

## SHORT COMMUNICATION

**Formal transfer of *Murchisonia* to *Thysanotus* (Asparagaceae)**

*Murchisonia* Brittan (Asparagaceae) was described by Brittan (1972) to accommodate a species, *M. fragrans* Brittan, which he had recently discovered in Western Australia. He considered that it did not fit the then-current concept of *Thysanotus* R.Br. Subsequently a second, widespread, inland Australian species of *Murchisonia* was described: *M. volubilis* Brittan (Brittan 1986).

These two species have not been well illustrated in print to date. Figure 1 is therefore included to fill that gap. The figure shows the very different habit of the two species and also differences in perianth morphology with *M. fragrans* bearing an inflexed, long fringe on the upper part of the petals, the lower part of the petal margins being glabrous or with a shorter, erect fringe, whereas *M. volubilis* lacks a fringe altogether. Neither condition occurs in *Thysanotus*, although sometimes in species of *Thysanotus* the fringe is very short or sparse, e.g. in a form of *T. manglesianus* Kunth (T. D. Macfarlane, unpubl.). The stamens of both species also represent a unique form distinct from that observed in *Thysanotus*, being evenly distributed around the flower and incurved toward the style, with the anthers having the whole dorsal surface consisting of a thickened connective and the ventral face consisting of well-developed longitudinally dehiscent thecae. Species of *Thysanotus* have stamens moderately to strongly declinate, anthers with less than full-length dorsal thickenings or poorly developed thickenings and the few species that dehisce by slits show indications that the slits are secondary extensions of apical pores.

Despite these distinct morphological features, phylogenetic studies of *Thysanotus* and *Murchisonia* using chloroplast (*trnL* and *trnL-F*) and nuclear (ITS2) DNA regions and morphology (Sirisena 2010; Sirisena *et al.*, in prep.), show that the two *Murchisonia* species are nested within *Thysanotus*, but in separate parts of the phylogenetic tree. Vegetatively, *M. fragrans* resembles *T. rectantherus* Brittan, whereas *M. volubilis* is almost indistinguishable from *T. patersonii* R.Br. and related twining species. Thus, *Murchisonia* is neither monophyletic, nor phylogenetically distinct from *Thysanotus*. *Murchisonia* should therefore be a synonym of *Thysanotus*; its two species are here transferred to *Thysanotus*. The scientific case for this action including detailed discussion of characters is outlined in Sirisena (2010) and will be published in more detail in Sirisena *et al.* (in prep.).

The cited type specimens have been examined.

***Thysanotus*** R.Br., *Prodr. Fl. Nov. Holland.* 282 (1810).

*Type*: not designated. *Lecto*, *fide* N.H. Brittan, *Brunonia* 4: 72 (1981): *T. junceus* R.Br., *nom. illeg.* [= *T. juncifolius* (Salisb.) J.H. Willis & Court].

*Murchisonia* Brittan, *J. Roy. Soc. Western Australia* 54: 95 (1972), *syn. nov.*

*Type*: *M. fragrans* Brittan.

