



Kippistia suaedifolia Fleshy Minuria

Taxonomy

Kippistia suaedifolia F. Muell.

Current conservation status

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

Proposed conservation status

Endangered in Victoria

Criteria A3bce; B1ab(iii,v)+2ab(iii,v)

Species Information

Description and Life History

The taxon is an erect, often rounded, bright green, aromatic shrub to c. 40 cm high; stems glabrous or with sparse, minute erect glandular hairs when young. Leaves c. terete, 3-10 mm long, 0.5-1 mm wide, somewhat fleshy, recurved and shortly apiculate at apex, glabrous. Capitula c. hemispherical, 4-8 mm diam. Involucral bracts subequal, c. subulate, 2-3 mm long, 0.5-1 mm wide, acute, at least the innermost with fimbriate apices; ligules of ray florets 0.5-1.5 mm long. Cypselas of ray florets pinkish at maturity, 0.8-1 mm long, with pappus of free bristles c. 1 mm long; disc cypselas sterile (in all Victorian specimens examined), c. 0.5 mm long, with cup-like pappus 0.6-0.9 mm long. The taxon is dispersed by wind. The taxon flowers mostly from September to November (VicFlora 2019).

Generation Length

The generation length of *Kippistia suaedifolia* is suspected to be 25 to 50 years. The taxon is inferred to be a moderately long-lived perennial, recruiting episodically or opportunistically in response to localised disturbance events or exceptional seasonal conditions. The habitat is not likely to carry fire. Episodic recruitment events are likely to be triggered by La Niña events.

Distribution

The taxon is confined to the far north-west of Victoria. For example, Raak Plain near Nowingi, Pink Lakes near Underbool, Chinkapook and Temy areas, with old records from Jeparit. The taxon also occurs in Western Australia, Northern Territory, South Australia, and New South Wales (VicFlora 2019).

Habitat

The taxon is confined to gypsum-rich, often saline soils. It is associated with *Tecticornia* spp, *Frankenbia* spp, and *Maireana oppositifolia* (Heathy Bluebush) (VicFlora 2018).

Threats

The taxon is threatened by weeds, climatic drying and increased salinity in saline habitats. The taxon is also threatened by localised anthropogenic disturbance in isolated occurrences outside reserves.

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>
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Evidence:

Eligible under Criterion A3 as Endangered

The population reduction over the next 75 to 100 years is projected to be 30 to 70 percent (midpoint 45%), based on (b), (c) and (e) above.

Future decline is based on the projected impact of the identified threats.

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 across the taxon's range is estimated to be 4,741 km², based on accepted, post-1970 records from the Victorian Biodiversity Atlas (VBA).

The taxon is estimated to be severely fragmented. All geographically isolated occurrences are separated at spacings which exceed the dispersal range of the taxon which has no specialised mechanism for long-distance dispersal. The dispersal range is estimated to be at the 100 m to one kilometre scale, based on localised wind dispersal.

It is inferred to have two locations. It has a continuing decline in (iii) and (v) above, based on the current impact of the identified threats.

Eligible under Criterion B2 as Endangered

The Area of Occupancy across the taxon's range is estimated to be 72 km², based on 2 x 2 km grids derived from accepted, post-1970 records in the VBA. As above, it is severely fragmented, has* two locations and has a continuing decline in (iii) and (v) above.

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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.

VicFlora (2019). Flora of Victoria, Royal Botanic Gardens Victoria: *Kippistia suaedifolia*. Retrieved from: <https://vicflora.rbg.vic.gov.au/flora/taxon/7730fa57-afa6-4bce-99e9-e14bcdf1c186>