



Lerista timida Dwarf Burrowing Skink

Taxonomy

Lerista timida Hutchinson, M. 2008

Formerly recorded as *Lerista muelleri* in Victoria

Current conservation status

Listed as threatened under the *Flora and Fauna Guarantee Act 1988* as *Lerista muelleri* (SAC 2002).

Categorised as Endangered in the 2013 Advisory list of threatened vertebrate fauna in Victoria (DSE 2013).

Proposed conservation status

Endangered in Victoria

Criteria B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

Species Information

Description and Life History

The Dwarf Burrowing Skink is greyish brown on the back and head, the individual scales often with darker spots which tend to form up to four lines along the body. There is usually a dark upper lateral stripe, beginning on the rostral, passing through the eye and above the ear, and extending well onto the tail. The lower lateral surfaces are grey, with dark flecks; the belly is light grey to white with faint darker reticulations; and there is a dull yellowish colouring on the underside of the tail. This species has 20 rows of scales at mid-body, a single fused frontoparietal and three supraocular scales. There are three digits on each limb. The eye is dark, covered by a spectacle in the immovable lower eyelid. The Dwarf Burrowing Skink grows to a snout vent length of 45 mm. (Robertson and Coventry (2019). Females have been recorded as producing a single clutch of two eggs in late spring.

Generation Length

The generation length of the Dwarf Burrowing Skink is estimated to be 3 to 6 years. Longevity may be up to 5 or 6 years. As an arid zone skink it may not be able to reproduce every year. so the turnover in population is relatively slow.

Distribution

Within Victoria, the Dwarf Burrowing Skink occurs only in the Sunraysia area of the semi-arid zone, restricted to the Red Cliffs-Mildura-Merbein area on the southern limit of its distribution in north-western Victoria. It is more common and widespread in inland areas of Western Australia, the Northern Territory, South Australia, Queensland and New South Wales.

Habitat

The taxon shelters beneath ground debris in chenopod shrublands of the Black Box Woodland ecosystem. It is semi-fossorial, occasionally active on the surface, but mostly moving through fine litter and the upper soil layer, often under fallen timber, where it forages on small invertebrates (Robertson and Coventry 2019).

Lerista timida

Dwarf Burrowing Skink

Threats

The taxon is rarely encountered, due to its very restricted area of occurrence in Sunraysia, and the extent of development and habitat disturbance in this area. Most records are from private land, and the taxon is subject to habitat changes associated with increasing agricultural utilisation.

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 			

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.

Lerista timida Dwarf Burrowing Skink

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 270 km², based on accepted, post-1970 records from the Victorian Biodiversity Atlas (VBA).

The taxon is estimated to be severely fragmented. There are multiple, small isolated subpopulations that are all at risk from the identified threats, such that there is increased extinction risk and little or no probability of recolonisation should subpopulations become extinct.

It is estimated to have four locations. It has a continuing decline in (i), (ii), (iii), (iv) and (v) above.

Eligible under Criterion B2 as Endangered

The Area of Occupancy (AoO) across the taxon's range is estimated to be 32 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 4 locations, and has a continuing decline in (i), (ii), (iii), (iv) and (v) above.

Lerista timida

Dwarf Burrowing Skink

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 inferred to be very restricted.

Criterion E (Quantitative Analysis) was not addressed as the taxon does not have a detailed Population Viability Analysis.

References

DSE (2013) *Advisory List of Threatened Vertebrate Fauna in Victoria 2013*. Department of Sustainability and Environment, Melbourne

Hutchinson, M.N. (2008). Nomenclature of the scincid lizards belonging to eastern Australian populations formerly assigned to *Lerista muelleri* (Fischer, 1881). *Herpetofauna* 38: 39-40.



Lerista timida Dwarf Burrowing Skink

Robertson, P. and Coventry, A. J. (2019). *Reptiles of Victoria: A Guide to Identification and Ecology*. CSIRO Publishing, Clayton, Victoria.

SAC (2002). Flora and Fauna Guarantee Scientific Advisory Committee: Final Recommendation on a Nomination for Listing. Nomination No. 585 *Lerista muelleri*