Nomenclatural notes and new taxa in the genera *Asterolasia*, *Drummondita* and *Microcybe* (Rutaceae: Boronieae)

Paul G. Wilson

Western Australian Herbarium, Department of Conservation and Land Management, Locked Bag 104, Bentley Delivery Centre, Western Australia 6983

Abstract

Paul G. Wilson. Nomenclatural notes and new taxa in the genera *Asterolasia*, *Drummondita* and *Microcybe* (Rutaceae: Boronieae). Nuytsia 12(1): 83-88 (1998). Material is provided to validate the names to be used in a forthcoming treatment of Rutaceae in the "Flora of Australia". Two new species and two new subspecies are described: *Asterolasia rivularis* Paul G. Wilson, *A. pallida* subsp. *hyalina*, *Drummondita microphylla*, and *Microcybe pauciflora* subsp. *grandis*. Two new combinations are made: *Drummondita longifolia* (Paul G. Wilson) Paul G. Wilson and *Microcybe multiflora* subsp. *baccharoides* (F. Muell.) Paul G. Wilson. Several names are lectotypified.

Introduction

The family Rutaceae will be included in Volume 26 of the "Flora of Australia". The present paper is a precursor to that treatment and deals with the genera *Asterolasia*, *Drummondita*, and *Microcybe*. These genera, apart from each being a member of the tribe Boronieae, have no close affinity; they are here treated together solely for the sake of convenience.

Asterolasia F. Muell.

Asterolasia asteriscophora (F. Muell.) Druce, Bot. Soc. Exch. Club Brit. Isles Rep. 4: 606 (1917). - *Phebalium asteriscophorum* F. Muell., Trans. Proc. Vict. Instit. Advance. Sci. 31 (1855). - *Asterolasia muelleri* Benth. *nom. illeg.*, Fl. Austral. 1: 350 (1863). - *Asterolasia correifolia* var. *muelleri* Maiden & E. Betche, Proc. Linn. Soc. New South Wales 26: 80 (1901). *Type citation:* On stony declivities of Mount Disappointment (Dallachi) and on the gravelly banks of the Buffalo Creek. *Type*: Mt Disappointment, Victoria, October 1852, *F. Mueller* (*lecto*, here chosen: MEL 708656).

Notes. The lectotype specimen from Mt Disappointment at MEL is labelled as having been collected by Mueller although credited to Dallachy by Mueller in his protologue. It is possible that Dallachy should have been indicated as the collector of the Buffalo Creek collection since he and Mueller were together on the expedition to that area in 1853 (Gillbank 1992).

Asterolasia buxifolia Benth., Fl. Austral. 1: 351 (1863). *Type citation:* Blue Mountains, A. and R. Cunningham. *Type:* Bells Road, Blue Mountains, New South Wales, 1834, *R. Cunningham* (*lecto*, here chosen: K).

Notes. The specimens I have seen of this species were all collected in the Blue Mountains in the 1830s and 1840s. In recent floras *A. buxifolia* has either been ignored or treated as a synonym of *A. asteriscophora*; it differs from the latter species, and from other eastern Australian species, in having glabrous carpels and in having thick solid golden centres to the stellate hairs of its petals. This type of petaline hair is similar to that found in the Western Australian species *A. grandiflora* and *A. nivea*. A projected attempt by Keith Ingram in 1994 to re-collect the species was thwarted by fires that burnt through the Bells Road area.

Asterolasia pallida Benth., Fl. Austral. 1: 352 (1863). *Type:* Western Australia, *J. Drummond* 42 & 112 (*syn:* K, MEL).

Woody perennial to 1 m high, sometimes rhizomatous. *Leaves* petiolate, elliptic to broadly elliptic, 1-2.5 cm long, somewhat scabridulous. *Umbels* terminal and axillary. *Sepals* stellate-hairy and insignificant or glabrous and *c.* 0.5 mm long. *Petals* 4-8 mm long, white, covered on outside with colourless or rufous stellate hairs radiating in all directions. *Stamens c.* 15-25, glabrous; anthers *c.* 0.8 mm long. *Carpels* 1-3; style glabrous. *Cocci* with prominent horizontal beaks.

Distribution. Found in Western Australia in the Darling Range from near Perth south to Manjimup.

Notes. Two subspecies are recognized.

