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

A. PROPOSAL: Inclusion of *Diomedea cauta* in Appendix II.

B. PROPONENT: **Government of Australia**

C. SUPPORTING STATEMENT

1. Taxonomy

1. 1 Class	Aves
1.2 Order	Procellariiformes
1.3 Family	Diomedeidae
1.4 Genus/Species	*Diomedea cauta* Gould, 1841
Subspecies	*cauta* Gould, 1841
	salvini (Rothschild, 1893)
	eremita (Murphy, 1930)
1. 5 Common Name(s)	
	Shy Albatross, Shy Mollymawk (English)
	Albatros à cape blanche (French)
	Albatros Frentiblanco (Spanish)

2. Biological Data

2.1. Distribution (current and historical)

Known to breed at eleven sites:
D. c. cauta - Albatross I, Pedra Branca and The Mewstone (Tasmania); Disappointment I., Adams I., Antipodes I., Auckland Is..
D. c. salvini - Penguin I. (Iles Crozet); The Snares and Bounty Is
D. c. eremita - Pyramid Rock (Chatham Is).

D. cauta is circumpolar in subantarctic and subtropical oceans but details of the pelagic distribution of the subspecies are not well known due to the similarity in appearance of immature birds of all the subspecies in at sea. Some populations traverse the Indian Ocean towards South Africa or South Pacific towards South America, while others remain close to the colonies all year. Most published records are summarised in Marchant and Higgins (1990). Adults of subspecies *cauta* from Australia colonies attend breeding colonies all year but the juveniles from at least two of the colonies differ in their movement patterns (N. Brothers pers. comm. in Gales 1993). During their first two years, juveniles from Albatross I., stay mainly in the waters of south and southwestern Australia. Juveniles from the Mewstone, however mainly traverse the Indian Ocean with records of marked birds from Western Australia and South Africa, as well as from longliners operating in the Indian Ocean.

Movements of birds from the Auckland Is. are not well known but there appears to be some movement to south eastern Australian waters and to the South African region (Marchant and Higgins 1990). In the New Zealand region, *D. c. cauta* is the most abundant albatross on shelf areas except on the Chatham Rise and Bounty Platform where it is displaced by *D. c. salvini* and

the Campbell Island shelf where it is displaced by *D. melanophris* (J. A. Bartle pers. comm. in Gales 1993). Adults are present in New Zealand and Australian waters throughout the year whilst immature birds are rare in New Zealand waters, being more common off south-east Australia and South Africa (Marchant and Higgins 1990). Despite this age segregation at sea, there is no evidence of any at-sea sex segregation in the *cauta* subspecies.

Subspecies *salvini* is abundant on continental shelf areas around New Zealand except Challenger plateau, Auckland and Campbell Is. shelves (A. Bartle pers. comm. in Gales 1993). The birds move eastwards to the west coast of South America where they extend north to about 5°S in the zone of the Humboldt Current (del Hoyo *et al.* 1992). Small numbers are present off south-east Australia, Iles Crozet and South Africa (Marchant and Higgins 1990). A Iles Crozet banded bird was recovered at South Georgia.

Subspecies *eremita* are solitary birds and their movement patterns are not clear. They are rarely seen around the coast of New Zealand but are present on the shelf areas throughout the year, being least numerous in summer months. This species is not abundant around Chatham Is. in summer. It is possible that they move east, dispersing into the northern Humboldt current region off South America in winter (C. J. R. Robertson and J. A. Bartle pers. comm. in Gales 1993). Evidence of age or sex segregation at sea is unclear for both *salvini* and *eremita* subspecies.

2.2. Population

Breeding population is estimated at about 168 000 pairs breeding annually, which equates to approximately 750 000 individuals (Gales, in press).

D. c. cauta - Australian populations (7% of total). Populations estimates for this race are of moderate accuracy only, exept for the Albatross I colony. This colony is showing signs of recovery following the devasting harvest by sealers harvesting for feathers and eggs at the turn of the Century. The colony has increased to 5000 pairs in 1995 from 300 pairs in 1909 (Johnstone *et al.* 1975, Gales, in press). Ground counts are carried out annually. Mewstone and Pedra Blanca populations are estimated at 7000 and 200 pairs respectively.

