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Typification of three species of *Cryptandra* from Western Australia and a range extension for *C. myriantha* (Rhamnaceae: Pomaderreae)

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Abstract

Lectotypes are selected for three species of *Cryptandra*, *C. mutila* Nees, *C. myriantha* Diels and *C. polyclada* Diels, from southern Australia. *Cryptandra myriantha* is the only member of the genus known to occur on both sides of the Nullarbor Plain. It was previously considered to be restricted to Western Australia, but is here reported to also occur in South Australia and Victoria.

Introduction

Cryptandra Sm. is a genus of c. 60 species, which is distributed throughout the temperate, semi-arid and tropical regions of Australia, but absent from the arid centre of the continent. Most species are found either in south-western or in south-eastern Australia (Kellermann & Udovicic 2007), two areas separated by the arid Nullarbor Plain. In preparation of the *Flora of Australia* treatment of Rhamnaceae, it became apparent that the typification of several of the south-western Australian taxa needed to be resolved and that one of these species also occurred in south-eastern Australia, where it was known by a different name.

Taxonomy

Cryptandra mutila Nees

[in Reissek] in J.G.C. Lehmann, Pl. Preiss. 2: 289 (1848). — **Type citation:** ‘Inter saxa calcarea clivuli haud longe ab ora maris (Perth) (19. Jun. 1839. Herb. Preiss. No. 1217); inter saxa calcarea vallis haud longe a “Woodman’s-point” (Perth) (15. Aug. 1839. Herb. Preiss. No. 1229); Swan River (Drummond. Coll. II. No. 723)’. **Lectotype (here designated):** Inter saxa calcarea vallis haud longe a “Woodman’s-point” (Perth) [In limestone valley close to Woodman’s Point, Perth, W.A., 13 Aug. 1839, L. Preiss 1229 (LD 1025518, photo seen)]. **Isolectotypes:** MEL 2120309B. **Residual syntypes:** Inter saxa calcarea clivuli haud longe ab ora maris (Perth) [On limestone slopes close to the coast, Perth], W.A., 19 June 1839, L. Preiss 1217 (LD 1025710, photo seen; K, 3 sheets ex Herb. Hooker with loan stamps ‘H/1310/95 58/76’ (right specimen), ‘H/1310/95 59/76’ (top left specimen), ‘H/1310/95 60/76’ (right specimen); M; MEL 2120306; MEL 2120307; MEL 2120308; MEL 2120309A). Swan River, W.A., [1843–1844.] J. Drummond 2: 723 (K, with loan stamp ‘H/1310/95 57/76’; MEL 2120305).

Cryptandra mutila was published in Reissek’s (1848) treatment of Rhamnaceae of south-western Australia for *Plantae Preissianae* from a description by Christian Nees von Esenbeck. Reissek quotes “N. ab E.” after both the name of the taxon and the Latin description. So far, authorship of the species was always given as “Nees ex Reissek in Lehm.”; this needs to be changed to “Nees in Lehm.”

The species is the type for subgenus *Corisandra* Reissek, although further study of all species within *Cryptandra* seems needed before an infrageneric classification can be accepted (Rye 2007). *Cryptandra mutila* is unusual in *Cryptandra* on account of its pedicellate flowers, which are arranged in clusters along the branches, a characteristic shared with the closely related *C. pungens* Steud. and *C. inconspicua* Rye. Should subgen. *Corisandra* be accepted in the future, it would include all three species.

Of the three collections cited in the protologue of *C. mutila*, two were collected by Ludwig Preiss during his travels through Western Australia in 1839, while the third is from the second collection of James Drummond, which he gathered in 1843 or early in 1844 (Barker 2005). There are numerous duplicates of these collections available in herbaria throughout the world. The Preiss collection in the Lund herbarium (LD) contains specimens from Preiss’ own herbarium and is often considered to be the prime collection to use for the selection of lectotypes (Crisp 1983). Preiss specimens are also preferable to Drummond’s collections on account of their exact collection details and numbering. Scans of the LD material are now also available online (Botaniska Museet Lund 2007–).

The specimen *L.Preiss 1219* at LD is here chosen as lectotype, since this specimen is annotated by Nees. His determinavit reads “*Discaria (?) mutila* N. ab E.”, i.e. he tentatively assigned the taxon to *Discaria*, but Reissek changed that to *Cryptandra* when publishing the species. The specimen is not in a very good state of preservation; one duplicate is known from MEL.

