Threatened Species Assessment

Thalassarche chrysostoma
Grey-headed Albatross

Taxonomy

Thalassarche chrysostoma (J.R. Forster, 1785)

Current conservation status

Listed as Endangered under the *Environment Protection and Biodiversity Conservation Act 1999*.

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

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

Proposed conservation status

Endangered in Victoria

Criterion C2a(ii)

For species that also occur outside of Victoria, the *Guidelines for Application of IUCN Red List Criteria at Regional and National Levels: Version 4.0 (2012)* apply. This may lead to an adjustment of the threat category, to reflect the influence of adjacent populations.

The regional assessment (Victoria only) results in Critically Endangered. This assessment has been downgraded to Endangered EN^{o} to account for the influence of interstate and international populations that reduce the extinction risk in Victoria.

Species Information

Description and Life History

The Grey-headed Albatross is a medium-sized albatross. Adults weigh approximately 3-4 kilograms and have a wingspan of just over two metres. The head, neck and mantle of the Grey-headed Albatross are darkish blue-grey in colour. The upper-wings are black and the under-wings are white with a dark grey stripe on the forward edge and a lighter, narrower grey stripe on the trailing edge. Grey-headed Albatrosses have a black bill with a yellow stripe running down the culmen, ending in an orange-red tip. The eyes are black with a brown iris. The legs and feet are usually grey or pink (Pizzey and Knight 1999, Department of Environment 2009).

Generation Length

The generation length of the Grey-headed Albatross is estimated to be 23 to 30 years. This is based on Garnett et al. (2011). At a workshop to review the Bird Action Plan, held in August 2019, unpublished data suggested a figure of 22.7 years. However some authors have records of the taxon living beyond 35 years (Catry et al. 2006) and even to 40 years (DoE 2009).

Distribution

The Grey-headed Albatross has a circum-global distribution in the southern hemisphere. They breed in subantarctic island colonies ranging from less than 100 breeding pairs to several thousand breeding pairs. In Australian territory, 70-80 pairs breeding on the southern and western flanks of Petrel Peak, Macquarie Island since 1912. They also breed on islands in Pacific, Indian and Atlantic Oceans and at Cape Horn (Gales 1998). Breeding and non-breeding birds disperse widely across the Southern Ocean, at more southerly latitudes in summer than in winter, when they frequent the waters off southern Australia and New Zealand (Marchant and

Higgins 1990). Most Australian records come from Tasmania, and fewest from Western Australia and southern Queensland (Marchant and Higgins 1990).

Habitat

Grey-headed Albatrosses breed biennially (if successful) in dispersed colonies amidst grass tussocks. Foraging is primarily away from the continental shelf, the diet varying geographically and including squid, fish, crustaceans, penguin carrion and lampreys. The birds frequently forage behind fishing boats (Garnett and Crowley 2000).

Threats

The greatest global threat to the Grey-headed Albatross is accidental mortality due to fisheries related by-catch. This includes by-catch in long-line fisheries, trawl fisheries, drift-netting and trolling operations. Globally, the species experienced a decline of 48% over three generations (90 years) primarily due to this threat. Within Australian jurisdiction, implementation of the 'Threat Abatement Plan for the Incidental Catch (or bycatch) of Seabirds during Oceanic Longline Fishing Operations' has significantly reduced levels of albatross bycatch in longline fisheries. Marine pollution, especially of plastics, also threatens the species with records of dead birds being washed up in Australia with helium balloon plastic in their gut (ACAP 2019). There is also an emerging threat of marine parasites threatening fledgling albatross at breeding colonies (Vanstreels et al. 2018).

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:

Eligible under Criterion A2 as Vulnerable

The population reduction over the past 69 to 90 years is estimated to be 30 %, based on (b), (c) and (e) above.

There has been a severe global decline of the taxon as a result of accidental mortality due to fisheries related by-catch, marine pollution and damage to nest sites.

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:

Ineligible under Criterion B

The Extent of Occurrence (EoO) across the taxon's range, based on accepted, post-1970 records in the Victorian Biodiversity Atlas (VBA), is estimated to be 61,263 km² which exceeds the threshold for criterion B.

The Area of Occupancy (AoO) across the taxon's range, based on 2 x 2 km grids derived from accepted, post-1970 records in the VBA, is estimated to be 127 km² 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:

Eligible under Criterion C2 as Endangered

It is estimated that there are 50 to 100 mature individuals. This is based on reporting rates by pelagic birding groups.

The number of mature individuals is projected to continue to decline, due to a very slow recruitment rate, even after threats are reduced, and the percentage of mature individuals in one subpopulation is 90-100 %.

The taxon is assessed as Critically Endangered under this criterion, but it has been downgraded to Endangered to account for the influence of interstate and international populations that reduce the extinction risk in Victoria.

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:

Eligible under Criterion D as Endangered

It is estimated that there are 50 to 100 mature individuals.

The taxon is assessed as Endangered under this criterion, but it has been downgraded to Vulnerable to account for the influence of interstate and international populations that reduce the extinction risk in Victoria.

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

References

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