

## A NEW SPECIES OF *CASSINIA* R. Br. (ASTERACEAE) FROM SOUTH-WEST VICTORIA.

by

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### ABSTRACT

Walsh, N. G. A new species of *Cassinia* R. Br. (Asteraceae) from south-west Victoria. *Muelleria* 7(2):141-145 (1990).—*Cassinia rugata* sp. nov. is described and illustrated, with notes on distribution, habitat, conservation status and relationships to some other species of *Cassinia* and *Helichrysum*.

### INTRODUCTION

When compiling a register of rare or threatened plants in Victoria, collections at the National Herbarium of Victoria (MEL) were examined for Victorian plant taxa which were poorly known or for which little contemporary information was available. Specimens of one such taxon, listed as '*Cassinia* sp. (Heathmere)' in Forbes and Ross (1988), were segregated from collections of *Cassinia aculeata* and *Helichrysum rosmarinifolium* and found to be uniform and distinct from both these species as well as other species in both genera.

Locality details on the specimens indicated that the undescribed species was known from a restricted area in the far south-west of Victoria and in March 1988, field-work in the area confirmed this and also suggested that the species was vulnerable due to the low number of individuals and its absence from any biological reserve. In order that the case for protection may be more successfully mounted, the opportunity is here taken to describe the new species.

### TAXONOMY

*Cassinia rugata* N.G. Walsh sp. nov.

*Frutex* ad 3 m altum. *Ramuli* cristati per lineas decurrentes basibus et costatis foliorum, hispidi, juvenes gossypini. *Folia* sessilia, alterna, saepe fasciculata et/vel subopposita sub inflorescentiis; lamina crassiuscula, oblonga ad anguste-elliptica, 6-25 mm longa, 1.5-4.5 mm lata, margine recurvata, paginae superae scabra, secus costam impressam pubescentia, paginae infernae breviter lanata. *Inflorescentiae* corymbosae, paniculatae, plerumque 3-12 cm diametro. *Capiula* aggregata, cylindrica vel turbinata, 4-5 mm longa, 1.5-3 mm lata; bractae involucri in 5-6 seriebus radialibus, et in 4-5 seriebus longitudinalibus accedentibus dispositae, arachnoideae sparsim, interior 2-3 series apicibus erectae, firmae, albae, rugatae. *Flosculi* 4-7, cum 1-3 squamae receptaculi oblongae interspersae. *Achenium* cylindricum vel ovoideum, c. 1.2 mm longum, 0.5 mm latum, sectione plano-convexum, cum c. 6 cristae longitudinali, glabrum, sparsim viscidum-glanduliferum. *Setae* pappi 24-28, barbellatae, complanatiores et latiores ad apice.

TYPUS: Victoria—South-west. Heathmere area. Heathland beside Jennings Road, c. 1.2 km north from Surrey River crossing. 11.5 km due south from Sinclair railway siding. 38° 11' 30" S; 141° 33' 50" E. Victorian Plant Grid E 13. N. G. Walsh 2074 and A. C. Beauglehole, 14.iii.1988. (HOLOTYPUS: MEL 1560557. ISOTYPI: AD, HO).

*Shrub* to c. 3 m high. *Stems* ridged by decurrent lines from leaf bases and midribs, sparsely hispid, overlain by cottony hairs when young. *Leaves* sessile, alternate, often fascicled and/or subopposite shortly below the inflorescence; lamina thick, oblong to narrowly elliptic, 6-25 mm long, 1.5-4.5 mm wide, margins recurved, upper surface scabrous, downy along the impressed midvein, lower surface covered with white woolly hairs. *Inflorescence* a corymbose panicle, mostly 3-12 cm diameter.

