

## *Pomaderris phyllicifolia* subsp. *phyllicifolia* Slender Pomaderris

### Taxonomy

*Pomaderris phyllicifolia* subsp. *phyllicifolia* Lodd. ex Link

This is one of two subspecies, partly co-extensive with subsp. *ericifolia*, but restricted to the eastern part of its range. It also occurs in NSW, Tasmania, and New Zealand.

### Current conservation status

Categorised as Rare in the 2014 Advisory list of rare or threatened flora (DEPI 2014).

### Proposed conservation status

Vulnerable in Victoria

Criteria D2

### Species Information

#### Description and Life History

The taxon forms slender shrubs, 1–2.5 m high; branchlets greyish, pubescent or villous with simple and stellate hairs. Leaves linear; 3–8 mm long, 0.7–1.3 mm wide, apex slightly recurved, obtuse, margins entire, revolute, upper surface sparsely hispid with simple hairs, or rarely glabrous, lateral veins not apparent, lower surface obscured by revolute margins; stipules 1–6 mm long, persistent. Flowers in small axillary clusters, crowded toward branch-tips; bracts deciduous. Flowers cream to yellow; externally greyish, densely pubescent, with simple hairs overlaying stellate hairs; pedicels 0.5–2.5 mm long; hypanthium 0.5–1 mm long; sepals 1.2–2 mm long, deciduous; petals absent; disc absent; ovary half-inferior, summit simple-pubescent, style branched in middle third. Operculum membranous, subequal to mericarp. Flowers November-January (VicFlora 2014).

#### Generation Length

The generation length of *Pomaderris phyllicifolia* subsp. *phyllicifolia* is estimated to be 10 to 40 years. This is inferred from likely post-fire episodic recruitment at pre-settlement frequencies of 30-50 years, with some continuous recruitment in response to small-scale localised disturbances.

#### Distribution

The taxon is of restricted occurrence in Victoria, being known from a handful of sites in the Suggan Buggan-Wulgulmerang areas. Pre-1900 records from Omeo area have not been substantiated by contemporary collections.

The taxon generally occurs at higher altitudes than subsp. *phyllicifolia*, but the two are sympatric in some areas (e.g. near Wulgulmerang). Plants with leaves glabrous above appear to be confined to the Mt Wellington-Sentinels-Dargo High Plains area (VicFlora 2014).

#### Habitat

The taxon occurs in mostly montane/subalpine sites near streams, usually near rocks and near, but usually not directly adjacent to, watercourses, mostly between 700 and 1,000 m altitude. Associated taxa include *Eucalyptus camphora*, *E. pauciflora*, *E. rubida*, *Grevillea lanigera*, *Hakea macrocarpa* and *Leptospermum grandifolium*.

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### Threats

Although climate change-induced increasing fire frequency is expected through much of the taxon's range, the inter-fire period is not likely to be less than that required for shrubs to reach maturity and maximum seed production age (estimated to be reached after about 5 years). However, continuing drying conditions, particularly on shallow ground in rocky sites, is likely to make many currently occupied sites unsuitable. Browsing by Sambar Deer (*Rusa unicolor*) is likely, but to date, not directly observed for this taxon, although it is known for similarly small-leaved taxa (e.g. *P. helianthemifolia*).

### IUCN Criteria

Criterion A. Population size reduction. Population reduction (measured over the longer of 10 years or 3 generations) based on any of A1 to A4			
	Critically Endangered	Endangered	Vulnerable
A1	≥ 90%	≥ 70%	≥ 50%
A2, A3, A4	≥ 80%	≥ 50%	≥ 30%
<p>A1 Population reduction observed, estimated, inferred or suspected in the past and the causes of the reduction are clearly reversible AND understood AND ceased.</p> <p>A2 Population reduction observed, estimated, inferred or suspected in the past where the causes of the reduction may not have ceased OR may not be understood OR may not be reversible.</p> <p>A3 Population reduction, projected or suspected to be met in the future (up to a maximum of 100 years) [(a) cannot be used for A3]</p> <p>A4 An observed, estimated, inferred, projected or suspected population reduction where the time period must include both the past and the future (up to a max. of 100 years in future), and where the causes of reduction may not have ceased OR may not be understood OR may not be reversible.</p> <p style="text-align: center;">based on any of the following:</p> <ul style="list-style-type: none"> <li>(a) direct observation [except A3]</li> <li>(b) an index of abundance appropriate to the taxon</li> <li>(c) a decline in area of occupancy, extent of occurrence and/or quality of habitat</li> <li>(d) actual or potential levels of exploitation</li> <li>(e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites</li> </ul>			

### Evidence:

#### Ineligible under Criterion A

There is insufficient evidence to satisfy any criterion under A.

