, but it has a similar inflorescence to some of the south-western species.

The five south-western species showing the greatest similarity to *C. monticola* in terms of flower size and density are *C. congesta* Rye, *C. graniticola* Rye, *C. intonsa* Rye, *C. polyclada* Diels and *C. wilsonii* Rye. These are described in the accompanying paper (Rye 1995). All five species have glabrous or subglabrous leaves, in contrast to the conspicuously hairy leaves of *C. monticola*, and each of them shows a number of other obvious differences from *C. monticola*.

Acknowledgements

We would like to thank Steve van Leeuwen for providing specimens and information about the distribution and conservation status of the new species, Paul Wilson for commenting on the manuscript and preparing the Latin diagnosis and Margaret Pieroni for the illustration.

References

Rye, B.L. (1995). New and priority taxa in the genera *Cryptandra* and *Stenanthemum* (Rhamnaceae) of Western Australia. Nuytsia 10 : 255-305.

Wheeler, J.R. (1992). Family 93 Rhamnaceae. *In:* Wheeler *et al.* "Flora of the Kimberley Region" pp. 629-634. (Department of Conservation and Land Management: Western Australia.)