

Change of status for *Epacris microphylla* R.Br. var. *rhombifolia* L.R.Fraser & Vickery (Ericaceae: Epacridoideae)

Yvonne Menadue and R.K. Crowden¹

Tasmanian Herbarium, P.O. Box 5058, UTAS LPO, Sandy Bay, Tasmania 7005.

¹Author for correspondence: ron.crowden@bigpond.com

Abstract

A change of status is proposed for *Epacris microphylla* var. *rhombifolia* (R.Br.) L.R.Fraser & Vickery. The new combination *Epacris rhombifolia* (L.R.Fraser & Vickery) Menadue is made and new descriptions are provided for *E. rhombifolia* and *E. microphylla* sens. strict.

Introduction

L. Fraser and J. Vickery (1937) collected and named *Epacris microphylla* var. *rhombifolia* from the Barrington Tops Plateau, N.S.W. They compared it to earlier collections of *E. microphylla* R.Br. by J.L. Boorman from near Wingello and from Barrington Tops. The few additional N.S.W. collections since then have been from the Vulcan to Oberon bogs and the Kanangra Walls area (Luthers Swamp). After 1981, specimens have also been collected in Victoria (initially identified as *E. coriacea* A.Cunn ex DC), in the Snowfields, e.g. Snowy Range and the Mount Baw Baw area, thus extending considerably the distributional range of the taxon.

There is a suite of morphological characters that separate *E. microphylla* from *E. microphylla* var. *rhombifolia* (Table 1). These differences are clear-cut, and consistent over the whole distributional range and, when coupled with differences in habitat preference and time of flowering, suggest it would be appropriate to promote *E. microphylla* var. *rhombifolia* to species status, thus the combination *E. rhombifolia* (L.R.Fraser & Vickery) Menadue is proposed here. Note also that the cladistic morphological analysis of *Epacris* and related genera by Quinn et al. (2015) shows a clear separation of the two taxa on the morphological tree.

Taxonomy

Epacris rhombifolia (L.R.Fraser & Vickery) Menadue, *comb. et stat. nov.*

Epacris microphylla R.Br. var. *rhombifolia* L.R.Fraser & Vickery, Proc. Linn. Soc. N.S.W. 62: 290, 1931.

Type citation: “Barrington Tops: 4,500 feet (L. Fraser and J. Vickery, 7/1/1934, Type)”

Type: New South Wales: Northern Tablelands: Barrington Tops, 4,500 ft, *L.R. Fraser & J.W. Vickery s.n.*, 7 Jan 1934 (holo: NSW591602)

An erect, virgate *shrub*, usually several stiff stems with limited upper branching, up to 1.5(–2.0) m high; young stems rounded, red-brown, pubescent; old stems brown with raised cuspidate leaf scars. *Leaves* crowded,

imbricate on younger branches, then more spreading down older branches to 15 cm, erect and semi-appressed or reflexed, broadly rhombic, 2.2–4.4 mm long, 1.6–3.2 mm wide, glabrous, lamina flat becoming squarrose, apex acute, the midrib projecting as a short blunt mucro, only slightly incurved, base obtuse or truncate, margin slightly hyaline, entire or scabrid proximally, midrib not keeled, other veins not conspicuous abaxially; *petiole* 0.3–0.6 mm long, slender, pubescent, semi-appressed. *Flowers* white, 3.8–5.0 mm diam. in apical clusters or spreading a short distance down branches, on short peduncles 1.8–2.6 mm long; *bracts* white, usually red-streaked, ovate to broadly ovate, apex obtuse, glabrous, keeled in the upper part, margin ciliolate; *sepals* white, red-streaked, 1.5–2.0 mm long, c. 1 mm wide, longer than the tube, ovate, glabrous, apex acute, margins ciliolate; *corolla tube* white, campanulate, c. 1.0–1.5 mm long, wider at the throat, 1.6–2.0 mm diam.; *lobes* spreading, not overlapping, longer than the tube, c. 1.7 mm long, apex obtuse, corolla deciduous; *anthers* angled at the throat, red, <0.5 mm long on filaments c. 0.7 mm long. *Ovary* depressed globose, smooth, glabrous, c. 1 mm diam. *Style* cylindrical, short, < 0.5 mm long, stigma rounded, below level of anthers. *Nectary* of five distinct scales, rounded–triangular, up to ¼ height of ovary. *Capsule* depressed, 1.6–2.0 mm diam., opening widely at maturity, style mostly persistent.

Flowering time: November to early March.

