

PROPOSAL FOR INCLUSION OF SPECIES ON THE APPENDICES OF THE CONVENTION ON THE CONSERVATION OF MIGRATORY SPECIES OF WILD ANIMALS

A. PROPOSAL: Listing of the Southern Giant Petrel *Macronectes giganteus* (entire population) in **Appendix II** of the Convention on the Conservation of Migratory Species of Wild Animals.

B. PROPONENT: **Republic of South Africa.**

C. SUPPORTING STATEMENT

1. Taxon

1.1	Class	Aves
1.2	Order	Procellariiformes
1.3	Family	Procellariidae
1.4	Genus & Species	<i>Macronectes giganteus</i> (Gmelin, 1789)
1.5	Common names	English: Southern Giant Petrel, Antarctic Giant Petrel, Southern Giant Fulmar, Nelly, Stinker, Bone-shaker French: Fulmar géant German: Reisensturmvogel Spanish: Abanto-marino Antártico

2. Biological data

2.1 Distribution

Circumpolar pelagic range in the Southern Ocean, breeding range between 40-67°S on southern cool-temperate, sub-Antarctic and Antarctic islands, Antarctica and South America (Argentina and Chile) (Table 1). Although some local populations have been displaced by human disturbance, only one island breeding population is certainly extinct, that formerly occurring on Tristan da Cunha (UK). Breeding at Bouvet Island (Norway) has not been confirmed since 1981, thought due to displacement by an increasing Antarctic Fur Seal *Arctocephalus gazella* population.

2.2 Population

In the mid-1980s there were an estimated 38,000 breeding pairs occurring globally. More recently (1990s, where regular censuses at breeding sites have been conducted), a global breeding population of 31,358 pairs has been estimated (Table 1). This corresponds to a decrease of 1.4% per annum since the mid-1980s. Marked decreases have occurred at Heard and Macquarie (Australia), King George (South Shetland), Signy (South Orkney) and Penguin (Antarctic Peninsula) Islands, but elsewhere populations have exhibited long-term stability, or have increased.

Table 1. Breeding distribution and numbers of Southern Giant Petrels *Macronectes giganteus*

Locality	Administrative authority	Nature Reserve	Year(s)	Population (census type)
Prince Edward Island	South Africa	Yes	1990	410 (nests)
Marion Island	South Africa	Yes	1997	2,139 (nests)
Ile de la Possession	France	No	1994	105 (nests)
Iles Crozet (other islands)	France	Yes	1981	958 (nests)
Iles Kerguelen	France	Yes (part)	1981	4 (nests)
Heard Island	Australia	Yes	1987	3,000 (nests)
McDonald Island	Australia	Yes	1979	1,400 (nests)
Macquarie Island	Australia	Yes	1996	1,988 (nests)
Falklands/Malvinas	United Kingdom	No	1994	3,122 (nests)
South Georgia	United Kingdom	No	1978	5,500 (nests)
Bird Island	United Kingdom	No	1995	521 (nests)
Gough Island	United Kingdom	Yes	1979	49 (nests)
South Sandwich Islands	United Kingdom		1979-96	1,551 (nests)
South America				
Isla Noir	Chile	No?	?	200 (nests)
Islas Diego Ramirez	Chile	No	?	60 (nests)
Isla Gran Robredo	Argentina	No?	1992	695 (nests)
Isla Arca	Argentina	No?	1993	155 (nests)
Isla Observatorio	Argentina	No?	1995	181 (nests)
Isla De Los Estados	Argentina	No?	1971	30 (nests)
Antarctic Treaty area				
South Orkney Islands			1958-95	c. 3500 (nests)
Antarctic Peninsula				
Avian Island			1979	1979 (nests)
Porquoi Pas Island			1985	76 (nests)
Rabot Island			1989	7 (nests)
Armstrong Reef			1983	146 (nests)
Adelaide Island South			1948	100 (adults)
Sterneck Island			1986	45 (nests)
Moss Island			1989	90 (nests)
Joubin Island			1997	12 (nests)
Cape Monaco			1986	3 (nests)
Anvers Island			1997	220 (nests)
Anvers Island, w coast			1986	26 (nests)
Aitcho Island			1966	22 (nests)
Livingston Island				
Byers Peninsula			1965	216 (nests)
Barnard Point			1986	30 (nests)
Hannah Point East			1993	20 (nests)
Hannah Point West			1994	100 (nests)
Greenwich Island			1966	41 (chicks)
Robert Island				
Coppermine Cove			1966	20 (nests)
Coppermine Peninsula			1986	80 (nests)
Edwards Point			1966	45 (nests)

