



## Confirmation of *Olearia aglossa* (Asteraceae) in Victoria with notes on its distribution

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### Introduction

*Olearia aglossa* has long been a poorly understood species, which has likely been often overlooked due to its close affinity with *O. alpicola* and *O. megalophylla*. Maiden & Betche (1899) described this taxon (as *Olearia alpicola* var. *aglossa* Maiden & Betche) as being distinguished from *O. alpicola* by the 'absence of the ray-flowers, in the fewer flowers in the heads (5–7 in the heads examined) and in the pinkish tint of the pappus bristles'. They noted that Mueller's material from the Cobberas – described by Mueller (1860) as *Eurybia alpicola* var. *rhodochaeta* – 'agrees precisely' with this species except for the presence of ray-flowers. Despite noting the affinity, they do not appear to include Mueller's specimen in var. *aglossa*. Lander (1991) elevated *O. alpicola* var. *aglossa* to species rank and expanded the description to include plants with up to 4 ligules per capitulum. Lander (1991) listed var. *rhodochaeta* as a possible synonym as he had not seen any of Mueller's specimens to confirm the association of the two taxa. The provision for *O. aglossa* to also include plants with ligules suggests they are the same taxon, as this was previously thought to be the only character distinguishing the two taxa.

Lander's (1991) change potentially expanded the distribution of *Olearia aglossa* to include Victoria, with Mueller's type of var. *rhodochaeta* the only record in Victoria. Walsh and Lander (1999) cautiously included this species in the *Flora of Victoria*, noting that its presence in Victoria relied on the taxonomic concepts of Mueller and Maiden & Betche being conspecific. The existence of *O. aglossa* in Victoria has up to this

### Abstract

Previously *Olearia aglossa* (Maiden & Betche) Lander has cautiously been treated as present in Victoria. This was due to confusion around diagnostic characters, similarity with other more widespread species, and uncertainty around its relationship with *O. alpicola* var. *rhodochaeta* F.Muell. Following inspection of type material and study of wild growing plants, these two taxa are shown to be synonymous. *Olearia aglossa* is here confirmed as present in Victoria, and details of its distribution and the features that distinguish it from morphologically similar species *O. alpicola* (F.Muell.) F.Muell. ex Benth. and *O. megalophylla* F.Muell. ex Benth. are discussed.

**Keywords:** Cobberas, *Olearia alpicola*, *Olearia megalophylla*, rediscovery



**Figure 1.** Mount Stradbroke population of *Olearia aglossa* in bud (left) and full bloom (right), inserts showing close up of capitula.

point remained unclear, with no other unambiguous specimens of this taxon held at MEL, and at least 140 years since its last sighting within the state.

**Recent findings**

In early 2023, plants matching *Olearia aglossa* were discovered on Mount Stradbroke, eastern Victoria, only 53 km south of the type location (Mount Kosciuszko) and 15 km southeast of the Cobberas (type location for var. *rhodochaeta*). The population was found in early February, and at that time all plants appeared to have highly reduced ray-florets. The discovery led to the conclusion that *O. aglossa* s.s. had at last been confirmed in Victoria. During a subsequent visit in March 2023, plants were observed in full bloom and had developed fully expanded ligules to 10 mm long (Fig 1). This prompted

an investigation of the type specimens of *O. aglossa* for comparison. During this work, it became apparent that a type specimen for *O. alpicola* var. *rhodochaeta* has since been located at MEL – subsequent to the *Flora of Victoria* treatment. Inspection of this specimen, along with types of var. *aglossa*, and comparison with field observations, confirmed that they are conspecific. The only character that differs between type specimens of these two taxa is the absence of ligules on Maiden’s syntype specimens. However, close inspection of these specimens revealed they are in bud, with neither ray or disc florets open. The reason ligules were not observed is because they have not yet developed and expanded. All three type specimens cited by Maiden & Betche (1899) were collected in January and are undoubtedly at the same immature stage as plants observed in early