Cryptandra polyclada Diels

in F.L.E.Diels & E.G.Pritzel, Bot. Jahrb. Syst. 35: 358 & Fig. 43B–D (1904). — **Type citation:** ‘Hab. in distr. Avon pr. Tammin in arenosis aridis fruticulosus flor. M. Majo (D. 2877). **Holotype:** B, destroyed. **Lectotype (here designated):** Near Tammin, W.A., 21 May 1901, *L.Diels 2877* (PERTH 01136232). **Isotypes:** PERTH 01136240. **Possible isotype:** MEL 1618191.

Cryptandra myriantha Diels

in F.L.E.Diels & E.G.Pritzel, Bot. Jahrb. Syst. 35: 357 (1904). — **Type citation:** ‘Hab. in distr. Avon pr. Moora in fruticeis lapidoso-lutosis flor. m. Jun. (D. 3112)’. **Holotype:** B, destroyed. **Lectotype (here designated):** E of Moora, W.A., 13 June 1901, *L.Diels 3112* (PERTH 01599305).

Cryptandra sp. Simple-haired calyx (*D.E.Symon 8875*) W.R.Barker, J. Adelaide Bot. Gard. Suppl. 1: 90 (2005).

Cryptandra myriantha and *C. polyclada* were published by Diels & Pritzel (1904–1905) from the collections they gathered during their trip to Western Australia in 1900–1901. Diels’ collection was housed in the Berlin herbarium, most of which was destroyed at the end of the Second World War (Hiepko 1987). A search for holotype material at B was unsuccessful (R. Vogt, pers. comm., Feb. 2006), so lectotypes are needed for these taxa. There are currently two subspecies known of *C. polyclada*: the typical subsp. *polyclada* and subsp. *aequabilis* Rye.

During his time as the first Australian Botanical Liaison Officer at Kew (1937–1939), Charles Gardner obtained fragments of many Western Australian types from B. These are now housed at PERTH and are often the only remaining original material of species described by Diels and others.

Lectotypes for the two species of *Cryptandra* are selected from the PERTH material. The herbarium holds one sheet of *C. myriantha* and two specimens of *C. polyclada*; the more complete specimen is chosen as lectotype. There is also a fragment labeled ‘[F]rom type. Tammin, 1901’ at MEL, which is accepted as a possible isotype.

After examining all herbarium specimens of *Cryptandra* at AD and MEL, it became clear that *C. myriantha* is not restricted to Western Australia as previously believed, but also extends further east. In South Australia it is currently known under the phrase name *Cryptandra* sp. Simple-haired calyx (*D.E.Symon 8875*) W.R. Barker.

In Western Australia *C. myriantha* extends from near Kalbarri to the south of the Stirling Range and Cape Arid National Park. In south-eastern Australia it is known from

scattered collections on Eyre Peninsula, Yorke Peninsula and the 90 Mile Desert in South Australia and also from one collection from the western part of the Little Desert in Victoria. It is the only species of *Cryptandra* that occurs on both sides of the Nullarbor Plain.

Selected specimens examined of *Cryptandra myriantha* outside Western Australia

SOUTH AUSTRALIA. **Eyre Peninsula.** Gawler Ranges, ca. 10 km N of Peterby Tank, Thurlga Station, 1 Aug. 1969, *B.Copley 2757* (AD); 4 miles N of Mt Hope P.O. & homestead, 22 Sep. 1965, *M.E.Phillips s.n.* (AD); Carrappee Hill about and above camp site, 14 Sep. 1974, *D.E.Symon 8875* (AD, L n.v.); Mt Remarkable Nat. Park, 6 July 1968, *R.Callen s.n.* (AD). **South Eastern.** Christmas Rocks near Keith, *D.Hunt 2078* (AD); Hundred of Willalooka, *D.Hunt 2135* (AD); 90 mile Desert in the vicinity of Gosse Hill, 2 Aug. 1972, *J.Venning 143* (AD); 90 Mile Desert, Yumali, Sep. 1917, *S.A.White 3* (AD, ex Herb. J.M. Black). **Yorke Peninsula.** Ardrossan, *J.G.O.Tepper 68* (AD).

VICTORIA. **Lowan Mallee.** W side of Little Desert Natl Park near Winniam E, 1 Sep. 1979, *M.G.Corrick 6303* & *B.A.Fuhrer* (MEL).

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