

NSW Threatened Species Scientific Committee

Conservation Assessment of *Thalassarche chrysostoma* (Grey-headed Albatross) Forster, 1785 (Diomedeidae)

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NSW Threatened Species Scientific Committee

***Thalassarche chrysostoma* (Grey-headed Albatross) Forster, 1785 (Diomedeidae)**

Distribution: Circum-global distribution in the southern hemisphere

Current EPBC Act Status: Endangered. Also listed as a marine and migratory species under EPBC Act

Current NSW BC Act Status: Not listed

Proposed listing on NSW BC Act: As the species is vagrant in NSW and does not warrant listing

Conservation Advice: *Thalassarche chrysostoma*

Summary of Conservation Assessment

The Grey-headed Albatross was identified, as part of the CAM process, as a species with a potential discrepancy in conservation status between the EPBC Act and the BC Act. An IUCN compliant national assessment was undertaken by the Threatened Species Scientific Committee in 2009 (DEWHA 2009a) and the Grey-headed Albatross was found to be eligible for listing as Endangered under the EPBC Act. The species is not listed in NSW. As a result of this misalignment, a NSW review was undertaken.

This review showed that in NSW the Grey-headed Albatross is known from only occasional records, with no biologically important areas (i.e. for breeding, foraging, resting or migration) identified in NSW. Hence, the Grey-headed Albatross is considered a vagrant in NSW and as such does not warrant listing under the NSW BC Act.

Description and Taxonomy

DEWHA (2009a) state that: “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).”

Distribution and Abundance

DEWHA (2009a) state that: The Grey-headed Albatross has a circum-global distribution in the southern hemisphere (Prince *et al.* 1998; Weimerskirch 1998). The species breeds in subantarctic island colonies ranging from less than 100 breeding pairs to several thousand breeding pairs. Globally, the annual breeding population of the Grey-headed Albatross is estimated to be approximately 92 000 pairs. This corresponds to roughly 250 000 mature individuals and 600 000 individuals in total (Gales 1998). The only place that the species breeds within Australian territory is on the southern and western slopes of Petrel Peak in the south-western corner of Macquarie Island. Macquarie Island is classified as a World Heritage Area, a Biosphere reserve and a National Estate property. The island is also classified as a Tasmanian Nature Reserve, and is managed by

NSW Threatened Species Scientific Committee

the Tasmanian Parks and Wildlife Service. The population on Macquarie Island consists of approximately 120 to 150 breeding pairs, representing approximately 0.15% of the global breeding population. The population's nesting area is approximately 0.12 km² (Terauds *et al.* 2005).

TSSC (2009) state that: "The Macquarie Island population is not genetically distinct from the global population (Burg and Croxall 2001) and are likely to move throughout the southern hemisphere during the nonbreeding season (Terauds *et al.* 2006)."

Records in NSW

In NSW, the Grey-headed Albatross is considered to be a rare vagrant (N. Carlile *in litt.* July 2018; Cooper *et al.* 2014; DSEWPC 2011), with no resident breeding populations, and since the closure in the 1970s of Malabar cliff-face ocean sewage outfall (which discharged offal from Homebush Abattoir), it is considered there is very little to encourage large albatrosses to congregate anywhere off the NSW coast (Doughty and Carmichael 2011; N. Carlile *in litt.* July 2018; Hindwood 1955).

The Grey-headed Albatross has been recorded in low numbers along the coast of NSW, with the majority of records from Sydney and southward. The oldest definite record in NSW is from 1931 at Rose Bay, Sydney (Cooper *et al.* 2014; BioNet NSW). Southern Oceans Seabird Study Association (SOSSA) describe the species as rare in the waters off Wollongong (with the species recorded in 1 of out every 20 survey trips) and very rare in waters off Sydney (only 4 records from 2000 to 2018). The species is recorded in the colder months in NSW, mainly from June to September (Cooper *et al.* 2014).

Most records of Grey-headed Albatross in NSW waters have been of juveniles (SOSSA various dates) and sightings of adults are considered extremely rare (instead preferring the colder waters south of the Subtropical Convergence Zone) (Smith 2009).

As this species is considered to be a vagrant to NSW waters, exact information on its abundance in NSW has not been included.