Petals with rufous and colourless hairs outside ..... subsp. **pallida**
Petals with a few colourless hairs only ..... subsp. **hyalina**

Asterolasia pallida Benth. subsp. **pallida**

Sepals scarcely observable, rufous stellate-hairy. *Petals* with rufous and colourless stellate hairs outside.

Distribution. Found in Western Australia in the Darling Range from near Perth south to Manjimup.

Habitat. Growing on laterite in *Eucalyptus marginata - Corymbia calophylla* woodland.

Conservation status. A widespread taxon which is not under threat.

Notes. The variant that grows in the Darling Range near Perth has flowers with broadly elliptic petals *c.* 8 mm long, and with 2 or 3 carpels. A southern variant, found between Augusta and Manjimup, has flowers with very broadly elliptic petals 4-5 mm long, and 1 or 2 carpels; it is sometimes rhizomatous.

Asterolasia pallida subsp. **hyalina** Paul G. Wilson, *subsp. nov.*

A *Asterolasis pallida* subsp. *pallida* sepalis late triangularibus *c.* 0.4 mm longis fere glabris, petalis extra sparse stellatis cum pilis debilibus incoloratis differt.

Typus: Dryandra [State Forest], Western Australia, 5 September 1992, *G.J. Keighery* 12276 (*holo:* PERTH 3341410).

Sepals broadly triangular, *c.* 0.4 mm long, glabrous or almost so. *Petals* sparsely stellate-hairy outside with weak colourless hairs.

Additional specimen examined. WESTERN AUSTRALIA: Dryandra State Forest, *G.J. Keighery* 12284 (PERTH).

Distribution. Occurs in Dryandra State Forest *c.* 130 km south-east of Perth, Western Australia.

Habitat. Growing in *Eucalyptus wandoo* woodland over granite.

Conservation status. The few known populations of this subspecies are in a conservation reserve. A Priority Two classification would appear to be appropriate.

Etymology. The subspecific epithet *hyalina* is derived from the Latin word *hyalinus*, which means colourless and transparent, referring to the transparent hairs on the petals.

Asterolasia phebalioides F. Muell., Trans. Philos. Soc. Victoria 1: 10 (1854). - *Eriostemon pleurandroides* F. Muell. *nom. illeg.*, Fragm. 1: 106 (1859) based on above. - *Asterolasia pleurandroides* Benth. *nom. illeg.*, Fl. Austral. 1: 351 (1863). - *Pleurandropsis phebalioides* (F. Muell.) Baill., Adansonia 10: 306 (1872). *Type citation:* On the stony declivities of the Grampians, the Serra and Victoria Ranges, particularly frequent on Mount Sturgeon and Mount Abrupt. *Type:* Grampians, Victoria, November 1854, *F. Mueller* (*lecto*, here chosen: MEL 708616).

Notes. This species has five leafy to scarious bracts that subtend each flower. These bracts occur in an inter-petaline position and may be modified sepals.

Asterolasia rivularis Paul G. Wilson, *sp. nov.*

Folia anguste oblonga vel anguste oblongo-cuneata, *c.* 15 mm longa, 2.5 mm lata, obtusa, supra profunde canaliculata, muricata, infra dense stellato tomentosa. Flores 1-3; pedicellus ad 3 mm longus. Sepala triangularia, *c.* 1 mm longa. Petala late elliptica, *c.* 6 mm longa, flava, extra rubiginoso stellata.

Typus: Avon Dam district, New South Wales, 27 July 1947, *E.F. Constable* (*holo:* NSW 3979).

Erect *shrub* to 1.5 m high. *Leaves* narrowly oblong to narrowly oblong-cuneate, *c.* 15 mm long, 2.5 mm wide, obtuse, deeply sulcate above with the lateral halves convex, muricate above, densely stellate-tomentose below. *Flowers* 1-3 in sessile axillary and terminal clusters; pedicels to 3 mm long in flower. *Sepals* triangular, *c.* 1 mm long. *Petals* broadly elliptic, *c.* 6 mm long, yellow, rusty-stellate-hairy outside. *Stamens* 10; anthers *c.* 1.5 mm long with a small terminal gland. *Carpels* 5, stellate-hairy; style glabrous; stigma subglobular, minutely verrucose. *Fruit* not seen.

Additional specimen examined. NEW SOUTH WALES: Little River, Buxton, *T.M. Whaite* 1080 (NSW).

Distribution. Found on the central coast of New South Wales near Buxton.

Habitat. Occurs in the hills along streams.

