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De-listing Antarctic Specially Protected Species

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Introduction

1. At III ATCM in 1964 the Parties addressed conservation issues for the first time and approved the Agreed Measures for the Conservation of Antarctic Flora and Fauna. In its Annex A were listed those species which were to be designated as Specially Protected Species. These comprised “All species of the genus *Arctocephalus*, Fur Seals and *Ommatophoca rossii*, Ross Seal”.
2. With the Antarctic Treaty only having been ratified in 1961 it appeared to at least some of the Parties that there was a pressing need to draw attention to the need to protect these particular species, Fur Seals because they had been previously hunted almost to extinction and Ross Seals as they appeared to be exceptionally rare and very little was known about them. However, no criteria were ever formally agreed or published to indicate precisely why or how these species were selected.
3. There appears to have been no further discussions on Specially Protected Species *per se*, although the seals were considered again when the Convention for the Conservation of Antarctic Seals (CCAS) was drafted. When the Agreed Measures were used as the basis for drafting Annex II of the Protocol in 1991 there was no specific discussion about the species listed in Annex A and they were therefore automatically incorporated into the legislation.
4. It has been generally assumed that classification as a Specially Protected Species is a status that is only afforded to the most vulnerable and endangered species, a tenet that has been accepted world wide by conservationists. Elsewhere in the world considerable effort over several decades has gone into reaching international consensus on criteria for determining this category of threat, and on the management actions that might be taken to assist the recovery of a Specially Protected Species.
5. No such definitions or discussions took place at the ATCM until 1999 when XXIII ATCM/WP24 was presented by the UK. The outcome of these discussions was Resolution 2 XXIII ATCM requesting SCAR, in consultation with other expert bodies, to review the status of species listed as Specially Protected Species and provide scientific advice to the Committee for Environmental Protection. An Intersessional Contact group was established to provide a forum for discussion, and this reported at XXIV ATCM/WP5 and at XXV ATCM/WP8 through Argentina.
6. These Working Papers focussed on the criteria needed to provide an objective basis for selecting species for listing. They did not provide any proposals for de-listing of species once they were no longer under threat.
7. At XXVII ATCM SCAR was asked to examine the available data for the species currently in Annex A and provide a recommendation on the future of these listings.

The Existing Situation

8. Five species of true seals (Family Phocidae) and two species of eared seals (Family Otariidae) spend all or some of their lives in areas governed by the Antarctic Treaty and derivative Conventions and Protocols. Within the Antarctic Treaty Area (and the broader area encompassed by the Convention on the Conservation of Antarctic Marine Living Resources [CCAMLR]), each of these seven species is a native mammal (as

defined in the Protocol on Environmental Protection to the Antarctic Treaty) and all are included generally in conservation and protection measures articulated by the Convention for the Conservation of Antarctic Seals (CCAS). Ross seals, southern elephant seals, all species of southern fur seals (genus *Arctocephalus*), and components of populations of Weddell seals are designated as Protected Species under CCAS but none of the species of Antarctic seals has so far been designated as a protected species under CCAMLR. All species of southern fur seals (genus *Arctocephalus*) and Ross Seals are designated as Specially Protected Species under Annex II Appendix A of the Protocol on Environmental Protection to the Antarctic Treaty.