Ecology

TSSC (2009) state that: "Grey-headed Albatrosses have been known to live up to 40 years. They generally reach sexual maturity at approximately 7–8 years of age, although on Macquarie Island, Grey-headed Albatrosses do not usually start breeding until approximately 10 years of age (Terauds *et al.* 2005). Grey-headed Albatrosses typically breed on steep, coastal slopes of subantarctic islands (Marchant and Higgins 1990). On Macquarie Island, the breeding slopes are usually covered in the tussock grass *Poa foliosa* (Scott and Kirkpatrick 2008). Grey-headed Albatrosses have strong pair and site fidelity. They generally only come onto land to find a nest site, find a mate and breed. Grey-headed Albatrosses arrive at Macquarie Island in September or October. Eggs are laid and both parents share the 72 day incubation period in shifts averaging 5-15 days. During this incubation period the adults travel long distances to feed in oceanic waters. The parents brood the chick for three weeks. During this time the adults forage closer to the nesting site. The parents return to oceanic feeding once the chick is able to be left unattended but continue to provide for the chick until it fledges in April or May. After fledging, juveniles leave the island and do not return to the island for up to 11 years. The adults spend the rest of the year foraging at sea (Marchant and Higgins 1990). Grey-headed Albatrosses feed mostly on small fish and squid, but their diet also includes a small proportion of crustaceans (Cherel and Klages 1998)."

"Breeding success is variable from year to year and can be influenced by a range of factors, including quality of nesting habitat. Grey-headed Albatrosses usually breed once every second or

third year if successful and the following year if unsuccessful. The mean breeding success from 1994–2003 was 55% from eggs hatched to chick fledged (Terauds *et al.* 2005).”

Threats

DEWHA (2009a) state that: “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, driftnetting and trolling operations (DEWHA 2009b). Globally, the species experienced a decline of 48% over three generations (90 years) primarily due to this threat (IUCN 2008). 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 (DEWHA 2009b).”

“An analysis of Macquarie Island population data from 1975 to 2005 found that long-line fishing was not likely to have significantly impacted on the Macquarie Island population (Terauds *et al.* 2005). However, although it may not be significant, accidental mortality due to fisheries related by-catch is still a threat to the small Macquarie Island population, notably in international waters where actions to mitigate fisheries related by-catch are not enforced (DEWHA 2009b). There are insufficient data to determine the degree to which this threat impacted on the Macquarie Island population prior to 1975 (Terauds *et al.* 2005). The trawl and longline fishing operations that currently occur within the Exclusive Economic Zone surrounding Macquarie Island are subject to stringent mitigation measures that have, to date, successfully avoided observed interactions between these birds and the fisheries. Foraging studies have shown that Grey-headed Albatrosses at Macquarie Island spend significant time in waters outside the spatial extent of the Marine Protected Areas (MPAs) off the island, and thus remain at high risk from fisheries in other areas (Terauds *et al.* 2006).”

“Additional global threats to the species include parasites and disease, competition with fisheries for marine resources and pollution. Mortality of Grey-headed Albatrosses can occur following ingestion or entanglement in marine debris. Changes in the distribution and abundance of food resources due to climate change is also a potential threat to the species on a global scale. All of the above threats potentially affect the population breeding on Macquarie Island (DEWHA 2009b).”

Up until recently, the major threat to the Macquarie Island population of Grey-headed Albatrosses was considered to be the reduction of its nesting habitat due to grazing by European rabbits (*Oryctolagus cuniculus*) and predation on chicks and eggs by black rats (*Rattus rattus*) and house mice (*Mus musculus*). However, a program to eradicate rabbits and rodents on Macquarie Island was implemented from 2007-2014. The island is now declared ‘pest free’ with no confirmed sightings of ship rats or house mice since July 2011 and no confirmed sightings of rabbits since December 2011 (Tasmanian Parks and Wildlife Service 2014). As a result of the reduced grazing pressure, vegetation has begun to regenerate, and many seabird species have increased in numbers (Springer 2018).

There are no known major threatening processes impacting the Grey-headed Albatross in NSW and no critical habitat for this species has been identified in NSW.

Assessment against IUCN Red List criteria

The Grey-headed Albatross is considered a vagrant in NSW (N. Carlile *in litt.* July 2018; Cooper *et al.* 2014; DSEWPC 2011) and no assessment has been undertaken.

NSW Threatened Species Scientific Committee

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NSW Threatened Species Scientific Committee

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