**Key to species**

- 1 Indumentum on lower leaf and peduncles of ascending Y-shaped hairs, making surfaces appear somewhat tangled and scruffy; leaves prominently reticulate-veined above; involucre cup-shaped, innermost bracts usually more than 6 mm long ..... ***O. megalophylla***
- 1: Indumentum on lower leaf and peduncles of appressed T-shaped hairs, appearing somewhat smooth or silky; upper leaf surface not or indistinctly reticulate-veined; involucre conical, innermost bracts less than 6 mm long ..... 2
- 2 Ray florets 2–4; pappus bristles often pink; leaf length:width ratio usually <6 ..... ***O. aglossa***
- 2: Ray florets 5–8; pappus bristles white to straw-coloured, never pink; leaf length:width ratio usually >6 ..... ***O. alpicola***

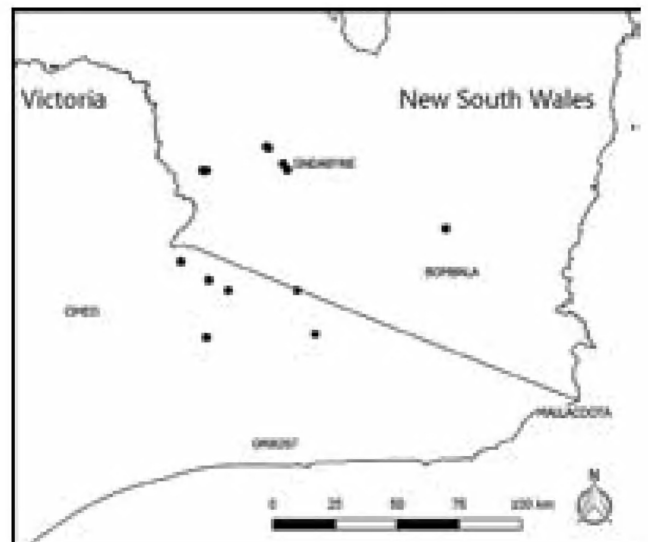
February 2023 at Mount Stradbroke. Plants collected in full bloom at Mount Stradbroke in March 2023 match the type of var. *rhodochaeta* (Fig. 1).

It is unfortunate that Lander (1991) had not seen the type specimen of var. *rhodochaeta* and was hence unable to synonymise the two. Lander's (1991) description allowed for the development of ligules, therefore the name *aglossa* (without tongues – alluding to the lack of ligules) is a misnomer. It is now clear that the type specimens of var. *aglossa* would have displayed developed ligules had they been collected a few weeks later. Mueller's epithet *rhodochaeta* (rose-bristles – alluding to the distinctive colour of the pappus) while also not diagnostic, appears to be a much more fitting name. Despite *rhodochaeta* being the earlier name, the priority principle does not apply in this case as the epithet is now being used at a different rank (see ICBN Article 11.2). Attempts to change this name here are likely to result in unnecessary additional nomenclature and further confusion. Furthermore, a new combination is likely to be made for this species in the future (along with most Australian taxa in section *Dicherotriche*) as phylogenetic studies have shown them to be unrelated to *Olearia* s.s. (Cross et al., 2002). Any nomenclatural changes made here would be short-lived.

### Distribution of *Olearia aglossa*

The uncertainty (at least in Victoria) around the reduction of ligules – taken literally as a reduction in size and number, rather than just number of florets as a key character, has led to uncertainty in the identification of *Olearia aglossa* specimens at MEL. With this character now clarified, a number of other specimens at MEL have been attributed to *O. aglossa* providing a much better understanding of the distribution of this species in Victoria. *Olearia aglossa* has been recorded from scattered sites in highlands in the far east of Victoria (Fig. 2), with specimens from the Cobberas, Mount Stradbroke, Gelantipy, Snowy River area, Mount Tingaringy, and Mount Koolabbra (between Bendoc and Bonang). At nearly all sites plants occur in sclerophyll forest in dry, rocky situations.