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Criterion B. Geographic range in the form of either B1 (extent of occurrence) and/or B2 (area of occupancy)			
	Critically Endangered Very restricted	Endangered Restricted	Vulnerable Limited
B1. Extent of occurrence (EOO)	< 100 km <sup>2</sup>	< 5,000 km <sup>2</sup>	< 20,000 km <sup>2</sup>
B2. Area of occupancy (AOO)	< 10 km <sup>2</sup>	< 500 km <sup>2</sup>	< 2,000 km <sup>2</sup>
AND at least 2 of the following 3 conditions:			
(a) Severely fragmented OR Number of locations	= 1	≤ 5	≤ 10
(b) Continuing decline observed, estimated, inferred or projected in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) area, extent and/or quality of habitat; (iv) number of locations or subpopulations; (v) number of mature individuals			
(c) Extreme fluctuations in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) number of locations or subpopulations; (iv) number of mature individuals			

### Evidence:

#### ineligible under Criterion B

The Extent of Occurrence across the taxon's range is estimated to be 146 km<sup>2</sup>, based on accepted, post-1970 records in the Victorian Biodiversity Atlas, and the Area of Occupancy is estimated to be 32 km<sup>2</sup>, but other thresholds under this criterion have not been met.

Criterion C. Small Population size and decline				
	Critically Endangered	Endangered	Vulnerable	
Number of mature individuals	< 250	< 2,500	< 10,000	
AND at least one of <u>C1</u> or <u>C2</u>				
<u>C1</u>	An observed, estimated or projected continuing decline of at least (up to a max. of 100 years in future):	25% in 3 years or 1 generation (whichever is longer)	20% in 5 years or 2 generations (whichever is longer)	10% in 10 years or 3 generations (whichever is longer)
<u>C2</u>	An observed, estimated, projected or inferred continuing decline AND least 1 of the following 3 conditions:			
(a)	(i) Number of mature individuals in each subpopulation	≤ 50	≤ 250	≤ 1,000
	(ii) % of mature individuals in one subpopulation =	90 – 100%	95 – 100%	100%
(b) Extreme fluctuations in the number of mature individuals				

### Evidence:

#### Ineligible under Criterion C

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It is suspected that there are 200 to 2,000 mature individuals, but this qualifier is too weak, and other thresholds under this criterion have not been met.

Given the deeply incised, difficult-to-access valleys from which this taxon is known, it is very difficult to estimate the current population, let alone future/past trends. Potential loss of populations (pre 1900 records) from Mitta Mitta/Livingstone Ck areas are possibly due to land clearing, but are not known for certain. There are only about five reliable post-1970 records of the taxon from Victoria.

Criterion D - Very small or restricted population			
	Critically Endangered	Endangered	Vulnerable
Number of mature individuals (observed or estimated)	<50	<250	<1,000
D2 - Only applies to the VU category Restricted area of occupancy or number of locations with a plausible future threat that could drive the species to critically endangered or Extinct in a very short time.	-	-	D2 - Typically: AoO < 20 km <sup>2</sup> or number of locations ≤ 5

## Evidence:

### Eligible under Criterion D2 as Vulnerable

The taxon is estimated to be very restricted. The taxon has a restricted distribution, occurring in a single location, such that this restriction makes the taxon capable of becoming Critically Endangered or Extinct within a time frame of one or two generations. This is in response to the impact of the identified long-term threats, notably continuing drying conditions.

**Criterion E (Quantitative Analysis) was not addressed as the taxon does not have a detailed Population Viability Analysis.**

## References

DEPI (2014). *Advisory list of rare or threatened plants in Victoria - 2014*. Department of Environment and Primary Industries, Melbourne. Retrieved from:

[https://www.environment.vic.gov.au/\\_\\_data/assets/pdf\\_file/0021/50448/Advisory-List-of-Rare-or-Threatened-Plants-in-Victoria-2014.pdf](https://www.environment.vic.gov.au/__data/assets/pdf_file/0021/50448/Advisory-List-of-Rare-or-Threatened-Plants-in-Victoria-2014.pdf)

VicFlora (2017). Flora of Victoria, Royal Botanic Gardens Victoria: *Pomaderris phyllicifolia* subsp. *phyllicifolia*.

Retrieved from: <https://vicflora.rbgs.vic.gov.au/flora/taxon/638d4acc-132a-476f-9293-4d68eb0f3bf5>