

SHORT COMMUNICATIONS

Tetratheca* sp. Mt Solus (F. Obbens 307/98) (Elaeocarpaceae) is not distinct from *Tetratheca affinis

Tetratheca affinis Endl. (*sensu* Thompson 1976) is a distinctive member of the genus, characterised among the Western Australian species by its combination of alate stems with narrowly triangular scale-leaves, 4- or 5-merous flowers, the apex of the peduncle expanding into a broad, conical receptacle with the calyx segments inserted well inside the receptacle rim, stamens with a distinct constriction between the hairy anther body and the glabrous anther tube, short glandular hairs on the ovary and multiple ovules (four or five) per loculus. Based on specimens at the Western Australian Herbarium (PERTH), its distribution in the South-West Botanical Province is from Balingup to Cape Riche, with two outlying collections from Yallingup (*Dr Ostenfeld* B.1141, *Miss Wood* 1596) made in October 1914.

Tetratheca sp. Mt Solus (F. Obbens 307/98) was collected in 1998 from Mt Solus, c. 65 km south-east of Perth, and was determined to be different from *T. affinis* based on the presence of only one ovule per loculus and its disjunct distribution (F. Obbens, pers. comm.). The name was placed on the Census of Western Australian Plants in 2000. The sole collection of *Tetratheca* sp. Mt Solus (F. Obbens 307/98) was made opportunistically during a recreational bush walk and repeated attempts to relocate the taxon by F. Obbens, T.D. Macfarlane and R. Butcher in recent years have been unsuccessful.

Examination of the *T. affinis* collection at PERTH against *Tetratheca* sp. Mt Solus (F. Obbens 307/98) has determined that ovule number per loculus is more variable than recognised by Thompson (1976), with some specimens having flowers with only one ovule per loculus (*R. Butcher* RB 945, *T.D. Macfarlane* TDM 1832, *E.M. Sandiford* EMS 871A, EMS 871B), one or two ovules per loculus (*W. Greuter* 23154), two ovules per loculus (*C. Andrews* s.n. PERTH 02961539), two or three ovules per loculus (*E.J. Croxford* 2131) and three ovules per loculus (*G.J. Keighery* 9658, *A.S. George* 176162, *K.R. Newbey* s.n. PERTH 06266630, *Col. Goadby* B.2566). Although ovule number is usually diagnostic for species of *Tetratheca* (Thompson 1976), intraspecific variation was recently observed in *T. aphylla* F.Muell., which was found to have one, rarely two, ovules per loculus (Butcher 2007).

All other morphological features of *Tetratheca* sp. Mt Solus (F. Obbens 307/98) fall within the range of variation observed for *T. affinis*. Specifically, *Tetratheca* sp. Mt Solus (F. Obbens 307/98) has slender, winged stems (1–2 mm wide), small flowers (petals 5.7–7.5 mm long, stamens 3.5–4.4 mm long), short hairs on the anther body and slightly curved anther tubes. These features are comparable to *T. affinis* which has stems 0.5–70 mm wide, petals 5.8–15 mm long and stamens 3.3–6 mm long. Co-occurring small- and large-flowered plants of *T. affinis* were observed near the Perup Forest Ecology Centre in 2008. Variation in stamen morphology includes specimens with anther tubes that are strongly sinuate (*R.D. Royce* 3134, *A. Burchall* 438), scarcely sinuate (*Ostenfeld* 1096), very slender (*R.J. Chinnock* 3242) and relatively thick (*A.S. George* 17162), as well as specimens with long (*C.P. Dornan* 509, *P.G. Wilson* 6340) or short hairs (*R.D. Royce* 3134) on the anther body and with additional, sparse, glandular hairs (*A.B. Cashmore* 76). The relative length of the anther tube to the anther body also displays some variation between specimens.

Given the variation observed within *T. affinis* and the absence of any unique morphological features in *Tetrateca* sp. Mt Solus (F. Obbens 307/98), this latter name is hereby subsumed under *T. affinis*. The disjunction of c. 130 km between Mt Solus and the nearest known *T. affinis* collection (12 km SE of Noggerup, P.A. Jurjevich 1899) is difficult to explain, however this situation is not unique (e.g. c. 350 km disjunctions occur in *Sphaerolobium calcicola* R. Butcher and *S. hygrophilum* R. Butcher; Butcher & Chappill 2004). A disjunction of c. 90 km is already recognised between collections of *T. affinis* from near Yallingup and from near Balingup (E.M. Sandiford 554). Mt Solus may represent the northernmost naturally occurring population of this species and additional collections may yet be made in the intervening areas.

Ironically, three specimens (*T.D. Macfarlane* TDM 1832, *E.M. Sandiford* EMS 871A, EMS 871B) from two localities near Cape Riche tentatively identified as *T. affinis* may warrant recognition as a new taxon. These specimens differ from typical *T. affinis* in having a smaller stature, consistently 4-merous flowers, a narrow receptacle which is formed at the apex of a gradually tapering peduncle, glabrous dorsal and lateral surfaces to the anther body, minute tubercles on the lower half of the sinuate anther tube and one ovule per locule, this attached near the apex of the septum by a small placenta. The two known localities of this entity are c. 50 km south-west of the nearest known population of typical *T. affinis* (Bluff Knoll Road, Stirling Range National Park, J.J. Alford s.n. PERTH 05979897) and c. 5.5 km apart from one another. Further field investigation in the Stirling Range–Albany–Cape Riche area is required to confirm the distinctness of this entity from *T. affinis*. The phrase name *T. affinis* subsp. Cape Riche (*T.D. Macfarlane* TDM 1832) has been erected on the Census (see Western Australian Herbarium 1998–) to refer to these specimens, pending their taxonomic resolution.

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References

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