Etymology. The Latin word *rivularis,* which applies to streams, refers to the preferred habitat of this species.

Notes. This species is similar to *A. asteriscophora* (F. Muell.) Druce from which it differs principally in leaf shape.

Drummondita Harv.

Drummondita longifolia (Paul G. Wilson) Paul G. Wilson, *comb. et stat. nov.*

Drummondita hassellii var. *longifolia* Paul G. Wilson, Nuytsia 1: 206 (1971). *Type:* Peak Charles National Park, Western Australia, 15 June 1929, *C.A. Gardner & G.L. Throssell* (*holo:* PERTH 1004891).

Conservation status. This species is known from only a small area. Currently listed as Declared Rare Flora.

Notes. This species differs from *D. hassellii* in having well-spaced slender leaves and in having resinous sepals and branchlets. With the removal of var. *longifolia*, *D. hassellii* still remains an extremely variable species, particularly in respect to the size and shape of the leaves.

Drummondita microphylla Paul G. Wilson, *sp. nov.*

Ramuli in statu juveniles nitidi albique, cristis brevis rotundatis glanduloso-verrucosis ex foliis decurrentibus. Folia congesta, subteretia, crassa, carnosa, 2-3 mm longa, glabra, apice rotundata. Flores solitarii; pedicellus nullus. Sepala inaequalia, triangularia vel sub-orbicularia, 2-4 mm longa, sparse ciliata aliter glabra, rubra, margine scariosa, aliter crassa, carnosa. Corolla tubularis; petala *c.* 13 mm longa, glabra, sanguinea. Staminorum tubus 1.5-2 cm longus, dense sericeus, rubra; anthera 3 mm longa.

Typus: Bulga Downs Station, Western Australia, 23 August 1993, *K.H. Coate* 295 (*holo:* PERTH 03282007; *iso:* CANB, K, MEL, NSW).

Shrub, much branched, *c.* 1.5 m high. *Branchlets* glossy and white when young with short raised rounded glandular-verrucose glabrous ridges decurrent from the leaf-bases, sparsely hirtellous between the ridges. *Leaves* crowded, fleshy, subterete, thick, 2-3 mm long, smooth, glabrous, sulcate above, apex rounded. *Flowers* solitary; pedicel turbinate, fleshy, *c.* 1.5 mm long, glabrous; bracteoles absent. *Sepals* unequal, triangular to suborbicular, 2-4 mm long; sparsely ciliate, otherwise glabrous, red; margin thin; centre raised and fleshy. *Corolla* tubular; petals narrowly oblong-ovate, *c.* 13 mm long, glabrous, blood-red. *Staminal tube* 1.5-2 cm long, densely silky, red; anthers 3 mm long.

Additional specimens examined. WESTERN AUSTRALIA: Between Fields Find and Yalgoo, 24 Aug. 1990, *K. Coate* (PERTH); 30 km SE of Bulga Downs Homestead, *P.G. Wilson* 13055 (PERTH).

Distribution. Found on Bulga Downs Station between Sandstone and Menzies in southern Western Australia.

Habitat. Only known from plants that are growing on breakaways.

Conservation status. This species has been found on several breakaways and does not appear to be in need of protection.

Etymology. The epithet *microphylla* is made up of the two Greek words *micro* - small, and *phyllon* - leaf, and has reference to the small leaves found in this species.

Notes. A plant similar to *D. microcephala* is found in the Blue Hill Range, *c.* 300 km west of the above locality (*R.J. Cranfield* 8586A, PERTH). It differs from typical *D. microcephala* in having minute reddish brown apicula to the leaves and suborbicular flat coriaceous sepals. This variant may warrant recognition as a distinct taxon, however, since it is only known from a small specimen which bears one flower it is not appropriate that it should be formally described.

Microcybe Turcz.

Microcybe multiflora Turcz. subsp. **baccharoides** (F. Muell.) Paul G. Wilson, *comb. nov.*

Eriostemon capitatus F. Muell. var. *baccharoides* F. Muell., Fragm. 9: 107 (1875). - *Microcybe multiflora* var. *baccharoides* (F. Muell.) Ewart & Tovey, Proc. Roy. Soc. Victoria ser. 2, 32: 201 (1920). *Type citation:* Fowler's Bay E. Giles, ad Gawler's Range D. Sullivan, ad Port Eucla J. Forrest. *Type:* Near Port Eucla, 1870, *J. Forrest* (*lecto,* here chosen: MEL 232732).