D. c. cauta - New Zealand populations (45% of total) Population census data for Disappointment I. are derived from aerial counts of all or part of the colony taken at different times of year on three occasions since 1973. As a result, it is not possible to determine if there have been any changes in population size.

D. c. salvini (45% of total) The past and present status of this population is poorly known. The total population at Bounty Is. is approximately 76 000 ± 10 % and current survey frequency is sporadic. The population at the Snares Is., is estimated as greater than 650 pairs but has not been surveyed. The population of 4 pairs at Iles Crozet is stable.

D. c. eremita (2% of total) Anecdotal reports from this population suggest 2000 - 3000 pairs were present during the 1960s. An estimate of 3200 pairs in 1974 was based on aerial photographs with assumptions regarding hidden nest sites.

2.3 Habitat

Nesting usually occurs on rocky ledges or relatively flat ground. Nest forms vary with underlying

terrain and generally consist of conical mounds formed of mud and other materials ranging from 10 to 40 cm high (Brothers 1979, Robertson and van Tets 1982). Nests are re-used each year.

2.4 Migratory patterns

See Distribution.

3. Threat data

3.1. Direct threats to the population

D. cauta are attracted to fishing vessels and distribution at sea is influenced by fishing activity (Ryan and Molony 1988). They are preferential scavengers behind trawlers (Bartle 1974) and in some areas are second only to *D. exulans* in their aggression in competing for food (Brothers 1991). This scavenging habit may benefit the birds through provision of accessible food however the contribution of scavenged food to the total food intake is unknown (J. A. Bartle and C. J. R. Robertson pers. comm. in Gales 1993). It is likely that commercial fisheries take considerably more resources, particularly squid, than the albatrosses consumed prior to the fishery.

Since the late 1970s mid-water trawlers (Russian, Korean and Japanese vessels operated under charter by New Zealand companies) have fished over shelf and slope waters around New Zealand subantarctic waters. Up to 50 trawlers fish between December and May primarily for arrow squid (*Nototodarus sloani*), a cephalopod consumed by the *eremita* subspecies. In the late 1980s New Zealand recognised that this fishery was responsible for large scale mortality in territorial waters. Albatrosses were killed by collision with netsonde monitor cables, a thin cable running from the stem of the trawler to the nets. Of the observed albatrosses killed 85 % were adults*D. c. cauta* (no sex bias) from the Auckland Is. It was estimted that 2 300 were killed during 1990 (Bartle 1991a). This level of mortality is amplified by the death of dependent chicks and the breaking of long term pair bonds which are usually required for successful breeding. Mortality prior to 1990, for which there are no data, was probably significantly higher than the 1990 estimates as the fishing effort was greater in previous years. Based on the 1990 rates, Bartle (1991b) calculated that the New Zealand population of *D. c. cauta* would be extinct in 32 years. In 1991 the New Zealand Government banned the use of netsonde monitor cables within its 200-mile Exclusive Economic Zone, and the incidental mortality associated with this fishery in this zone, was greatly reduced (J. A. Bartle pers. comm. in Gales 1993). The rate of mortality which occurs outside the 200-mile limit is unknown.

D. cauta has been identified as incurring high rates of mortality by incidental capture on longlines. In a study of albatross mortality during Japanese longlining fishing operations targeting tuna in Australian waters, 23% of the albatross identified were *D. cauta* (Brothers 1991). Extrapolating the catch rates results in an estimate of around 10 000 *D. cauta* being caught each year by the Japanese tuna longline fishery in the Southern Oceans.

More than 200 adults from the Auckland Is population were caught in 1989 - 1990 in the southern Japanese tuna fishery in New Zealand (J. A. Bartle pers. comm, Murray *et al,* 1993). It is likely that this bycatch rate is significantly lower than previous years due to a decrease in fishing effort and introduction of bird deterrent devices such as tori poles and streamer lines (Murray *et al.* 1993). The majority of the albatross bycatch reported was of the *cauta* subspecies. This may bc a result of observer distribution as there were no observers on boats operating on the southern

slopes of the Chatham Rise during 1989 - 91 where the other subspecies would more likely be caught. There are records of subspecies *salvini* bycatch in trawl fisheries on the Chatham Rise (J. A. Bartle pers. comm. in Gales 1993).

