

## RECOVERY OUTLINE

# Northern Giant-Petrel

1	Family	Procellariidae
2	Scientific name	<i>Macronectes halli</i> Mathews, 1912
3	Common name	Northern Giant-Petrel
4	Conservation status	
	Australian breeding population	Vulnerable: D2
	Population visiting Australian territory	Near Threatened

### 5 Reasons for listing

The species breeds at a single location within Australian territory (Vulnerable: D2). Globally, its population size is increasing, but has the potential to decrease to Vulnerable levels (Near Threatened as per Birdlife International, 2000). Site fidelity is high, so immigration rate is assumed to be low. The national status of the breeding population is therefore determined independently of the global status (as per Gärdenfors *et al.*, 1999).

Australian breeding colonies	Estimate	Reliability
Extent of occurrence	5,000,000 km <sup>2</sup>	medium
trend	stable	high
Area of occupancy	10 km <sup>2</sup>	medium
trend	stable	high
Population size	2,600	medium
trend	increasing	medium
No. of sub-populations	1	high
Largest sub-population	2,600	medium
Generation time	17 years	medium
Global population share	25 %	high
Level of genetic exchange	low	medium

### 6 Intraspecific taxa

None described.

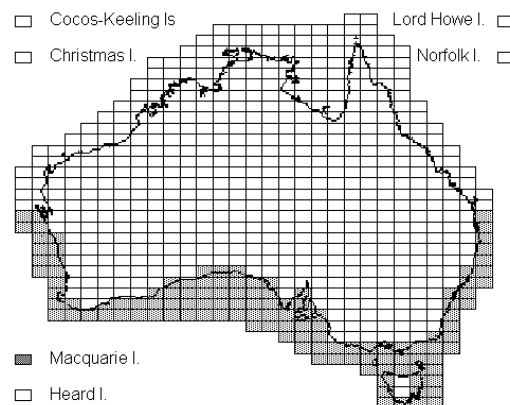
### 7 Past range and abundance

Within Australian territory, breeding on Macquarie I., where about 1,000 breeding pairs in 1974 (Johnstone, 1974). Breeding birds from this island mainly foraging in inshore waters off southern Australia. Extralimittally, also breeding on islands south of the Pacific and Indian Oceans. In winter, birds from all colonies found throughout oceans south of 28°S (Marchant and Higgins, 1990).

### 8 Present range and abundance

As above. Current global population estimated at 11,519 pairs, an increase of 34% since 1985, although mostly attributable to a doubling of the sub-population on Bird I., South Georgia. Overall, since 1985, increases appear to have occurred on three islands and decreases on one (Patterson *et al.*, in press), as well as

at sea (Woehler, 1996). The sub-population on Macquarie I. estimated at 1,281 breeding pairs in 1996, suggesting a slight increase over two decades (Patterson *et al.*, in press).



### 9 Ecology

Northern Giant-Petrels nest as dispersed pairs, often amidst tussocks in dense vegetation. They raise a single chick (Marchant and Higgins, 1990), but each year about 30% of individuals do not breed (Voisin, 1988). They feed on fish, cephalopods, crustaceans and carrion (Marchant and Higgins, 1990), increases at individual breeding islands being attributed to recovery of seal populations (Voisin, 1988). They also avidly attend fishing vessels (Marchant and Higgins, 1990).

### 10 Threats

Longline fishing vessels operate throughout the range of the Northern Giant-Petrels and are the principal threat to the species (EABG, 1999). When attempting to take bait from lines, giant-petrels are frequently caught and drowned on the baited hooks (Gales in EABG, 1999). Breeding success and/or nest-site selection have probably been adversely affected by rats, cats and an elevated number of Subantarctic Skuas *Catharacta lonnbergi* (EABG, 1999), although the threat from the latter two has been substantially reduced (G. Copson). Ingestion of plastics and hooks, and their regurgitation to chicks, entanglement in marine debris and accumulation of chemical contaminants may also pose risks to this species (EABG, 1999).

- 11 Information required**
- 11.1 Determine diet and foraging areas of breeding sub-populations.
- 11.2 Quantify extent of plastic debris ingestion.
- 11.3 Assess chemical pollutant levels in tissue and the effect of pollutants on fertility.
- 11.4 Develop genetic profiles for breeding sub-populations.
- 11.5 Determine acceptable levels of at-sea threats.
- 12 Recovery objectives**
- 12.1 Reduce at-sea threats to acceptable levels.
- 12.2 Reduce land-based threats to acceptable levels.
- 12.3 Obtain global agreement on conservation measures required.
- 12.4 Promote public awareness of the conservation needs of Giant-Petrels.
- 13 Actions completed or under way**
- 13.1 A Threat Abatement Plan (TAP) to minimise fishing bycatch has been prepared (EABG, 1998).
- 13.2 Effective mitigation techniques have been developed and are being improved.
- 13.3 Bycatch rates in the AFZ and the success of mitigation measures are monitored and the results quickly analysed.
- 13.4 Measures known to be effective in mitigating seabird bycatch within the AFZ are promoted by legislation, a code of practice and education programs.

- 13.5 Continued monitoring of breeding population size and success.
- 13.6 Ongoing feral animal control on Macquarie I.
- 13.7 Tourists on breeding islands are managed to prevent disturbance.
- 13.8 A Recovery Plan has been written and a Recovery Team is in place.

**14 Management actions required**

- 14.1 Limit further construction on breeding islands.

**15 Organisations responsible for conservation**

Australian Antarctic Division, Environment Australia  
Tasmanian Parks and Wildlife Service.