9. Neither in the Agreed Measures nor in Annex II of the Protocol are any criteria provided for the selection of Specially Protected Species, which are defined simply as “those listed in Annex A”.
10. CCAS explicitly protects southern elephant seals, leopard seals, Weddell seals, crabeater seals, Ross seals, and southern fur seals (*Arctocephalus* spp) in the areas south of 60°S¹ and, notwithstanding minor exceptions and qualifications, prohibits killing or capturing of these animals by representatives of the Contracting Parties.² The exceptions to this prohibition may be authorized by special permits issued by the Contracting Parties to those under their jurisdiction to extent that those permits are consistent with the CCAS and its Annexes.³
11. Further, Ross seals, southern elephant seals, and all fur seal species are specifically identified as protected species, but this is only to categorically prohibit the killing or capture of these seals.⁴ No killing or capture of seals is permitted (i.e., no permits issued) in certain areas, which are established as reserves.⁵ Finally, seasonal regulations are imposed to limit authorization to issue permits for commercial sealing operations in several other areas. Nowhere in CCAS is there any mention of special protection for any species.
12. None of the seven Antarctic seals that occur in the Antarctic Treaty Area or in the CCAMLR area are included on the IUCN Red List of Threatened Species. The southern elephant seal is listed (as of 1975) in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) whilst the Antarctic fur seal and the Subantarctic fur seal have been included in the Appendix since 1977.

¹ CCAS Article 1(2)

² CCAS Article 2(1)

³ CCAS Article 4(1)(a-c)

⁴ CCAS Annex 1 §2(a)

⁵ CCAS Annex 1 §5(a-c)

Criteria for assessing species for Special Protection

13. In Annex 1 the criteria used worldwide to identify species in need of special protection are described in detail. For the purposes of considering the case of the listed seals four characteristics are critical:

- a. How large is the population and is it, either globally or regionally, increasing or decreasing?
 - b. Is the geographic spread increasing or decreasing?
 - c. Is the breeding population sufficient to ensure breeding success each year?
 - d. Are there any known threats to the stability of the population?
14. SCAR suggests that organising all available information into a single format will allow these questions to be tested and a conclusion drawn.
 15. Appendices A and B contain the data summaries, provided by the SCAR Expert Group on Seals, for existing Specially Protected Species in the *Arctocephalus* genus (*A.gazelle* and *A.tropicalis*) that occur with the Antarctic Treaty Area. The most recent data for the Ross seal have not yet been finally corrected and will not be available until 2006.

Recommendations

16. SCAR recommends that the application of the criteria for endangerment devised by IUCN are a logical and scientific way for the CEP to judge the need for conservation measures.
17. SCAR recommends that the ATCM recognise the remarkable recovery of the populations of fur seals as a major conservation success, attributable to the concerted actions taken nationally and internationally to rescue heavily exploited from probable extinction.
19. On the basis of the current population estimates, the annual trend, the continuing extension of the geographical area inhabited and the lack of any threats to the species (detailed in Appendix A of this paper) SCAR recommends that *Arctocephalus gazella* (Antarctic fur seal) is not in need of any Special Protection and should be removed from Annex A of Annex II of the Protocol.
20. On the basis of the current population estimates, the annual trend, the geographical area inhabited and the lack of any threats to the species (detailed in Appendix B of this paper) SCAR recommends that *Arctocephalus tropicalis* (Subantarctic fur seal) is not in need of any Special Protection and should be removed from Annex A of Annex II of the Protocol.
21. As these are the two species of this genus in the Antarctic Treaty Area the wording in Annex II Appendix A of “All species of the genus *Arctocephalus*” can therefore be removed. The species will continue to have all the general protection afforded under the Protocol and Annex II even after this change.
21. If this approach is deemed satisfactory for determining the continuing status of a listed species, SCAR will provide a further statement in due course for the Ross seal once all the data are available.

Appendix A

Species: *Arctocephalus gazella* (Antarctic fur seal)

Species characteristics

Distribution: Breeding colonies occur at islands scattered around the Southern Ocean, but principally in the South Atlantic (including the Antarctic Peninsula) and southern Indian Ocean sectors south of the Antarctic Polar Front. The primary colony is on Bird Island (near South Georgia) where about 90% of the population breeds. During the breeding season the foraging distribution of lactating females is relatively near the breeding colonies. The whereabouts of non-breeding seals during that time is unknown, but they are presumably widespread in the Southern Ocean judging by recent data on foraging areas of seals during the non-breeding season when they range widely in the Southern Ocean including south to the Antarctic pack ice.