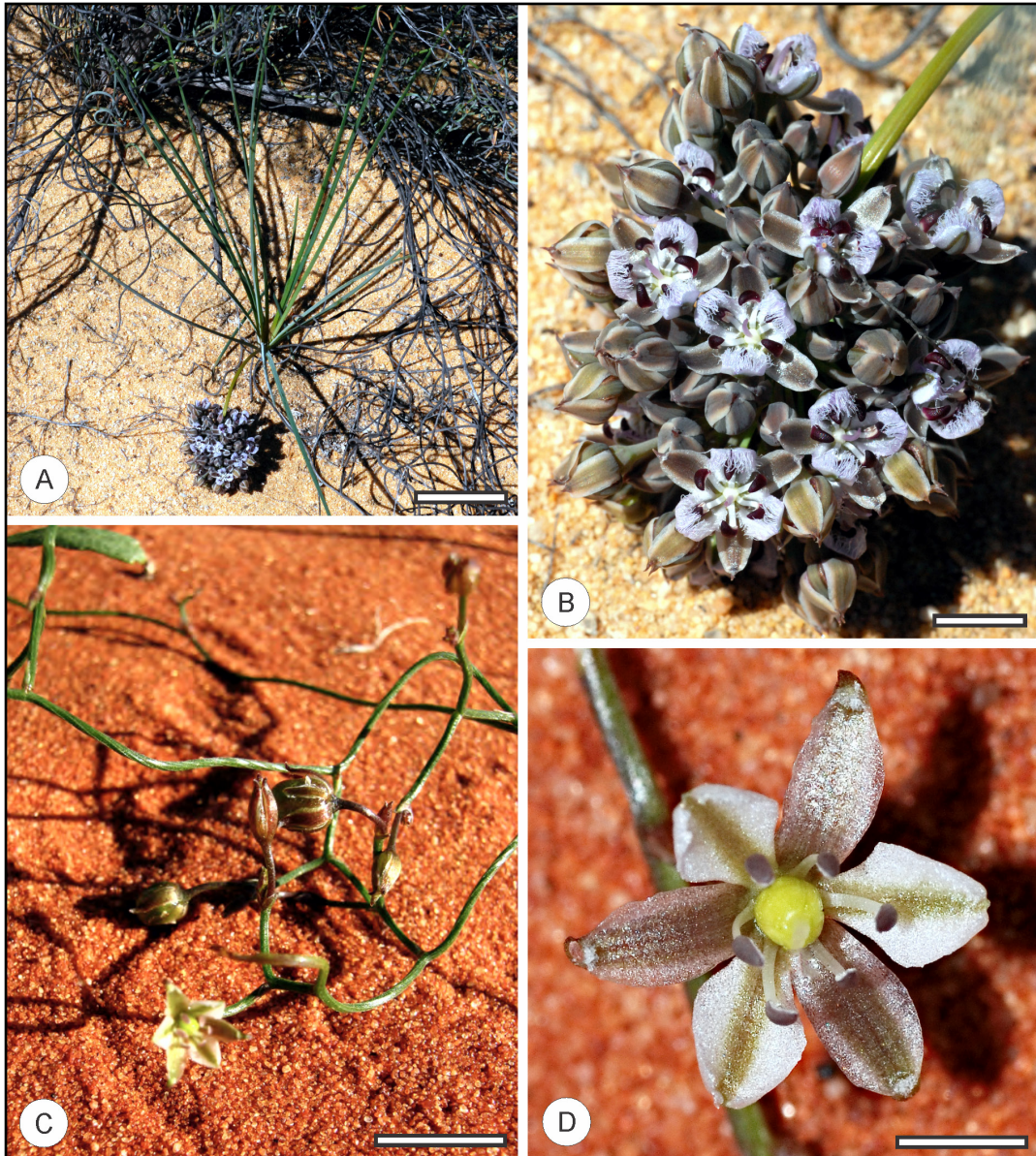


Figure 1. *Thysanotus* species. A, B. *T. fragrans*. A – flowering plant *in situ* showing the dense, decumbent inflorescence; B – inflorescence with several open flowers showing the fringed petals. C, D. *T. exfimbriatus*. C – plant *in situ* showing the twining habit, buds, open flower and developing fruits; D – flower showing lack of petal fringing. Scale bars = 50 mm (A); 10 mm (B, C); 2 mm (D). Images from north of Murchison River Crossing, North West Coastal Highway, Western Australia (A, B) and south of Pimba, South Australia (C, D). Photographs by J.G. Conran.

***Thysanotus fragrans*** (Brittan) Sirisena, Conran & T.Macfarlane, *comb. nov.*

*Murchisonia fragrans* Brittan, *J. Roy. Soc. Western Australia* 54: 95–98 (1972). *Type*: 390 mile peg, North West Coastal Highway, c. 50 miles [80 km] north of Northampton, Western Australia, *N.H. Brittan* 70/11, 25 August 1970 (*holo*: PERTH 01087487).

***Thysanotus exfimbriatus*** Sirisena, Conran & T.Macfarlane, *nom. nov.*

*Murchisonia volubilis* Brittan, in J.P. Jessop & H.R. Toelken, *Fl. S. Austral.* 4<sup>th</sup> edn, p. 1762 (1986), *non Thysanotus volubilis* R.Br. *Type*: east of 'C 50' kilometre peg on North West Coastal Highway [50 km S of Carnarvon], Western Australia, 17 August 1984, *N.H. Brittan* 84/33 (*holo*: PERTH 06289290).

*Thysanotus patersonii* var. *exfimbriatus* J.M.Black, *Fl. S. Austral.* 2<sup>nd</sup> edn, p. 191 (1943), *nom. inval.*, *p.p.*

*Etymology*. The epithet refers to the lack of a fringe on the petals and also acknowledges J.M. Black's first recognition of the taxon as distinct.

### Acknowledgements

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### References

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- Sirisena, U.M. (2010). Systematic studies on *Thysanotus* R.Br. (Asparagales: Laxmanniaceae). PhD thesis. (University of Adelaide: Adelaide.)

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