**16 Other organisations involved**

Antarctic Science Advisory Committee, Australian Department of Foreign Affairs and Trade, Australian Agriculture, Fisheries and Forestry - Australia, Australian Fisheries Management Authority, Convention for Conservation of Migratory Species of Wild Animals, Ecologically Related Species Working Group of the Commission for the Conservation of Southern Bluefin Tuna, Food and Agricultural Organization of the United Nations and its Committee on Fisheries, Incidental Mortality Arising from Longline Fishing – ad hoc Working Group of the Working Group on Fish Stock Assessment of Convention for the Conservation of Antarctic Marine Living Resources, Tasmanian Fisheries Service, professional fishing industry groups.

**17 Staff and financial resources required for recovery to be carried out**

<i>Staff resources required 2001-2005</i>	1.0	<i>Project Officer (international liaison)<sup>1</sup></i>
	2.0	<i>Project Officer (diet, foraging range)<sup>2</sup></i>
	3.0	<i>Technical Officers (fisheries observers)<sup>1</sup></i>
	1.0	<i>Technical Officer (monitoring)<sup>2</sup></i>
	1.0	<i>Technical Officer (ferals)<sup>3</sup></i>
	1.0	<i>Technical Officer (monitoring)<sup>3</sup></i>
	1.0	<i>Extension Officer<sup>1</sup></i>

*Financial resources required 2001-2005*

<i>Action</i>	<i>Conservation agencies</i>	<i>Other funding sources</i>	<i>Total</i>
<i>Develop improved fishing bycatch mitigation<sup>1</sup></i>	\$10,500	\$10,500	\$21,000
<i>Monitor bycatch rates in the AFZ and success of mitigation measures<sup>1</sup></i>	\$3,600	\$8,600	\$12,200
<i>Analysis of annual bycatch data<sup>1</sup></i>	\$8,300	\$0	\$8,300
<i>Educate fishers in the AFZ in mitigation techniques<sup>1</sup></i>	\$6,300	\$5,400	\$11,700
<i>Inform national fora about the TAP<sup>1</sup></i>	\$2,300	\$0	\$2,300
<i>Inform international fora about the TAP and pursue international threat abatement<sup>1</sup></i>	\$3,900	\$0	\$3,900
<i>Maintain currency of TAP and report annually<sup>1</sup></i>	\$2,100	\$0	\$2,100
<i>Demographic and foraging studies<sup>2</sup></i>	\$50,000	\$14,300	\$64,300

<i>Monitoring breeding sub-populations</i> <sup>3</sup>	\$15,800	\$0	\$15,800
<i>Feral animal control on Macquarie I.</i> <sup>3</sup>	\$277,900	\$0	\$277,900
<i>Research on plastic pollution</i> <sup>4</sup>	\$6,500	\$6,500	\$13,000
<i>Research on genetics</i> <sup>5</sup>	\$500	\$500	\$1,000
<i>Managing recovery process</i> <sup>5</sup>	\$4,600	\$1,800	\$6,400
<b>Total</b>	<b>\$392,300</b>	<b>\$47,600</b>	<b>\$439,900</b>

1 Costs for TAP actions divided amongst all 20 albatrosses, 2 giant-petrels, White-chinned Petrel and Grey Petrel; costs to fishing industry assumed to be offset by improved catch of fish

2 Costs for diet and foraging range studies divided among Rockhopper Penguin, four breeding albatrosses and two giant-petrels

3 Costs of Macquarie I. monitoring and feral animal control shared among 19 threatened taxa

4 Costs shared among 2 penguins, 2 giant-petrels, Wandering, Black-browed, Grey-headed, Shy and Light-mantled Albatrosses

5 Costs shared among 20 albatrosses and 2 giant-petrels

## 18 Bibliography:

Birdlife International. 2000. *Threatened Birds of the World*. Birdlife International, Cambridge.

EABG 1998. *Threat Abatement Plan for the incidental catch (or by-catch) of seabirds during oceanic longline fishing operations*. Environment Australia Biodiversity Group, Canberra.

EABG 1999. *Draft Recovery Plan for Albatrosses and Giant Petrels*. Environment Australia Biodiversity Group, Canberra.

Gärdenfors, U., Rodríguez, J.P., Hilton-Taylor, C., Hyslop, C., Mace, G., Molur, S. and Poss, S. 1999. Draft guidelines for the Application of IUCN Red List Criteria at National and Regional Levels. *Species* 31-32:58-70.

Johnstone, G. W. 1974. Field characters and behaviour at sea of Giant Petrels in relation to their oceanic distribution. *Emu* 74:209-218.

Marchant, S. and Higgins, P. J. (eds) 1990. *The Handbook of Australian, New Zealand and Antarctic Birds*. Oxford University Press, Melbourne.

Patterson, D. L., Woehler, E. J., Croxall, J. P., Cooper, J., Poncet, S. and Fraser, W. R. in press. Breeding distribution and population status of the Northern Giant Petrel (*Macronectes halli*) and the Southern Giant Petrel (*M. giganteus*). *Mar. Ornithol.*

Robertson and Bell, B. D. 1984. Seabird status and conservation in the New Zealand region. Pp. 573-586 in *Status and Conservation of the World's Seabirds*. ICBP Tech. Publ. No. 2. J. P. Croxall, P. G. H. Evans and R. W. Schreiber (eds). ICBP, Cambridge, U.K.

Voisin, J.-F. 1988. Breeding biology of the Northern Giant Petrel *Macronectes halli* and the Southern Giant Petrel *M. giganteus* at Ile de la Possession, Iles Crozet, 1966-1980. *Cormorant* 16:65-97.

Woehler, E. J. 1996. Concurrent decreases in five species of Southern Ocean seabirds in Prydz Bay. *Polar Biol.* 16:379-382.

### Comments received from

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