Large numbers of *D. cauta* (predominantly adults but subspecies unknown) are taken on longlines off the East Cape (New Zealand) and this mortality declined in 1992 with the introduction of night setting regulations in New Zealand but continues at a lower level (J. A. Bartle per comm.). There is circumstantial evidence that this species has been affected by longlining and trawl fisheries off the coast of South Africa but there are no details of catch rates for this area (Adams 1992). The incidence of longline mortality on the high seas, particularly in the Indian and South Pacific Ocean is virtually unknown.
An additional source of mortality associated with these fisheries is the intentional shooting of albatross to prevent bait loss (N. Brothers pers. comm. in Gales 1993). The scale of this threat is not likely to be great but the rate of incidence is unknown. *D. cauta* are also illegally taken by fishers in southern African waters for human consumption (Adams 1992). The subspecies *eremita* is subject to sporadic illegal harvesting of chicks (Robertson 1991).

3.2. Habitat destruction

Some small colonies on the Auckland Is. are threatened by feral pigs and population numbers in these colonies have declined since 1971 (del Hoyo *et al.* 1992, C. J. R. Robertson pers. comm. in Gales 1993).

3.3. Indirect threat

Given the lack of detailed dietary information for this species, competition with fisheries for food resources is difficult to assess. The possibility of competition does exists as *D. cauta* commonly consumes cephalopods *Nototodarus* spp. which are commercially exploited, as well as fish species which are also the target of commercial fishing operations e.g. *Trachurus declivis*.

It is not known whether any other agents at sea, such as ingestion of plastics, affect this species. An avian pox virus, transmitted by fleas (*Parapsyllus australiacus*) is a major cause of chick mortality at the Albatross I. breeding colony of the *cauta* subspecies (N. Brothers pers. comm. in Gales 1993). Repeated infection of the virus results in liver and kidney failure in chicks causing breeding success rates to decline to 20 to 30% in some years.

3.4. Threat connected especially with migrations

Pelagic threats include fisheries bycatch discussed above.

3.5 National and International Utilisation

None known.

4. Protection status and needs

4.1. National protection status

Completely protected in Australia, including its Exclusive Economic Zone (to 200nm) and all

external territories.

Currently being considered by Australla for listing as a *vulnerable* species under the Endangered Species Protection Act 1992.

4.2. International protection status

None known.

4.3. Additional protection needs

There is a lack of information concerning the size of the New Zealand populations and the demographic parameters for all subspecies. Absence of these data prevent assessment of impacts of threats which are anything less than catastrophic.

Attempts should be made, if possible, to reduce or eliminate the direct exploitation of *D. c. eremita* on the Chatham Is. Similarly, the status of all breeding locations should afford protection from human interference. This perhaps applies most directly to Albatross I. (Australia) which is easily accessible and currently has Nature Reserve status which permits unlimited access by the public. The status of this island at least, should be upgraded.

Research is required into the nature and extent of fisheries mortality in longline and other fisheries. Methods of mitigating this threat (e.g. tori (bird) poles, night setting, weighted branch lines, bait throwing devices) have been developed and should be appropriately assessed and implemented in each type of fishery operation. Assessment of mitigating methods should consider the effect on the catch of target species as measures will only be used on the high seas if they do not impact on the efficiency and economics of the fishery. The mitigating measures should not increase bycatch of other species. National and International cooperation and collaboration between fisheries managers, fishers, ornithologists and regulators should encouraged.

A greater coverage of specialist seabird scientific observers on boats fishing in the Exclusive Economic Zones of range states and on the high seas is needed to improve the quality and quantity of bycatch data. Currently, most observers are present on boats to mainly record target species catch data.

Where possible carcasses of birds killed should be retained for analysis of species, provenance, age and sex. Banded birds should be reported.

5. Known Range States

Argentina, Australia, Chile, France, New Zealand, Peru, South Africa, United Kingdom, International Waters (Indian, Pacific, Atlantic, Southern Oceans). Vagrant in Northern Hemisphere.

6. Comments from Range States

7. Additional remarks

8. References

See Reference at the very end of this document (pp. 182-187).