Habitat: Breeding and resting habitat includes cobble and rocky coastal beaches but also tussock grass and inland grassy meadows, where fur seals have been documented to have substantial impacts on terrestrial habitats directly through trampling and consequent erosion and by enrichment of soils from their faeces and urine. Their foraging habitat at sea may vary depending on geographic location and prey community composition from shallow water epipelagic to pelagic habitats, near breeding colonies and at great distances from colonies evidently correlative with oceanographic (eg up-welling and down-welling areas at current boundaries, eddies) and bathymetric (ridges, seamounts, shelf breaks) features.

Role of species in ecosystem: Antarctic fur seals are key predators of krill in some areas and various species of fishes, squids, and invertebrates. Short term changes in environmental conditions with correlative changes in composition and abundance of prey communities near breeding colonies have been found to have substantial effects on reproductive success of females at some sites, suggesting that the size of breeding colonies may be primarily limited and regulated by local prey resource type and quantity.

Status and trends

Habitat trends: Breeding habitat is still being colonized at most Southern Ocean Islands while densities at extant colonies continue to increase. The extent of foraging ranges of seals during the breeding and non-breeding seasons have only recently been documented but continuing studies are revealing the characteristics of those ranges for males and females of various ages and reproductive status in several regions. Antarctic fur seals appear to be far ranging in the Southern Ocean during most of the year.

Population size and trends: The species was reduced to perhaps 3,000 or fewer seals in the 1800s but began increasing at relatively high rates relatively soon after commercial sealing ended and may now number more than six million individuals. The global population continues to increase in abundance at virtually all extant colonies and annual rates of increase exceed 10% at many.

Geographic trends: Breeding colonies are now established at South Georgia, the South Sandwich Islands, South Orkney Islands, South Shetland Islands, Bouvetøya, Prince Edward and Marion Islands, Iles Crozet, Iles Kerguelen, McDonald Island, Heard Island, and Macquarie Island. The largest colony is at South Georgia (Bird Island) that was estimated to number between 4.5 and 6.2 million seals in the late 1990s, and still

increasing. The population along the Antarctic Peninsula continues to increase at high rates both from *in situ* reproduction and from immigration and the smaller colonies in the Indian Ocean and South Pacific Ocean sectors of the Southern Ocean continue to increase in range and number at those islands.

Threats: There are no clear immediate threats to the species vitality, though commercial fishing activities have been suggested to be a potential issue for some colonies and some foraging areas and global and regional climate change will likely provoke some short term population and perhaps longer term evolutionary response. Seals continue to become entangled, and perhaps consequently die, in low numbers in various types of synthetic marine debris.

Table 1. Estimated sizes and trends of Antarctic fur seal (*Arctocephalus gazella*) populations.