Clothier Harbor	1986	112 (nests)
Nelson Island		
Harmony Point	1995	746 (nests)
Rip Point	1966	53 (nests)
Rip Point, New	1980	11(chicks)
Duthoit Point	1995	102 (nests)
King George Island	1966-96	c. 3,000 (nests)
Two Summit Island	1980	6 (nests)
Geologist Island	1980	4 (nests)
Diomedea Island	1980	3 (nests)
Penguin Island	1980	512 (nests)
Ardley Island	1995	7 (nests)
Elephant Island	1971	845 (nests)
Seal Island	1971	25 (nests)
Giganteus Island	1993	2 (nests)
Hawker Island	1989	18 (nests)
Frazier Islands	1990	174 (nests)
Pointe Géologie (Ile des Petrels)	1985	14 (nests)

2.3 Habitat

Marine, ranging from coastal to pelagic waters, occurring south into pack-ice zone and north to sub-tropical waters. Extensive pelagic foraging includes following ships and scavenging behind fishing vessels. In higher latitudes nests on exposed ice- and snow-free coastal areas, bluffs, ridges and slopes, raised beaches and open flats, often near steep drops which aid take-offs. In northern parts of range nests on open vegetated flats, mounds, ridges and hill sides, avoiding dense vegetation and rocky areas.

2.4 Migrations

Poorly understood. Some adults resident at breeding colonies during winter, but most non-breeding adults and all juveniles disperse widely from colonies. Fledglings depart natal colonies March-early May, and move north and east within a broad latitudinal range, tracking prevailing westerly winds. Most (c. 80%) recoveries of banded birds occur in June-August from Australian and New Zealand waters, with relatively few from South American and southern African waters. Mean distance between banding and recovery sites of juveniles is c. 10 000 km. Movements of pre-breeding birds after first year little known, because recovery rates are very low, but average age of first breeding (6-13 years) and absence from natal colonies during this period suggests a largely pelagic existence. During breeding, most adults appear to have limited dispersal to adjacent waters.

3. Threat data

3.1 Direct threats

The main threat is incidental mortality of migratory juvenile and pre-breeding birds, and breeding adult birds, from commercial longline fishing activities, from alighting on and swallowing baited hooks (see below), and being shot to prevent bait-stealing. Other threats include entanglement in marine debris and fishing gear from other fisheries; human disturbance at breeding colonies on land (e.g. Signy Island, South Orkneys and Pointe Géologie, Antarctica) including taking of eggs and chicks for subsistence;

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predation from alien vertebrates e.g. feral cats *Felis catus* and rats *Rattus* spp.

3.2 Habitat destruction

Habitat degradation (e.g. from introduced Reindeer *Rangifer tarandus*, domestic sheep *Ovis aries* and European Rabbits *Oryctolagus cuniculus*, as well as from Antarctic Fur Seals) at some sub-Antarctic islands may have contributed to population decreases.

3.3 Indirect threats

At sea, ingestion of plastic pollutants, hooks and other fishing gear, and their regurgitation to chicks; accumulation of chemical contaminants; fluctuations in numbers of important prey species - seals and penguins; oceanographic change.

3.4 Threats connected especially with migrations

Taken together, both the Southern Giant Petrel and the Northern Giant Petrel *M. halli* are caught by longline tuna *Thunnus* spp. vessels in waters off southern Africa at a minimum rate of 0.024 birds per 1000 hooks set (but this estimate based on <2% of total effort), and off Australasia at 0.008 birds per 1000 hooks. Off southern Africa, interviewed captains of tuna longline vessels have reported 'frequent' captures of giant petrels on longlines. Rates of capture of Southern Giant Petrels by tuna longline vessels in New Zealand waters appear to be considerably less than off southern Africa, with rates of capture from 1989-1994 <0.01 birds per 1000 hooks set.

In longline fisheries for Patagonian Toothfish *Dissostichus eleginoides* at the Prince Edward Islands, in 1996-97 0.011 giant petrels were caught per 1000 hooks set, and in 1997-98 0.004 birds per 1000 hooks. The rate in 1996-97 corresponded to an estimated annual 'harvest' of ca. 2% (126 birds) of the total breeding population of Southern Giant Petrels at the Prince Edward Islands. This contrasts to a (single) survey at Isles Kerguelen (France) in 1994 where no giant petrels were captured.