Distribution and habitat: New South Wales, Barrington Tops, Wingello, Vulcan to Oberon. Bogs and along water courses at high altitudes. Victoria, Blue Range, Snowy Range, Upper Thompson River catchment. Sub-alpine wet heathlands.

Notes: In the protologue, the authors say the species “occurs besides creeks on the Barrington Tops Plateau, usually at an altitude of 4,500–4,800 ft.” The type bears two flowering specimens in which the flowers extend c. 8 cm down the stems.

Specimens examined: NEW SOUTH WALES: NORTHERN TABLELANDS: Barrington Tops, *Boorman s.n.*, Dec 1915 (HO326195); East Barrington Tops, 40 miles N of Singleton, *Schodde 3226*, 3 Feb 1963 (NSW700909); Polblue Creek carpark, Barrington Tops Rd., *Matarczyk s.n.*, 15 Dec 1997 (HO526874); Stewart’s Brook State Forest, *Binns 247*, 30 Mar 1988 (NSW360917). CENTRAL TABLELANDS: Wingello, *Boorman s.n.*, Dec 1899 (NSW591600); near pluviometer, Luther’s Creek on Kanangra Walls Road (7.5k SSE of Jenolan Caves), alt. 1200 m, *Coveny 9463 & Hind*, 5 June 1977 (HO309368, NSW); Jensen’s Swamp, Boyd Plateau W. of Kanangra Walls, *Anon.*, 1 Mar 1985 (NSW276685). VICTORIA: SNOWFIELDS: Storm Creek on Blue Range Rd., *Albrecht 1841*, 7 July 1985 (MEL 0526750A); Moroka Range, 4 km WSW of East Pinnacle, *Beauglehole 43490*, 4 Nov 1973 (MEL0526750A); Snowy Range, Caledonia Swamp, *Chesterfield s.n.*, 31 Jan 1982 (MEL602115); Blue Range Rd. 8.5 km SE of Buxton, *Stajsic 815*, 13 Feb 1993 (MEL2020541A); Upper Thompson R. catchment area, 4 km W from Rocky Knob, *N.G. Walsh 695*, 7 Dec 1981 (MEL0604195A); Swamp margin (Thompson R. headwaters) near helipad beside road from Toorong to Matlock, *Crowden 8405-06*, 14 May 1984 (HO324132); Snowy Range, Shaw’s Creek, 5k NE of Mt. Tamboritha, *N.G. Walsh 2874*, 16 Jan 1989 (HO310290); Rubicon State Forest, bog fed by Whisky Creek or tributary on northern slopes of Mt Bullfight, 100 m S of Bullfight Rd., 3.5 km from jn. with Royston R. Rd., alt. 1310 m, *Sinnott 3175*, 15 Mar 1996 (HO319812); Blue Range Rd. near crossing at Storm Creek, *M.G. Corrick 8575*, 2 Jan 1983 (HO78292, NSW).

Epacris microphylla R.Br., Prodrromus Florae Novae Hollandiae 550 (1810).

Illustration: Curtis’ Botanical Magazine t. 3658 (1839)

An erect, usually multistemmed straggling or virgate *shrub* 0.5–1.0–(1.8) m high, young stems rounded to ribbed, brown to reddish-brown, villous; old stems dark brown, scaly with crescentic leaf scars. *Leaves* crowded and imbricate at first then evenly spaced down stems, semi-appressed to spreading, broadly deltoid occasionally wider than long, 2.0–3.5 mm long and wide, glabrous, concave, straight, apex acute and grading into marked shoulders, tip mucronate, not pungent and inflexed, base cordate or strongly sagittate, even stem clasping auriculate, margin ciliolate near base and partly hyaline, no marked keel, three major parallel veins evident but not conspicuous when viewed abaxially; *petiole* 0.3–0.8 mm long, ± flattened, glabrous, appressed to stem. *Flowers* white, 4.5–8.0 mm diam., spreading down branches to c. 40 cm, not crowded, erect, distinct on peduncles which may vary greatly in length, 1.3–5.0 mm long; *bracts* white ovate, glabrous, apex obtuse to acute, margin ciliolate; *sepals* white, 2.0–3.0 mm long, longer than the tube, glabrous, elliptic, apex acute, margin ciliolate; *corolla tube* campanulate, 1.5–1.7 mm long, wider at the throat, 1.8–2.1 mm, glabrous; *lobes* equal to or barely longer than the tube, 1.5–2.0 mm long, flat, not overlapping at the base, apex obtuse; corolla deciduous. *Anthers* angled at the throat, red, 0.5–0.7 mm long on filaments equal in length or longer. *Ovary* globose 0.5–1.0 mm high, 0.8 mm diam., slightly ribbed, glabrous; *style* cylindrical, variable in length, the stigma being placed either very close to the ovary, or ± level with the top of the anthers; *stigma* capitate-rounded; *nectary* five distinct scales, rounded to triangular, up to ⅓ ovary height. *Capsule* brown, depressed, opening widely at maturity, style rarely persistent.