Site	Pup numbers	Total population	Year of census	Mean annual rate of change	Reference
Macquarie Island	152 ^a		1999/00	increasing (1988/89 to 99/00) ^a	Goldsworthy (pers. comm.)
	165 ^a		2003/04	stable	Goldsworthy (pers. comm.)
Heard Island	248		1987/88	+ 23% (1962/63 to 87/88)	Shaughnessy (1993)
	1,012		2000/01	+ 12.0 % (1986/87 to 2000/01)	Page <i>et al.</i> (2003)
	1,278		2003/04	+ 8.1% (2000/01 to 2003/04)	Goldsworthy (pers. comm.)
McDonald Island	100	300	1979/80	increasing	Johnstone (1982)
Iles Nuageuses (Iles Kerguelen)	2,500 ^c 5,000	?	1984/85 2000	increasing increasing	Jouventin and Weimerskirch (1990) Lea (pers. comm.)
Courbet Peninsula (Iles Kerguelen)	2 >200 1,500-1,700	1,332 ? ?	1984 1998 2000	Increasing Increasing increasing	Bester and Roux (1986) Guinet (pers. comm.) Lea (pers. comm.)
Ile de la Possession (Iles Crozet)	67 234 295	? ? ?	1992/93 1999/00 2003/04	+ 21.4% (1983 to 92) + 16.9% (1992 to 1999) + 5.9% (1999/00 to 2003/04)	Guinet <i>et al.</i> (1994) Guinet (pers. comm.) Guinet (pers. comm.)
Marion Island	251 ^c 796 ^c	1,205 ^d 3,821	1994/95 2003/04	+ 17% (1988/89 to 94/95) + 13.8% (1994/95 to 2003/04)	Hofmeyr <i>et al.</i> (1997) Hofmeyr <i>et al.</i> In preparation-a
Prince Edward Island	400	200 2000 ¹	1981/82 2001/02	increasing + 16.2%	Kerley (1983) Bester <i>et al.</i> (2003)
Nyrtøysa (Bouvetøya)	2,000 15,523 ^c	>9,501 66,128	1989/90 2001/02	+7.0% (1978/79 to 89/90) +0.1% (1996/97 to 2001/02)	Bakken (1991) Hofmeyr <i>et al.</i> In preparation-b

South Georgia	<600,000 ^e	2,700,000 ^{f,g}	1990/91	(1976/77 to 90/91) +6% to 14% (1990/91 to 99/00)	+ 9.8% Boyd (1993)
South Sandwich Islands	<500 346	4,500,000 -6,200,000 ^{f,g}	1999/00		Boyd (pers. comm.)
South Orkney Islands	<1,000	<2,000	1962/63 1997/98	? stable	Holdgate (1962) Boyd (pers. comm.)
South Shetland Islands	9,300		1970/71	?	Laws (1973), Boyd (1993)
			1991/92-95/96	+ 11% (1994/95 to 95/96)	J.L. Bengtson and D. Torres (pers.comm), Aguayo <i>et al.</i> (1992)
	10,057 ^h		2000/01	+ 0.9% (1995/96 to 01/02)	Goebel <i>et al.</i> (2003)
Cape Shirreff	5,313		1991/92	+ 14% ⁱ (1986/87 to 91/92)	Hucke-Gaete (1999)
(SSSI No 32, S.	8,455		1999/00	+ 6% ⁱ (1991/92 to 99/00)	Hucke-Gaete (pers. comm.), Vallejos <i>et al.</i> (2000)
Shetland Is.)	8,577	21,190	2001/02	+4.6% ⁱ (1992/93 to 2001/02)	Hucke-Gaete <i>et al.</i> (2004)

a - For populations of both *A. tropicalis* and *A. gazella*
b - Corrected for observer undercount
c - Corrected for precourt mortality
d - Recalculated from population values in publication
e - Number of breeding females

f - Estimated from the number of breeding females
g - Standard deviation = 300,000
h - Standard error = 140
i - Calculated from pup counts

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Appendix B

Species: *Arctocephalus tropicalis* (Subantarctic fur seal)

Species characteristics

Distribution: Breeding colonies of subantarctic fur seals are widely distributed in the Southern Ocean and virtually all are on subantarctic islands north of the Subtropical convergence. The principal colonies are at Gough Island in the South Atlantic Ocean and at Amsterdam Island in the Indian Ocean with smaller colonies farther south at Marion and Prince Edward Islands, Iles Crozet and Macquarie Island. Seasonal haul-outs occur at several other sites including Heard Island. The distribution of seals when at sea is poorly known.

Habitat: When on land subantarctic fur seals prefer rocky coastal habitats when breeding and tussock slopes above beaches when resting or not breeding. Their foraging habitat at sea presumably includes epipelagic and mesopelagic habitats based on dietary data.

Role of species in ecosystem: Subantarctic fur seals appear to be key predators in regional marine ecosystems though their role in structuring the biological communities in those systems is not clear.