Based on recoveries of banded birds, roughly 10% of reported juvenile mortality of giant petrels is attributable to interactions with fisheries. The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) has estimated that, in the unregulated longline fishery in the Convention Area in 1998, 2000–4000 giant petrels were caught. This rate of bycatch equates to 10-20% of the breeding populations of giant petrels in CCAMLR Subareas 58.6, 58.7 and Divisions 58.5.1 and 58.5.2, and is considered to be unsustainable by CCAMLR. Expansion of longline fisheries into new areas of the Southern Ocean and the targeting of new species is cause for concern that rates of incidental capture will continue to be unacceptably high.

3.5 National and international utilization

In the past chicks and eggs were collected for food, leading to extirpation at at least one locality (Tristan da Cunha), but subsistence utilization is currently a minor threat. Giant petrels together with other conspicuous sub-Antarctic and Antarctic wildlife, collectively support a burgeoning tourism industry.

4. Protection status and needs

4.1 National protection status

Australian, some French and South African breeding islands and Gough Island (UK) are formally protected as nature reserves (Table 1). Australian and South African breeding islands and Gough Island have current management plans that control human activities. Australia has accorded the species a Vulnerable status in its Action Plan for Australian Birds. Accorded a Near-Threatened status in the current update of the South African Red Data Book.

4.2 International protection status

Australian breeding islands and Gough Island (UK) are inscribed as natural properties on the World Heritage List of the Convention Concerning the Protection of the World Cultural and Natural Heritage. Protected within the Antarctic Treaty area. CCAMLR regulations aim to reduce deaths from the Patagonian Toothfish longline fishery. Not listed by CITES, or in *Birds to Watch 2* (1994), but candidate species for inclusion with a Vulnerable status in revision of IUCN Red List currently in preparation by BirdLife International.

4.3 Additional protection needs

Inclusion in Appendix II of the Bonn Convention and within a range-state Agreement for Southern Ocean seabirds at risk from longline fisheries. Inclusion within National Plans to be produced by longline fishing range states as part of the Food and Agriculture Organization of the United Nations' International Plan for Reducing Incidental Catch of Seabirds in Longline Fisheries. Unregulated fishing for Patagonian Toothfish needs to be halted and CCAMLR regulations strictly enforced. All unprotected breeding localities require nature reserve status and management plans which strictly control human disturbance from logistical, scientific and tourist activities. The paucity of information on migration, especially of pre-breeding and breeding birds, requires urgent attention.

5. Range States^a

Angola (M, *Macronectes* sp.), Argentina (B), Australia (B), Brazil (M), Chile (B), France (B), Madagascar (M), Mozambique (M), Namibia (M), New Zealand (M), Norway (M, B?, Bouvet Island), Peru (M), South Africa (B), United Kingdom (B), Uruguay (M); vagrant birds recorded from Fiji, Gulf of Papua (Papua New Guinea), Mauritius, Tahiti, Easter Island (Chile), Ushant (France), Midway Atoll (USA, identified as *Macronectes* spp.).

^a B = breeding range, B? = breeding previously reported, M = occurs solely as a migrant.

6. Additional remarks

Southern and Northern Giant Petrels were regarded until 1966 as a single species, the Giant Petrel *Macronectes giganteus*. This, inadequate censuses at some breeding localities, and difficulties in separating the two forms at sea, has complicated the historical record on population trends and recording of fisheries mortality, with many observers combining the two forms into a generic *Macronectes* category. Frequently it has not been possible to assign causal factors to population changes at many sites owing partly to the infrequency of censuses of breeding birds at these sites, and to the high proportion of adults that may be absent from breeding colonies each year. However, where long-term decreases have been documented, disturbance, introduced predators, and fisheries activities have been implicated. Both Southern and Northern Giant Petrels

are particularly sensitive to human disturbance when breeding, leading at times to complete colony failures.