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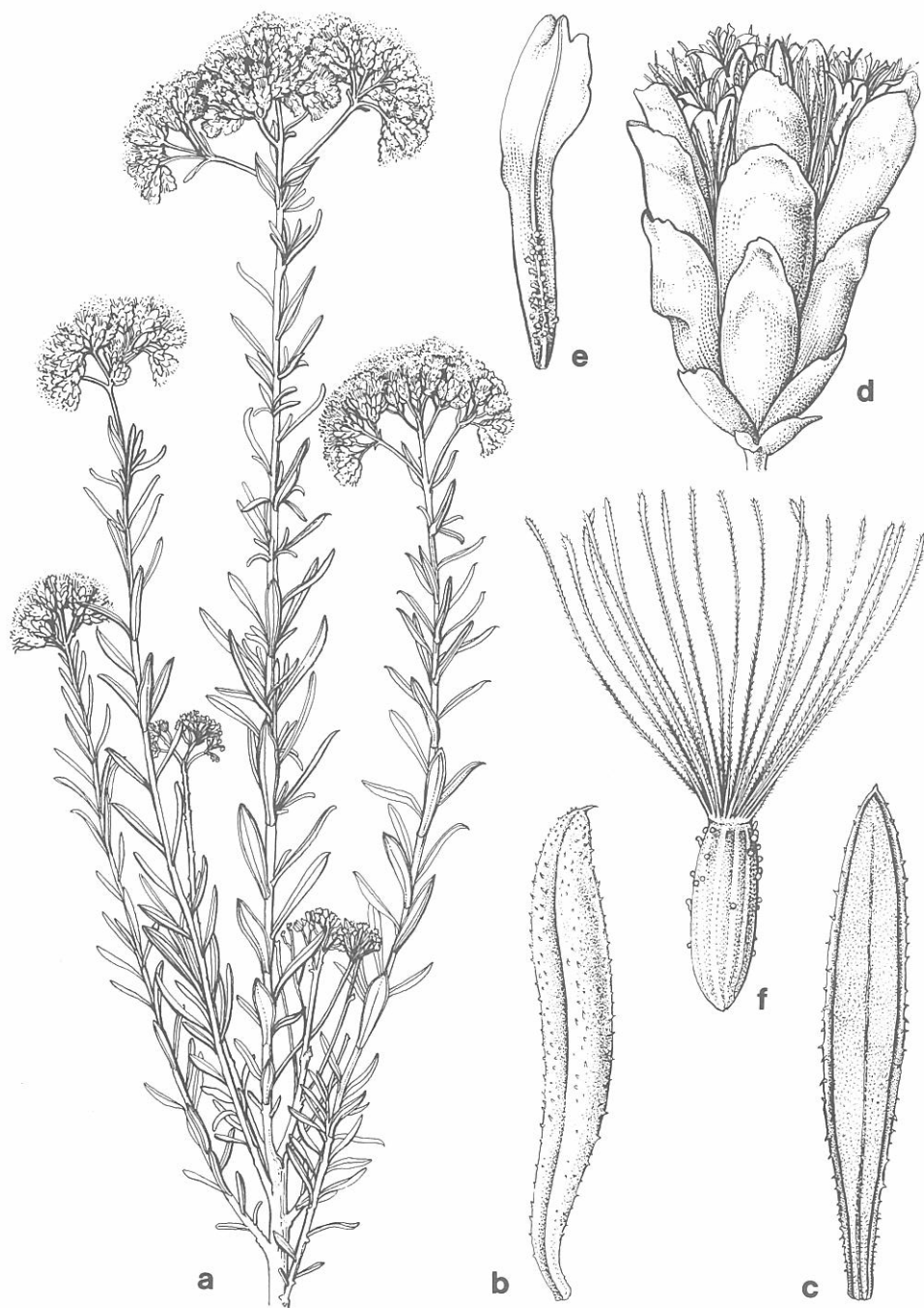


Fig. 1. *Cassinia rugata*. a—flowering branch,  $\times 1$ . b—leaf 3/4 view,  $\times 4$ . c—leaf from undersurface,  $\times 4$ . d—capitulum,  $\times 12$ . e—receptacular bract,  $\times 15$ . f—achene,  $\times 20$ . a–e from holotype, Walsh 2074 (MEL 1560558); f from Beaglehole 5677 (MEL 527146).

*Capitula* densely clustered, cylindrical to turbinate, 4–5 × 1.5–3 mm; involucre bracts obtuse to truncate, in 4–6 series, approximately ranked into 4–5 rows, sparsely cobwebby, the inner 2–3 series with erect, firm, white, wrinkled tips. *Florets* 4–7, interspersed with 1–3 oblong receptacular scales. *Achene* cylindrical to ovoid, c. 1.2 × 0.5 mm, plano-convex in section, c. 6-ribbed longitudinally, glabrous, sparsely viscid-glandular. *Pappus* of 24–28 barbellate bristles, flattened and broader toward the tips. (Fig. 1)

#### OTHER SPECIMENS EXAMINED:

Victoria—Drumborg, c. 18 miles NNW of Portland, 15.iv.1945, *A. C. Beauglehole* 481 (MEL 1560578); 0.8 km N of Surry River, swampy places, Gorae, 21.iv.1962, *A. C. Beauglehole* 5677 (MEL 527146); south-west Study Area, Cobboboonee Block, Boundary Road, 10.iii.1977, *A. C. Beauglehole* 55410 and *C. & D. Woolcock* (MEL 527127); approx. 11 miles NNW of Portland, and 5 miles west of Heathmere, 10.ii.1968, *H. I. Aston* 1655 (MEL 1560583); beside unnamed road, 7 km SW from Sinclair railway siding, c. 1 km S of Fitzroy R. ford, 14.iii.1988, *N. G. Walsh* 2076 and *A. C. Beauglehole* (MEL 1560555).

