

Pomaderris ligustrina subsp. *ligustrina* Privet Pomaderris

Taxonomy

Pomaderris ligustrina subsp. *ligustrina* Sieber ex DC.

There are two subspecies, and only the typical subspecies occurs in Victoria. *P. ligustrina* subsp. *latifolia* is restricted to northern NSW.

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,iv,v); C1+2a(i)

Species Information

Description and Life History

The taxon is a shrub 1.5–4.5 m high; young branchlets stellate-pubescent with scattered long simple hairs, but soon becoming glabrous. Leaves narrow-ovate to narrow-elliptic, 25–60 mm long, 8–20 mm wide, acute, margins weakly to strongly recurved, upper surface glabrous, lower surface villous with dense, pale to rusty simple hairs (often appressed on midvein) over fine stellate hairs; stipules 4–6 mm long, deciduous. Inflorescence c. pyramidal or subglobular, 1–5 cm long; bracts deciduous. Flowers cream or yellow, externally greyish, moderately to densely villous with longer simple hairs over fine stellate hairs; pedicels 1.5–2.5 mm long; hypanthium 0.6–0.8 mm long; sepals 0.8–1.4 mm long, deciduous; petals absent, style branched in middle third; disc absent; ovary virtually inferior, summit villous. Operculum membranous, c. half mericarp length. Flowers September–October (VicFlora 2017).

The taxon flowers in spring and recruits by seed alone. Plants are believed to be killed by fire, are long-lived (plausibly to 40 years), and are likely to substantially contribute to the soil seedbank at around 4 years old. Recruitment is considered to be primarily from fire, with a lower level of recruitment in 'good' seasons.

Generation Length

The generation length of *Pomaderris ligustrina* subsp. *ligustrina* 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 60 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 occurs in Victoria in Gippsland, east of the Stockdale area. It also occurs in New South Wales and southern Queensland.

Pomaderris ligustrina subsp. ligustrina

Privet Pomaderris

Habitat

The taxon is largely restricted to sheltered damp forest, often near margins of rainforest (gully heads etc.), but also occurs in near-coastal vegetation near Mallacoota (where rainforest elements are not uncommon components of lowland eucalypt-dominated forests).

Threats

The taxon is potentially threatened by climatic warming and drying which increases the risk of recruitment failure in response to repeat fire events and extreme drought stress. Small and isolated stands may also be threatened by targeted browsing by Sambar Deer (*Rusa unicolor*), particularly during the early stages of post-fire recruitment (This is only speculative; there are no direct observations, but related *Pomaderris* taxa are targeted by Sambar).

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>	<p>(a) direct observation [except A3]</p> <p>(b) an index of abundance appropriate to the taxon</p> <p>(c) a decline in area of occupancy, extent of occurrence and/or quality of habitat</p> <p>(d) actual or potential levels of exploitation</p> <p>(e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites</p>
--	---------------------------------------	---

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 ligustrina subsp. *ligustrina* Privet 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 ²	< 5,000 km ²	< 20,000 km ²
B2. Area of occupancy (AOO)	< 10 km ²	< 500 km ²	< 2,000 km ²
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 B1 as Vulnerable

The Extent of Occurrence (EoO) across the taxon's range is estimated to be 6,100 km², based on accepted, post-1970 records in the Victorian Biodiversity Atlas (VBA).

The taxon is estimated to be severely fragmented naturally at the landscape scale with no dispersal mechanism other than the main likelihood of ant dispersal at the metre scale. It is estimated to have 1 location and has a continuing decline in (i), (ii), (iii), (iv) and (v) above, due to the identified threats.

Eligible under Criterion B2 as Endangered

The Area of Occupancy (AoO) across the taxon's range is estimated to be 120 km², based on 2 x 2 km grids derived from accepted, post-1970 records in the VBA.

As above, the taxon is severely fragmented, has 1 location, and has a continuing decline in (i), (ii), (iii), (iv) and (v) above.

Pomaderris ligustrina subsp. ligustrina

Privet 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:

Eligible under Criterion C1 as Endangered

It is estimated that there are 400 to 6,000 mature individuals. The current population estimate is based on an assumption of between 80 and 200 subpopulations of between 5 and 30 plants per population. Approximately 40 subpopulations are represented by herbarium specimens and/or VBA records.

There is estimated to be a continuing decline of 20% within two generations.

Eligible under Criterion C2 as Endangered

It is estimated that there are 400 to 6,000 mature individuals.

The number of mature individuals is estimated to continue to decline, and each subpopulation is estimated to have fewer than 250 mature individuals.

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: AaO < 20 km ² or number of locations ≤ 5

Evidence:

Eligible under criterion D as Vulnerable

It is estimated that there are 400 to 6,000 individuals.



Pomaderris ligustrina subsp. *ligustrina* Privet Pomaderris

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

VicFlora (2019). Flora of Victoria, Royal Botanic Gardens Victoria: *Pomaderris ligustrina* subsp. *ligustrina*. Retrieved from: <https://vicflora.rbg.vic.gov.au/flora/taxon/b57e042b-c198-4903-bbfb-a648521bc2c3>