7. References

- Bourne, W.R.P. & J. Warham. 1966. Geographical variation in the giant petrels *Macronectes*. *Ardea* 54: 45-67.
- Brooke, R.K. 1984. South African Red Data Book - Birds. *South African National Scientific Programmes Report* 97: 1-213.
- Brothers, N.P., Cooper, J. & S. Løkkeborg. 1998. The incidental catch of seabirds by longline fisheries: world-wide review and technical guidelines for mitigation. *FAO Fisheries Circular* 937: 1099 (preliminary version).
- CCAMLR. 1998. Report on the Working Group on Fish Stock Assessment. Hobart, Australia: 12-22 October 1998. SC-CAMLR-XVII/4.
- Collar, N.J., Crosby, M.J. & A.J. Stattersfield. 1994. *Birds to Watch 2. The World list of threatened birds*. Birdlife International Conservation Series 4. Cambridge: Birdlife International.
- Cherel, Y., Weimerskirch, H. & G. Duhamel. 1996. Interactions between longline vessels and seabirds in Kerguelen waters and a method to reduce seabird mortality. *Biological Conservation* 75: 63-70.
- Del Hoyo, J., Elliott, A. & J. Sargatal (Eds.). 1992. *Handbook of the birds of the World. Vol. 1. Ostrich to ducks*. Barcelona: Lynx Edicions.
- Dingwall, P.R. (Ed.). 1995. *Progress in conservation of the Subantarctic islands*. Gland and Cambridge: IUCN.
- FAO 1998. Consultation on the Management of Fishing Capacity, Shark Fisheries and Incidental Catch of Seabirds in Longline Fisheries. Rome, 26-30 October 1998. International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries. FI:CSS/98/4. Rome: Food and Agriculture Organization of the United Nations.
- Harrison, P. 1983. *Seabirds an identification guide*. Beckenham: Croom Helm.
- Hayes, E.A. 1997. *A review of the Southern Bluefin Tuna fishery: implications for ecologically sustainable management*. Sydney: TRAFFIC.
- Hunter, S. 1983. The food and feeding ecology of the giant petrels *Macronectes halli* and *M. giganteus* at South Georgia. *Journal of Zoology, London* 200: 521-538.
- Hunter, S. 1984a. Breeding biology and population dynamics of giant petrels *Macronectes* at South Georgia (Aves: Procellariiformes). *Journal of Zoology, London* 203: 441-460.
- Hunter, S. 1984b. Movements of giant petrels *Macronectes* spp. ringed at South Georgia. *Ringing and Migration* 5: 105-112.
- Hunter, S. 1985. The role of giant petrels in the Southern Ocean ecosystem. In: Siegfried, W.R., Condy, P.R. & Laws, R.M. (Eds). *Antarctic nutrient cycles and food webs*. Berlin: Springer-Verlag. pp. 534-542.
- Hunter, S. & M.deL. Brooke. 1992. Diet of giant petrels *Macronectes* spp. at Marion Island, southern Indian Ocean. *Colonial Waterbirds* 15: 56-65.
- Huysen, O.A.W., Brooke, M.deL., Burger, A.E., Cooper, J., Crawford, R.J.M., Hunter, S., Nel, D.C. & A.J. Williams. ms. Breeding biology and conservation of giant petrels *Macronectes* at sub-Antarctic Marion Island.
- Jouventin, P., Stahl, J.-C., Weimerskirch, H. & J.-L. Mouglin. 1984. The seabirds of the French subantarctic islands and Adélie Land, their status and conservation. In: Croxall, J.P., Evans, P.G.H. & Schreiber, R.W. (Eds). *Status and conservation of the World's seabirds. International Council for Bird Preservation Technical Publication* 2: 609-624.
- Jouventin, P. & H. Weimerskirch. 1990. Long-term changes in seabird and seal populations in the Southern Ocean. In: Kerry, K.R. & Hempel, G. (Eds). *Antarctic ecosystems. Ecological change and conservation*. Berlin: Springer-Verlag. pp. 208-213.