#### DISTRIBUTION AND CONSERVATION STATUS:

The species is apparently confined to an area of about eight km radius taking in the upper catchments of the Surrey and Fitzroy Rivers, centred on a point about 25 km NW of Portland in far south-west Victoria. Four populations are known, each from roadside vegetation, two sites being at the eastern fringes of the Cobboboonee forest block and the others being marginal to private property. None of the populations are contained within a biological reserve. The sizes of the populations are estimated to be between 20 and 100 individuals. The species conservation status is assessed to be 2Vi (Briggs and Leigh, 1989).

#### HABITAT:

The species occurs on seasonally wet, heathy sites, virtually treeless and typically with a dense shrub layer to c. 2.5 m high (one population occurred on a roadside verge virtually cleared of other vegetation, but remnant species indicated that the original vegetation was probably comparable to the uncleared sites). Typically associated species include *Allocasuarina paludosa*, *Baumea juncea*, *B. rubiginosa*, *Helichrysum rosmarinifolium*, *Juncus procerus* and *Pultenaea stricta*. The substrate at each site is derived from recent Quaternary siliceous sand (Malanganee Sand), enriched and blackened with peaty deposits from the wet heathland.

#### ETYMOLOGY:

The specific epithet is derived from the Latin *rugatus* meaning folded or wrinkled referring to the inner involucre bracts which are wrinkled toward their tips, a feature unique in *Cassinia*.

#### DISCUSSION:

The new species appears to be most closely related to *C. uncata* Cunn. ex DC., a polymorphic species with “several more or less distinct entities” (Cooke in Jessop & Toelken, 1986), but which differs from *C. rugata* in a number of features (see table). *C. uncata* is distributed from southeast South Australia, through drier areas across Victoria to the tablelands and western slopes of New South Wales. It is not known to occur within c. 100 km of the known sites for *C. rugata*.

Notes accompanying herbarium specimens (e.g. *J. H. Willis* and *A. C. Beauglehole* s.n. 20.iv.1970, MEL 504682) suggest that *C. rugata* may be an intergeneric hybrid between *Helichrysum rosmarinifolium* (Labill.) Benth. (which grows in the same community) and *Cassinia aculeata* (Labill.) R.Br. (which is not known in the vicinity), but *C. rugata* differs in a number of characters which are apparently not derived from nor intermediate in state between the proposed parent species (see Table 1). Mature seed of *C. rugata* removed from *Beauglehole* 5677, germinated and has proceeded, albeit slowly, to the 4-leaf stage, further suggesting that it is not a hybrid. The distinction between *Cassinia* R.Br and shrubby species of *Helichrysum* [subgenus

Table 1. Comparison of *Cassinia rugata* with closely related species.

Species	leaf shape/ texture	stem vestiture	involucral bracts	receptacular bracts	achene	habitat
<i>H. rosmarinifolium</i>	linear, herbaceous apex straight	cotony	unranked- ranked, tips spreading, ± wrinkled	lacking	plano-convex in section glabrous, ribbed; pappus bristles flattened toward tips	swampy heaths
<i>C. aculeata</i>	linear, herbaceous; apex straight	bristly	unranked, erect, smooth	present	angular but not ribbed, with sparse, short hairs; pappus bristles not flattened toward tips	various, but not swampy heaths
<i>C. uncata</i>	linear, firm; apex recurved	cotony &/or bristly	ranked, erect, smooth	present	plano-convex in section, glabrous or sparsely glandular, ribbed; pappus bristles not flattened toward tips	drier sites and coasts
<i>C. rugata</i>	oblong to narrow elliptic; apex recurved	cotony & bristly	±ranked, spreading wrinkled	present	plano-convex in section, sparsely glandular, ribbed; pappus bristles flattened towards tips	swampy heaths

*Ozothamnus* (R.Br.) Lessing] is not always clear. The two are formally distinguished on the basis of the presence or absence of receptacular scales (only present in *Cassinia*). However, some entities currently included in *Helichrysum* (e.g. *H. bilobum* subsp. *scabrum*) possess receptacular bracts. It is possible that *Cassinia* and *Helichrysum* subgenus *Ozothamnus* may be united in the future. Both *Cassinia* and *Ozothamnus* were initially erected as genera in a preprint to the *Trans. Linn. Soc. London*, published before Sept. 1817. The priority of either name, should the two genera be amalgamated, is therefore unclear, so without wishing to preempt any decision on the future classification of the group, the new species is here included in *Cassinia* to which, in the narrow sense, it belongs, and which is a name in widespread use.

#### ACKNOWLEDGEMENTS

I am indebted to Mr A. Cliff Beaglehole of Portland for unerringly guiding me to the known populations of *C. rugata* (some of which he had not visited for c. 40 years!), to Mr David Cooke (Animal and Plant Control Commission, South Australia) for his comments in relation to South Australian forms of *C. uncatata* and the new species, to Paul G. Wilson (PERTH) and my colleague Philip Short for valued advice, and to Anita Barley who prepared the illustration.

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Revised manuscript received 27 February 1989