In New South Wales, *Olearia aglossa* is currently known only from Mount Kosciuszko National Park and an isolated record further east at 'Ngarago', 24.5 km ESE of Nimmitabel. Despite Lander's revision and the less



**Figure 2.** Distribution of *Olearia aglossa*. Data provided by The Australasian Virtual Herbarium, see <https://avh.chah.org.au/>

ambiguous key provided in the *Flora of New South Wales* treatment (Lander 1994), there are only seven specimens recorded of this species in New South Wales (three of which are the syntypes). A revision of specimens stored under *O. megalophylla* and *O. alpicola* held at NSW is likely to uncover additional locations of *O. aglossa*.

### Diagnostic features

*Olearia aglossa* has been confused with *O. alpicola* and *O. megalophylla* – two species which may also at times be difficult to distinguish. A table of diagnostic features and an identification key for these three species is provided here. In terms of leaf shape *O. aglossa* can be quite similar to *O. megalophylla*, with both species having relatively broad leaves that differ in overall shape and width to those of *O. alpicola* (Table 1). The indumentum of the stems, lower leaf surface, and bracts of *O. aglossa* are similar to those of *O. alpicola*, both having appressed T-shaped hairs (Fig. 3, Table 1), giving surfaces a smooth or silky appearance (c.f. ascending Y-shaped hairs, making surfaces appear somewhat tangled and scruffy in *O. megalophylla*). *Olearia aglossa* and *O. alpicola* are also similar in involucre size (Fig. 3, Table 1), both being narrower, with shorter bracts in more numerous rows than *O. megalophylla*. However, *O. aglossa* can be further distinguished from both of these species by the reduced number of florets, with heads containing only 2–4 radiate florets and 2–4 disc florets (c.f. 5–9 ray and >9 disc florets in both *O. aglossa* and *O. megalophylla*). *Olearia aglossa* has also previously been characterised

**Table 1.** Morphological comparison of *Olearia aglossa*, *O. alpicola* and *O. megalophylla*.

	<i>O. aglossa</i>	<i>O. alpicola</i>	<i>O. megalophylla</i>
<b>Leaf</b>	Shape	Lanceolate to narrow-ovate	Narrow linear, oblong, narrow-ovate
	Length (mm)	(40–)55–90(–115)	60–130(–140)
	Width (mm)	(10–)13–27(–35)	3–12(–17)
<b>Hair</b>	Venation above	Indistinctly reticulate	Indistinctly reticulate
	Type on leaf lower surface, stem and bract	Appressed T-shaped	Appressed T-shaped
<b>Capitulum</b>	Involucre shape	Narrowly conical	Conical
	No. rows of bracts	4–6	4–6
	Inner bract length (mm)	4.5–5.5	4.5–5.5
	No. ray florets	2–4	5–8
	Ligule length (mm)	4.5–10	5–10
No. disc florets	2–4	9–11	9–14



by the bright pink pappus bristles. However, pappus colour was found to vary within the population at Mount Stradbroke from very bright pink to pale pink, straw-coloured with a pink tinge, to straw-coloured. Pink pappus has apparently never been observed in *O. alpicola*, but is sometimes seen in other species in *Olearia* sect. *Dicerotriche*, including *O. megalophylla* and *O. myrsinoides* (Labill.) Benth. This feature, while at times distinctive, should not be treated as diagnostic.

### Concluding remarks

It is hoped that this paper will raise the profile of this species, which has been overlooked due to its resemblance to the far more widespread *Olearia alpicola* and *O. megalophylla*, both of which occur in close proximity to known *O. aglossa* populations. The characters provided in the key to the species are sufficient for straightforward identification. This is not intended to be a taxonomic treatment of these species, as this is provided in Lander (1991) while an updated treatment can be found on VicFlora (2023).

### Acknowledgements

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**LEFT: Figure 3.** Comparative images of involucre size and hair types. *Olearia aglossa* (top), fresh material (A.Messina 2508, MEL2491335); *O. alpicola* (middle), dried specimen (A.Messina 2425, MEL2527988); *O. megalophylla* (bottom), dried specimen (A.Messina 2473, MEL2528036). Scale bar represents 2 mm.

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