

Correa lawrenceana var. *cordifolia* Pink Mountain-correa

Taxonomy

Correa lawrenceana var. *cordifolia* Paul G. Wilson

Geoff Carr, who is currently revising the genus *Correa*, has advised that the only Victorian specimen identified as *Correa lawrenceana* var. *cordifolia* does not agree with the description of that taxon. Although the 1984 Christensen specimen was determined in 1986 as *C. lawrenceana* var. *cordifolia* by Paul Wilson, who described var. *cordifolia* in 1961, it differs from the type by its yellow-green flowers and its non-cordate leaves which are rounded to cuneate at the base, less pointed and ovate to ovate-oblong. The type of var. *cordifolia* has pale pink flowers with red hairs and cordate, acute leaves. Carr regards the Christensen specimen as belonging to a segregate taxon currently encompassed within a broad circumscription of *Correa lawrenceana* var. *cordifolia*. Carr considers this entity worthy of species rank.

Current conservation status

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

Proposed conservation status

Vulnerable in Victoria

Criterion D2

If the taxon is accepted as native to Victoria, the result is VU, otherwise it cannot be assessed in Victoria.

Species Information

Description and Life History

The taxon, as broadly circumscribed by Paul Wilson, is a shrub to 2 m high. Leaves coriaceous, broadly ovate or subcordate, to 7 cm long, to 4 cm wide, acute, cuneate to rounded at base, thinly felty beneath. Inflorescence of 1-3 flowers, axillary, peduncle 1-5 mm long (terminal bracts minute and deciduous); pedicel c. 10 mm long. Calyx cup-shaped, c. 5 mm long, dentate to slightly undulate, ferruginous-tomentose; corolla cylindric, 2.5-3 cm long, pink with yellowish tip or sometimes entirely yellowish. The taxon flowers mostly in Spring (Vicflora 2021).

Generation Length

The generation length of *Correa lawrenceana* var. *cordifolia* is estimated to be 45 to 90 years. An estimate of generation length is based on a plausible pre-settlement fire interval of 45-90 years. The taxon is inferred to recruit episodically, from a long-persistent soil-stored seedbank, following intense wildfire events. This may be supplemented by sporadic recruitment in response to localised site disturbance events. In long unburnt sites the taxon is likely to persist undetected in the seedbank. Field observations of related taxa suggest longevity may reach or exceed 50 years. The taxon is inferred to be fire-sensitive although field observations suggest that long-established individuals may be capable of some resprouting or even root-suckering following at least moderately intense fire.

Distribution

There is no evidence to suggest the taxon, in the strict sense, has ever been reliably recorded in Victoria. In 1984 T.J. Christensen collected a specimen of *Correa lawrenceana* in the Drummer State Forest, 11 km north of the

Correa lawrenceana var. cordifolia

Pink Mountain-correa

Princes Highway between Cann River and Genoa in far East Gippsland. In 1986 Paul Wilson, who had revised the genus *Correa*, identified the Christensen specimen as *Correa lawrenceana* var. *cordifolia*, a taxon which he had described in 1961. Geoff Carr advised that variety *cordifolia* is endemic to NSW and that the 1984 Christensen specimen does not agree with the description of that variety. Carr regards the Christensen specimen as belonging to a segregate taxon currently encompassed within a broad circumscription of *Correa lawrenceana* var. *cordifolia*. Far from being confined to a single site in the Drummer Forest, this entity is widely distributed across far East Gippsland where it has been recorded by Carr from the Brodribb River near Goongerah, the south and east flanks of the Errinundra Plateau and the Howe Range. It is locally common across this range and almost certainly extends into NSW.

Habitat

VicFlora (2021) states that *Correa lawrenceana* var. *cordifolia* is rare in Victoria, where it is confined to rainforest margins and along creeks in the far east. There is no evidence to support this assertion since the only Victorian specimen which has been assigned to this taxon was found growing on a roadside above a creek course. In south-eastern NSW, however, the taxon, as circumscribed by Paul Wilson, is often found on rainforest margins and along creeks.

The segregate taxon represented by the 1984 Christensen specimen occurs in damp to wet forest habitats across a range of foothill to montane elevations and may extend to Riparian Forest or rainforest margins.

Threats

The taxon represented by the 1984 Christensen specimen is likely to be threatened in the longer term by recruitment failure in response to extreme drought stress and targeted browsing by Sambar, particularly during post-fire recruitment. It is unclear whether the taxon is directly or indirectly threatened by climatic drying and warming and imposed anthropogenic fire regimes since it is well adapted to intense fire which promotes mass germination from a long-persistent soil-stored seedbank.

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>			

Correa lawrenceana var. cordifolia

Pink Mountain-correa

Evidence:

Ineligible under Criterion A

There is insufficient evidence to determine whether there has been or will be a reduction in population sufficient to meet any threshold for Criterion A.

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:

Ineligible under Criterion B

The Extent of Occurrence (EoO) across the taxon's range is estimated to be 1,500 km², but other thresholds under this criterion have not been met.

The AoO cannot be estimated since the taxon is poorly known and it is unclear which records of *Correa lawrenceana* or of *C. lawrenceana* var. *latrobeana* are likely to be referable to the segregate entity identified by Geoff Carr and represented by the 1984 Christensen specimen collected from the Drummer State Forest.

Correa lawrenceana var. cordifolia

Pink Mountain-correa

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 as Data Deficient

There is no available estimate of current population size although it is likely to be in the thousands.

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 ² or number of locations ≤ 5

Evidence:

Eligible under Criterion D2 as Vulnerable

If the taxon is native to Victoria, then it is estimated to be very restricted. It has a single location, since the long-term threats identified are likely to operate consistently across the Victorian range of the taxon. This restriction means that it may become Critically Endangered or Extinct within a timeframe of one or two generations in response to the impact of the identified long-term threats.

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.



Correa lawrenceana var. *cordifolia*
Pink Mountain-correa

VicFlora (2021). Flora of Victoria, Royal Botanic Gardens Victoria: *Correa lawrenceana* var. *cordifolia*. Retrieved from: <https://vicflora.rbg.vic.gov.au/flora/taxon/8a25bf27-1ee5-4902-8e11-251e2ef203ab>