Threatened Species Assessment

Ogyris genoveva
Genoveva Blue

Taxonomy

Ogyris genoveva Hewitson, 1853

Current conservation status

Listed as threatened under the *Flora and Fauna Guarantee Act 1988* (SAC 2003).

Categorised as Vulnerable in the 2009 Advisory list of threatened invertebrate fauna in Victoria (DSE 2009).

Proposed conservation status

Endangered in Victoria

Criterion B2ab(iii,v)

Species Information

Description and Life History

In this taxon, the male adult is metallic purple in colour. The female is black with metallic azure toward the hinge, and a cream patch near the tip of each forewing. The undersides of the forewings are dark brown, with a series of white bars along the costa. The hindwings underneath have a complex fawn pattern. The females have additionally a white patch under each forewing. The butterflies have a wingspan of about 50 mm.

Larval food plant is Box Mistletoe, *Amyema miquelii* and Furry Drooping Mistletoe, *A. pendula*. Adults seldom come close to the ground. Females fly near mistletoe in eucalyptus trees and males are usually seen combatting rival males on hill tops. Eggs are laid on or under bark of the eucalypt, usually within a few metres of the ground or hollow limbs containing temporary sugar ant nests (*Camponotus nigriceps*). Up to 50 or more eggs may be laid at one site. Young larvae shelter under bark near the mistletoe but larger larvae shelter with ants near the tree base, often underground in ant chambers or under rocks. Larvae emerge at night with ants, scale the tree and feed on the mistletoe. Pupation occurs in the ant nest or under loose bark on the trunk of the tree, the pupa attached to a silken pad by anal hooks and a silk girdle. In s and c Vic there is one generation a year but in the n there are two.

Generation Length

The generation length of *Ogyris genoveva* is observed to be 4 to 12 months. This is based on observations and literature review (Field 2013).

Distribution

This species occurs from southeast Qld to southeast SA, primarily in low rainfall eucalypt woodland. It occurs in the box-ironbark woodlands of central Victoria mallee woodlands of north-western Victoria. It previously occurred ibn other parts of the north-west (Horsham and Pimpinio) and in Djerriwarrah Creek gorge near Melbourne, Tallarook, Melton and Coimadai (Douglas 1995).

Habitat

The taxon occurs in box-ironbark woodland and grassy woodlands and mallee woodland, mainly in low rainfall areas where the larval food plant grows as mistletoes on *Eucalyptus* and *Acacia* spp.

Threats

The taxon is threatened by habitat clearing as a result of agricultural development, and lack of protection of hill topping sites. Increased fire frequency and intensity are likely to damage the habitat.

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%

A1 Population reduction observed, estimated, inferred or suspected in the past and the causes of the reduction are clearly reversible AND understood AND ceased.

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.

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*]

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.

based on any of the following:

(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

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.

Past declines have been significant but there have been no major changes in the last ten years. There may be some small decline in the next ten years, but the amount cannot be quantified.

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 km²	< 5,000 km²	< 20,000 km²
B2. Area of occupancy (AOO)	< 10 km²	< 500 km²	< 2,000 km²
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 B2 as Endangered

The Area of Occupancy (AoO) across the taxon's range is estimated to be 88 km², based on 2 x 2 km grids derived from accepted, post-1970 records in the Victorian Biodiversity Atlas.

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

It has a continuing decline in (iii) and (v) above, as a result of further habitat loss and increased fire frequency.

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

It is inferred that there are 100 to 1,000 mature individuals, but other thresholds under this criterion have not been met.

Criterion D. Very small or restricted population			
	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 km2 or number of locations ≤5

Evidence:

Ineligible under Criterion D

It is inferred that there are 100 to 1,000 mature individuals, but this qualifier is too weak.

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

References

Braby. M, (2016) *The Complete guide to butterflies of Australia.* CSIRO.

DSE (2009). *Advisory list of threatened invertebrate fauna in Victoria - 2009*. Department of Sustainability and Environment, Melbourne.

Douglas F. (1995) *Recovery plan for threatened diurnal Lepidoptera in western Victoria Part 2 Family Lycaenidae.* Department of Conservation and Natural Resources, Melbourne.

Field, R.P. (2013) *Butterflies: Identification and life History* pp.256-257. Museum Victoria

SAC (2003). Flora and Fauna Guarantee Scientific Advisory Committee: Final Recommendation on a Nomination for Listing. Nomination No. 661 *Ogyris genoveva araxes*.