Table 1. Morphological comparison of *E. microphylla* and *E. microphylla* var. *rhombifolia*

	<i>E. microphylla</i>	<i>E. microphylla</i> var. <i>rhombifolia</i>
Habit	Open, straggly, often virgate shrub	Erect shrub, few stiff stems.
Indumentum	Young stems villous	Young stems pubescent
Leaves	Leaves erect, semi-appressed to reflexed	Leaves ± imbricate, semi-appressed to spreading
Leaf shape	Leaves broadly deltoid	Leaves rhombic
Leaf apex	Apex conspicuously incurved	Apex only slightly incurved
Leaf in section	Concave	± Flat
Leaf base	Cordate or strongly sagittate or auriculate	Obtuse, or truncate
Flower size	Flowers 4.5–8.0 mm diam.	Flowers 3.8–5.0 mm diam.
Pedicle length	Variable, 1.3–5.0 mm	1.8–2.6 mm
Corolla lobes	± Equal with corolla tube	Longer than corolla tube
Style	Variable, stigma sometimes near ovary, sometimes near anthers	Short, <0.5 mm, the stigma close to ovary
Habitat	Sea level to high altitudes; in damp, sandy soils	High altitudes; in swamps and along watercourses
Flowering time	July to October	November to early March

Flowering time: July to October.

Distribution and habitat: Victoria, New South Wales and Queensland. Sea level to high altitudes. Surrounding rocky outcrops on granite, usually in seepages, and coarse granitic sandy loams with *Eucalyptus sieberi* L.A.S.Johnson, *Angophora floribunda* (Sm.) Sweet, *Allocasuarina littoralis* (Salisb.) L.A.S.Johnson, *Calytrix tetragona* Labill., *Pultenaea* spp. Coastal plains behind dune system, heathland with *Banksia integrifolia* L.f., *Casuarinaceae* spp., *Melaleuca* spp. and *Boronia* spp.

Selected specimens examined: QUEENSLAND: WIDE BAY: Carlo Point Rd. off Tin Can Bay, A.M. Buchanan 8775, 22 June 1982 (HO538647). NEW SOUTH WALES: NORTHERN TABLELANDS: Basket Swamp, 24.1 km NE of Tenterfield, in Boonoo State Forest, alt. 1040 m, P. Jobson 5213 & S. Mills, 25 Oct 1997 (HO506640, NSW); Wright's Lookout Track, New England NP, J.M. Powell 2982, 2 Sep 1987 (HO108945, NSW). NORTH COAST: margin of swamp just outside Diggers Camp settlement, J.M. Powell 4554, 5 Sep 1987 (HO108971, NSW). CENTRAL COAST: Budderoo NP, Barren Grounds Nature Reserve, c. 500 m E from start of circular track, alt. 600 m, Davies 416 & Mulcahy, 7 Dec 1987 (HO116270); 3.2 km N of main roundabout on old Princes Highway at Helensburgh, alt. 250 m, R. Johnstone 1585 & R. Turrin, 9 Nov 2005 (HO542038, NSW). SOUTH COAST: Falls Creek, Nowra, L. Rodway 6936, July 1917 (HO5322). VICTORIA: EAST GIPPSLAND: 3 km SE of Mt. Carlyle summit, Albrecht 3609 & Walsh, 4 Sep 1988 (HO115787).

Acknowledgments

We wish to thank Dr P. Wilson, National Herbarium of NSW, for helpful guidance in producing this manuscript, and the reviewers for their useful comments.

References

- Fraser LR, Vickery JW (1937) Notes on some species occurring in the upper Williams River and Barrington Tops districts, with descriptions of two new species and two new varieties. *Proceedings of the Linnean Society of New South Wales* 62: 284–293.
- Quinn CJ, Crowden RK, Brown EA, Southam MJ, Thornhill AH, Crayn DM (2015) A reappraisal of the generic concepts of *Epacris*, *Rupicola* and *Budawangia* (Ericaceae, Epacridoideae, Epacrideae) based on phylogenetic analysis of morphological and molecular data. *Australian Systematic Botany* 28: 63–77. <http://dx.doi.org/10.1071/SB13009>