



Leptospermum jingera Stringybark Tea-tree

Taxonomy

Leptospermum jingera Lyne & Crisp

This is a highly restricted endemic most closely related to *L. namadgiensis* (Lyne and Crisp 1996).

Current conservation status

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

Proposed conservation status

Endangered in Australia

Criteria B1ab(iii)+2ab(iii)

Species Information

Description and Life History

The taxon is a shrub to 2 m high; bark on smaller stems smooth, sometimes shedding in stringy strips, on larger stems toward base of plant peeling in many papery layers. Young stems with a groove near base of petiole. Leaves elliptic to narrowly obovate, 6-10(-15) mm long, 2-3.5 mm wide, finally glabrous (rarely retaining some appressed silky hairs); apex acute, flat to incurved; margins flat to incurved. Flowers 6-10 mm diam.; hypanthium 2.5-3 mm long, silky; pedicel 2-3.5 mm long; sepals narrowly triangular, c. 1 mm long, glabrous to silky on outer surface, persisting (erect) on fruit; petals 3-4 mm long, white; ovary 3-5-locular, apex shortly silky all over. Fruit deciduous, hemispherical, 2-3 mm diam., silky to sparsely silky, splits developing below the rim of the hypanthium and extending almost to the pedicel in older fruit; seeds c. 1.5 mm long, often with loose cells along margins, with a reticulate surface pattern. The taxon flowers from November to January (VicFlora 2017).

Generation Length

The generation length of *Leptospermum jingera* is estimated to be 50 to 100 years. Whilst generation length is unknown for this taxon, by analogy with related species of *Leptospermum*, and taking into consideration the extended natural fire intervals generally associated with montane plateau environments, the generation length of this taxon is likely to be in the range of 50-100 years or more (Cameron 2005, Walsh 2006 pers. comm.). This is based on an expectation that the taxon is capable of successful resprouting following destruction of the crown by intense fire, but this has yet to be confirmed by field observation, particularly following the wildfire of January 2003 which consumed the entire population at Brumby Point (Walsh 2006 pers. comm.).

Distribution

The taxon is highly localised and endemic to Victoria. It known only from the Brumby Point area of the Nunniong Plateau and The Watchtower in the Snowy Range of north-eastern Victoria (VicFlora 2017). The population appears to be distributed along c. 2 km of ridge-top from a point at 37° 03' 30" S, 148° 03' 18" E to a point at 37° 03' 11" S, 148° 04' 55" E. This area is located in the snowfields natural region of Conn (1992). The taxon is located in a remote and rugged area of the Buchan Headwaters Wilderness area of Alpine National Park (Lyne and Crisp 1996).

Leptospermum jingera

Stringybark Tea-tree

There is a record of a small roadside population on the Errinundra Plateau in far East Gippsland which may be referable to *Leptospermum jingera*. Tall slender shrubs with diagnostic peeling bark were observed on the south side of Gunmark Road east of Cobb Hill in association with *Kunzea peduncularis* and *Leptospermum grandifolium* in January 2002. The site is on the boundary between the Errinundra National Park and state forest with a long history of intensive hardwood logging activity. These plants require further investigation to confirm their identity and also to determine whether they are strictly indigenous or possibly introduced to the site with road construction, logging or other vehicles. The possibility of introduction of seed on motorised vehicles from the Brumby Point area, whilst remote, cannot be entirely dismissed (Cameron 2005).

Habitat

The taxon grows in shrubland and low woodland along a ridge-top of Ordovician sediments. Associated species include *Banksia canei*, *Podolobium alpestre*, *Bossiaea foliosa*, *Monotoca rotundifolia*, *Eucalyptus glaucescens*, *E. kybeanensis*, *E. pauciflora* and *E. stellulata* (mallee form). The Brumby Point area is interesting for the distinctive alternating bands of low woodland and shrubland. *L. jingera*, whilst occurring in the low woodland, is more commonly associated with the shrubland bands (Lyne and Crisp 1996; VicFlora 2017)

Threats

Some part of the habitat at Brumby Point may have been burnt at low intensity, to a degree that plants were probably not killed and potentially can resprout (D. Tonkinson pers. comm. March 2012).

The greatest threat to this taxon is the potential impact of future bushfire, particularly repeat fire events, and the impact of extreme drought on recruitment success and the potential impact of browsing herbivores such as Sambar deer (*Rusa unicolor*) on either of the known subpopulations. Even though Sambar rarely access ridgetop habitats, their increasing prevalence throughout the alpine region and their recent impact on threatened species populations on the Bogong High Plains indicates that their future impact on highly localised species such as this cannot be discounted.

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

Leptospermum jingera

Stringybark Tea-tree

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:

Eligible under Criterion B1 as Endangered

The Extent of Occurrence (EoO) across the taxon's range is estimated to be 12 km², based on accepted, post-1970 records from the Victorian Biodiversity Atlas (VBA). The EoO has been made equal to the Area of Occupancy (AoO) to ensure consistency with the definition of AoO as an area within EoO.

It is estimated to have two locations, as all key identified threats apply across the range of the taxon and can rapidly affect all individuals of the taxon present. These identified threats apply equally to both known occurrences but may operate at different timing and intensity, as a result of the geographic separation.

It has a continuing decline in (iii) above, based on the potential impact of future bushfires (particularly repeat fire events), extreme drought stress and the potential impact of browsing herbivores such as Sambar.

Eligible under Criterion B2 as Endangered

The AoO across the taxon's range is estimated to be 12 km², based on 2 x 2 km grids derived from accepted, post-1970 records in the VBA. As above, it has 2 locations and has a continuing decline in (iii) above.

Leptospermum jingera

Stringybark Tea-tree

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 insufficient evidence to determine the number of 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: AoO < 20 km ² or number of locations ≤ 5

Evidence:

Eligible under criterion D2 as Vulnerable

The taxon is estimated to be very restricted.

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

Lyne, A.M., and Crisp, M.D. (1996). *Leptospermum jingera* (Myrtaceae - Leptospermoideae): A new species from north-eastern Victoria. *Australian Systematic Botany*, 9(3), 301-306.



Leptospermum jingera
Stringybark Tea-tree

VicFlora (2016) Flora of Victoria, Royal Botanic Gardens Victoria; *Leptospermum jingera*. Retrieved from:
<https://vicflora.rbg.vic.gov.au/flora/taxon/72b1ccf0-b8c0-416c-8a7e-96bd4b6a7243>