

# Threatened Species Assessment



## *Phoebetria palpebrata* Light-mantled Sooty Albatross

### Taxonomy

*Phoebetria palpebrata* (J.R. Forster, 1785)

### Current conservation status

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

### Proposed conservation status

Critically Endangered in Victoria

Criterion D

### Species Information

#### Description and Life History

The Light-mantled Sooty Albatross is a medium-small, slender albatross, slightly heavier and more barrel-chested than the Sooty Albatross (length 78-90 cm; wingspan 1.8-2.2 m; weight 2.5-3.7 kg). Its plumage is sooty-brown except for a white crescent around each eye; a grey or light-grey mantle, back and rump; and a pale brownish-grey breast and belly. It has brown irides, a black bill with a pale blue or violet sulcus, and mauve or greyish-flesh legs and feet (Marchant and Higgins 1990). Juveniles are similar to adults but have a grey (rather than white) crescent around each eye; dark (rather than whitish) shafts to the primaries and rectrices; a grey, brownish or pale yellow sulcus; and, in older immatures, mottled plumage (Marchant and Higgins 1990).

#### Generation Length

The generation length of the Light-mantled Sooty Albatross is estimated to be 44 years. This is from Garnett et al. (2011), based on age at first breeding of 7 years and an annual survival of adults of 97.3%

#### Distribution

The taxon is circumpolar in Antarctic to temperate waters of the southern oceans. It breeds on sub-antarctic islands, including Macquarie and Heard Islands within Australian territory, and ranges north to southern Australian waters, mostly in winter and mostly over cold waters beyond the continental shelf. It is rarely observed from land. It ranges throughout Victorian waters, although records are concentrated in the west. It tends to avoid Bass Strait.

#### Habitat

Other than when breeding when they come to land (islands), the taxon is almost purely pelagic.

#### Threats

Past declines were caused mostly by bycatch to long-line fisheries, and introduced nest predators on breeding islands. These threats do not apply in Victorian waters.

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## Light-mantled Sooty Albatross

### 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 style="text-align: center;"><i>based on any of the following:</i></p> <ul style="list-style-type: none"> <li>(a) direct observation [except A3]</li> <li>(b) an index of abundance appropriate to the taxon</li> <li>(c) a decline in area of occupancy, extent of occurrence and/or quality of habitat</li> <li>(d) actual or potential levels of exploitation</li> <li>(e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites</li> </ul>			

### Evidence:

#### Eligible under Criterion A2 as Vulnerable

The population reduction over the past 132 years is estimated to be 30%, based on (b) above.

The taxon declined in the past, as a result of nest predation and the impacts of longline fishing, but has not declined as much as the 'great' albatrosses or mollymawks.

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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 (EEO)	< 100 km <sup>2</sup>	< 5,000 km <sup>2</sup>	< 20,000 km <sup>2</sup>
B2. Area of occupancy (AOO)	< 10 km <sup>2</sup>	< 500 km <sup>2</sup>	< 2,000 km <sup>2</sup>
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 8,582 km<sup>2</sup> and the Area of Occupancy (AoO) is estimated to be 32 km<sup>2</sup>, but other thresholds under this criterion have not been met.

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 estimated that there are 10 to 30 mature individuals, but other thresholds under this criterion have not been met.

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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 km <sup>2</sup> or number of locations < 5

### Evidence:

#### Eligible under Criterion D as Critically Endangered

The taxon is estimated to have 10 to 30 mature individuals. This is based on VBA records. Few birds come within 3 nautical miles of the Victorian coast.

**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

Garnett, S., Szabo, J. and Dutson, G. (2011). *The Action Plan for Australian Birds 2010*. CSIRO Publishing, Melbourne.

Marchant, S. and P.J. Higgins, eds. (1990). *Handbook of Australian, New Zealand and Antarctic Birds. Volume One - Ratites to Ducks*. Melbourne, Victoria: Oxford University Press.

SAC (2002). Flora and Fauna Guarantee Scientific Advisory Committee: Final Recommendation on a Nomination for Listing. Nomination No. 551 *Phoebetria palpebrata*.