- Jouventin, P. & H. Weimerskirch. 1991. Changes in the population size and demography of southern seabirds: management implications. In: Perrins, C.M., Lebreton, J.D. & Hiron, G.J.M. (Eds). *Bird population studies: their relevance to conservation and management*. Oxford: Oxford University Press. pp. 297-314.
- Maclean, G.L. 1985. Roberts' birds of southern Africa. Cape Town: John Voelcker Bird Book Fund.
- Marchant, S. & P.J. Higgins. 1990. *Handbook of Australian, New Zealand and Antarctic birds. Vol. 1, Part A. Ratites to Petrels*. Melbourne: Oxford University Press.
- Murray, T.E., Bartle, J.A., Kalish, S.R. & P.R. Taylor. 1993. Incidental capture of seabirds by Japanese Southern Bluefin Tuna longline vessels in New Zealand waters, 1988-1992. *Bird Conservation International* 3: 181-210.
- Parmelee, D.F. 1992. Antarctic birds: ecological and behavioural approaches. Minneapolis: University of Minnesota Press.
- Parmelee, D.F., Fraser, W.R. & D.R. Neilson. 1977. Birds of the Palmer Station area. *Antarctic Journal of the United States* 12: 14-21.
- Parmelee, D.F., Parmelee, J.M. & M.R. Fuller. 1985. Ornithological investigations at Palmer Station including the first long-distance tracking of seabirds by means of satellites. *Antarctic Journal of the United States* 20: 162-163.
- Parmelee, D.F. & J.M. Parmelee. 1987. Movements of Southern Giant Petrels ringed near U.S. Palmer Station, Antarctica. *Ringing and Migration* 8: 115-118.
- Patterson, D.L. & S. Hunter. in press. Giant Petrel *Macronectes* spp. band recovery analysis from the International Giant Petrel Banding Project, 1988/89. *Marine Ornithology*.
- Patterson, D.L., Woehler, E.J., Croxall, J.P., Cooper, J., Poncet, S. & W.R. Fraser. in press. Breeding distribution and population status of the Northern Giant Petrel *Macronectes halli* and the Southern Giant Petrel *M. giganteus*. *Marine Ornithology*.

- Prince Edward Islands Management Plan Working Group. 1996. *Prince Edward Islands Management Plan*. Pretoria: Directorate: Antarctica and Islands, Department of Environmental Affairs and Tourism.
- Rounsevell, D.E. & N.P. Brothers. 1984. The status and conservation of seabirds at Macquarie Island. In: Croxall, J.P., Evans, P.G.H. & Schreiber, R.W. (Eds). Status and conservation of the World's seabirds. *International Council for Bird Preservation Technical Publication 2*: 587-592.
- Ryan, P.G. 1987. The incidence and characteristics of plastic particles ingested by seabirds. *Marine Environmental Research 23*: 175-206.
- Ryan, P.G. & C. Boix-Hinzen. 1998. Tuna longline fisheries off southern Africa: the need to limit seabird bycatch. *South African Journal of Science 94*: 179-182.
- Ryan, P.G. & C. Boix-Hinzen. in press. Consistent male-biased seabird mortality in the Patagonian Toothfish longline fishery. *Auk*.
- Ryan, P.G., Boix-Hinzen, C., Enticott, J.W., Nel, D.C., Wanless, R. & M.G. Purves. 1997. Seabird mortality in the longline fishery for Patagonian Toothfish at the Prince Edward Islands: 1996-1997. *CCAMLR-WG-FSA 97/51*.
- Ryan, P.G. & M.G. Purves. 1998. Seabird bycatch in the Patagonian Toothfish longline fishery at the Prince Edward Islands: 1997-1998. *CCAMLR-WG-FSA 98/36*.
- Sladen, W.J.L. & Tickell, W.L.N. 1958. Antarctic bird-banding by the Falkland Islands Dependencies Survey, 1945-1957. *Bird-banding 29*: 1-26.
- Tickell, W.L.N. & C.D. Scotland. 1961. Recoveries of ringed Giant Petrels *Macronectes giganteus*. *Ibis 103a*: 260-266.
- Trivelpiece, S.G. & W.Z. Trivelpiece. 1998. Post-fledging dispersal of Southern Giant Petrels *Macronectes giganteus* banded at Admiralty Bay, King George Island. *Marine Ornithology 26*.
- Voisin, J.-F. 1990. Movements of giant petrels *Macronectes* spp. banded as chicks at Iles Crozet and Kerguelen. *Marine Ornithology 18*: 27-36.
- Woehler, E.J. 1991. Status and conservation of the seabirds of Heard Island and the McDonald Islands. In: Croxall, J.P. (Ed). Seabird status and conservation: a supplement. *International Council for Bird Preservation Technical Publication 11*: 263-277.
- Woehler, E.J. & G.W. Johnstone. 1991. Status and conservation of the seabirds of the Australian Antarctic Territory. In: Croxall, J.P. (Ed). Seabird status and conservation: a supplement. *International Council for Bird Preservation Technical Publication 11*: 279-308.