

## *Pomaderris pilifera* subsp. *pilifera* Striped Pomaderris

### Taxonomy

*Pomaderris pilifera* subsp. *pilifera* N.A. Wakef.

### Current conservation status

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

### Proposed conservation status

Endangered in Victoria

Criterion B2ab(i,ii,iii,v)

### Species Information

#### Description and Life History

The taxon is a shrub to c. 3 m high; branchlets with dense grey stellate hairs and sparse, simple hairs. Leaves ovate to obovate, 20–35 mm long, (10–)20–30 mm wide, obtuse, margin plane or undulate, glabrous above except for minute stellate pubescence in grooves above midvein and lateral veins, lower surface pale stellate-pubescent, with a few long rusty simple hairs on midvein (sometimes on larger secondary veins); stipules 4–6 mm long, deciduous. Panicles pyramidal, 1.5–10 cm long; bracts deciduous. Flowers lemon-yellow, externally greyish with dense stellate and sparse to mid-dense simple hairs; pedicels 2–4 cm long; hypanthium c. 1 mm long; sepals 1.5–3 mm long, deciduous; petals spathulate to cordate-reniform 1.5–2(–2.5) mm long; disc absent; ovary virtually inferior, summit with simple hairs, style branched above midway. Operculum membranous, c. half mericarp length. Flowers September–October (VicFlora 2018).

The taxon recruits only from seeds and these are likely to be substantially produced and contributed to the soil seed bank at around 4 years old. The plants are believed to be killed by fire, and recruitment is primarily from fire, with a lower level of recruitment in good seasons.

#### Generation Length

The generation length of *Pomaderris pilifera* subsp. *pilifera* is estimated to be 10 to 30 years. This is based on a longevity of plausibly 40 years, a pre-settlement fire interval plausibly in the 50 year range, and the likelihood that episodic fire-induced mass recruitment greatly exceeds the proportion of recruitment responding continuously to small scale soil disturbances.

#### Distribution

The taxon has a scattered distribution east from Warburton and mostly south of the Dividing Range, but with a few outlying occurrences near Mitta Mitta township in the north-east (VicFlora 2018).

#### Habitat

The taxon inhabits mostly damp eucalypt forest, often in the vicinity of watercourses, but not strictly riparian. It is occasionally found in dry forest (e.g., at W-Tree Falls). The altitude range is between approximately 200 and 700 m above sea level. Soils vary from sandy (e.g., Holey Plains) to more commonly clay-loam, occasionally skeletal over sedimentary parent material (Neville Walsh, pers. obs.). Associated spp. include: *Eucalyptus angophoroides*, *E. cypellocarpa*, *E. goniocalyx*, *E. obliqua*, *E. polyanthemos*, *E. radiata*, *E. sieberi*, *Acacia floribunda*, *A. melanoxylon*,

# Pomaderris pilifera subsp. pilifera

## Striped Pomaderris

*A. terminalis*, *Calytrix tetragona*, *Correa reflexa*, *Grevillea chrysophaea*, *Kunzea ericoides* s. l., *Polyscias sambucifolia*, *Pomaderris aspera*, and *P. prunifolia*.

### Threats

Outlying subpopulations are sometimes small, like at Holey Plains, and therefore prone to extinction by stochastic events such as drought or intense browsing. Subpopulations in the Warburton area are prone to weed invasion, but other sites further upstream along the Yarra River and toward Woods Point are mostly unaffected by weeds. Drier sites are perhaps likely to experience the depletion of soil seedbank with increased fire frequency. Deer browsing is likely, but the severity of this impact is unknown currently. There is a high correlation however, between habitat of the taxon and that of Sambar Deer (*Rusa unicolor*) in Victoria.

### 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>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

The past population reduction does not meet the threshold for eligibility under criterion A2, and the future population reduction does not meet the threshold for eligibility under criterion A3.

# *Pomaderris pilifera* subsp. *pilifera* Striped Pomaderris

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:

### Eligible under Criterion B2 as Endangered

The Area of Occupancy (AoO) across the taxon's range is estimated to be 164 km<sup>2</sup>, based on 2 x 2 km grids derived from accepted, post-1970 records in the Victorian Biodiversity Atlas, as well as personal observations and vouchered herbarium specimens (N. Walsh pers. comm.).

The taxon is estimated to be severely fragmented naturally at the landscape scale, with no dispersal mechanism to the outlying locations or within the main Gippsland location. Dispersal is likely by ants at the metre scale.

It is estimated to have 3 locations, and has a continuing decline in (i), (ii), (iii) and (v) above, based on the current and projected impact of the identified threats.

# Pomaderris pilifera subsp. pilifera

## Striped Pomaderris

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 C1 or C2				
C1	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)
C2	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

It is suspected that there are 1,000 to 4,000 mature individuals, but the qualifier is too weak, and other thresholds under this criterion have not been met.

Criterion D. Very small or restricted populations				
		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:

#### Ineligible under Criterion D

It is suspected that there are 1,000 to 4,000 mature individuals which exceeds the thresholds for criterion D.

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)



*Pomaderris pilifera* subsp. *pilifera*  
Striped Pomaderris

VicFlora (2018). Flora of Victoria, Royal Botanic Gardens Victoria: *Pomaderris pilifera* subsp. *pilifera*. Retrieved from: <https://vicflora.rbg.vic.gov.au/flora/taxon/757b1c4e-be7a-4740-b8db-e97eb2f391c9>