Status and trends

Status: The species was nearly extinguished by commercial sealing in the 1800s but began recovering in the 20th century once commercial harvests had ended. The species is now estimated to number around 300,000 and increasing. Rates of increase in births exceed 5 to 10% at most colonies.

Habitat trends: Subantarctic fur seals continue to increase in density at extant breeding sites and to colonize new island habitats. The colony at Amsterdam island appears to be stable, an exception to the general pattern elsewhere.

Population size and trends: The species is estimated to number around 300,000 and increasing at overall rates of 5 to 10% but exceeding 20% at some sites.

Geographic trends: Colonies of subantarctic fur seals are increasing in size at all established colonies, except perhaps at Amsterdam Island where births may have stabilized.

Threats: There are no clear immediate threats to the species vitality, though commercial fishing activities have been suggested to be a potential issue for some colonies and some foraging areas and global and regional climate change will likely provoke some short term population and perhaps longer term evolutionary response. Seals continue to become entangled, and perhaps consequently die, in small numbers in various types of synthetic marine debris.

Table 2. Estimated sizes and trends of subantarctic fur seal (*Arctocephalus tropicalis*) populations.

Site	Pup numbers	Total population	Year of census	Mean annual rate of change	Reference
Macquarie Island	152 ^a		1999/00	increasing (1988/89 to 99/00) ^a	Goldsworthy (pers. comm.)
	165 ^a		2003/04	stable	Goldsworthy (pers. comm.)
Heard Island	1	13	1987/88	?	Goldsworthy and Shaughnessy (1989) Page <i>et al.</i> (2003)
	1		2000/01		Goldsworthy (pers. comm.)
	1		2003/04		Goldsworthy (pers. comm.)
Ile Amsterdam	>9,638 ^b		1992/93	+ 0.4% (1981/82 to 92/93) ^e	Guinet <i>et al.</i> (1994)
	(partial census)		2002/03	Stable	Guinet (pers. comm.)
			1992/93 to 2002/03	1992/93 to 2002/03	
Ile Saint Paul	365		1992/93	+ 23.8% (1984/85 to 92/93) ^e	Guinet <i>et al.</i> (1994)
Ile de la Possession (Iles Crozet)	190		1990/91	+ 21.6% (1978-91) ^e	Guinet <i>et al.</i> (1994)
	251		1999/00	+ 3.1% (1990/91-1999/00) ^e	Guinet (pers. comm.)
	322		2003/04	+6.4% (1999/00-2003/04)	Guinet (pers. comm.)
Marion Island	10,137 ^{c,d}	48,658	1994/95	+ 1.8% (1988/89 to 94/95)	Hofmeyr <i>et al.</i> (1997)
	14,915 ^{c,d}	71,591	2003/04	+4.2% 1994/95 to 2003/04	Hofmeyr <i>et al.</i> In preparation
Prince Edward Island	5,372 ^{c,d}		1988/89	+ 9.7% (1981/82 to 88/89)	Wilkinson and Bester (1990)
	15,000 ^f			+ 9.5% (1987/88 to 2000/01)	Bester <i>et al.</i> (2003)
Gough Island	>53,076 ^{b,c,d}		1977/78	+ 14.9% (1955 to 1977/78) ^e	Bester (1987)
Tristan da Cunha	50	250	1993/94	Increasing	C. Glass (pers. comm.)
	?	700	1998/99	Increasing	C. Glass (pers. comm.)
Inaccessible Island (Tristan da Cunha Group)	>3	>200	1999/00	Increasing	P. G. Ryan (pers. comm.)

- a - For populations of both *A. tropicalis* and *A. gazella*
- b - Extrapolation based on a proportion of the total populated area
- c - Corrected for observer undercount
- d - Corrected for pre-count mortality
- e - Recalculated from population values in publication
- f - Extrapolated from peak adult male counts, and known adult male:pup ratios, in breeding colonies

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