Distribution. Found from Lake King south to Ravensthorpe in Western Australia eastwards to Eyre Peninsula in South Australia.

Habitat. Frequently in mallee scrub where predominantly in calcareous soil.

Notes. A variant of subsp. *baccharoides* that has thick, deltoid leaves *c.* 2 mm long, tightly appressed to and almost obscuring the branch, is found from Ravensthorpe in Western Australia to Eyre Peninsula in South Australia. Where this variant and subsp. *multiflora* grow together plants intermediate in form are also found. The three syntypes of subsp. *baccharoides*, cited above, appear to be of this intermediate variant. However, the Forrest collection comes close to the putative parental variant that has tightly appressed leaves and it has therefore been selected as the lectotype of this subspecies. The variant with tightly appressed leaves has only been recorded from soils with calcareous substrates.

Microcybe pauciflora Turcz., Bull. Soc. Imp. Naturalistes Moscou 25/2: 167 (1852). *Type:* Western Australia, *J. Drummond* 5: 209 (*holo:* KW photo seen; *iso:* MEL, TCD).

Branchlets smooth, silvery stellate-hairy to lepidote. *Leaves* subsessile, spreading, sub-terete due to the revolute margins, 5-16 mm long, 1-2.5 mm wide; upper surface glandular-punctate and sparsely scabridulous from the persistent hair bases. *Flowers* 5-12 in head. *Sepals* free, narrowly oblong, 1-2 mm long, stellate-lepidote. *Petals* glabrous or sparsely stellate-hairy, pale yellow. *Staminal filaments* stellate-lepidote near base.

Notes. Two subspecies are recognized.

Leaves 4-10 mm long; petals glabrous ..... subsp. **pauciflora**
Leaves 14-16 mm long; petals sparsely stellate-hairy ..... subsp. **grandis**

Microcybe pauciflora Turcz. subsp. **pauciflora**

Asterolasia chorilaenoides F. Muell., Defin. Austral. Pl. 38 (1855). - *Eriostemon capitatus* F. Muell.,

Fragm. 1: 106 (1859). *Type:* Near Lake Hamilton, South Australia, *C. Wilhelmi* (*holo:* MEL 4539; *iso:* TCD).

Leaves 4-10 mm long, *c.* 1 mm wide, stellate-lepidote below. *Flower-heads* subtended by leafy bracts equal to or shorter than the head. *Sepals c.* 1 mm long. *Petals* glabrous.

Distribution. Found from south of the Stirling Range in Western Australia eastwards along the Great Australian Bight to southern South Australia and north-east Victoria.

Microcybe pauciflora subsp. **grandis** Paul G. Wilson, *subsp. nov.*

Folia 14-16 mm longa, *c.* 2 mm lata. Bractei foliacei capitulum excedentes. Sepala 1.5-2 mm longa.

Typus: 40 km north-east of Lake King, Western Australia, 16 September 1989, *G. Barrett* HAT 24 (*holo:* PERTH 1004638).

Leaves 14-16 mm long, *c.* 2 mm wide, stellate-velvety beneath. *Flower-heads* subtended by leafy bracts exceeding the head. *Sepals* 1.5-2 mm long. *Petals* sparsely stellate-hairy outside.

Additional specimen examined. WESTERN AUSTRALIA: NE of Lake King, *K. Newbey* 6546 (PERTH).

Distribution. Found north-east of Lake King, Western Australia.

Habitat. Newbey records that it grows in a moderately exposed situation on a kaolinitic breakaway in well-drained loam. Barrett indicates that it was growing in *Casuarina*-mallee scrub in clay loam.

Conservation status. This subspecies is known from only a small area whose security is uncertain. A Priority One category would appear to be appropriate.

Etymology. The Latin epithet *grandis*, which means large or great, refers to the fact that the leaves and flower-heads are larger than in the typical subspecies.

Notes. This subspecies is restricted to a small area north-east of Lake King, in the Roe Botanical District (Beard 1980) of Western Australia. The typical subspecies is found further south, from the Fitzgerald River in Western Australia eastwards to north-western Victoria.

Acknowledgements

This work was partly funded by a grant from the Australian Biological Resources Study.

References

Beard, J.S. (1980). A new phytogeographic map of Western Australia. Western Australian Herbarium Research Notes No. 3: 37-58.

Gillbank, L. (1992). Alpine botanical expeditions of Ferdinand Mueller. Muelleria 7: 473-489.