

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

A. PROPOSAL: inclusion of *Caperea marginata* on Appendices I and II.

B. PROPONENT: Government of Australia

C. SUPPORTING STATEMENT

1 Taxon

1.1 Class	Mammalia
1.2 Order	Cetacea
1.3 Family	Neobalaenidae
1.4 Genus and species	<i>Caperea marginata</i> (Gray, 1846)
1.5 Common names	English: Pygmy Right Whale Spanish: Ballena franca pigmea French: Baleine pygmee

2 Biological data

Caperea marginata is the smallest species of baleen whales with maximum recorded length for a male is 6.1m and that for a female is 6.5m. They reach weights of at least 3200kg. At birth, *C. marginata* are about 2m long (Jefferson, Leatherwood and Webber, 1994). Very little is known about their life history and behaviour (IUCN, 1991).

Schools of up to eight animals have been observed, but most encounters have been with lone individuals or pairs. Association with dolphins and a female sei whale with a calf have been reported (Ivashin, Shevchenko and Yuchov, 1972)

Like other cetaceans, *C. marginata* are 'K strategists' in that they are large, long-lived, slow to mature, have fewer, larger offspring, high parental investment in young, and have evolved in an environment with little (temporal and stochastic) variation. As an Order, cetacean populations are thus not equipped to cope with and rebound from:

- ?? sudden declines in population numbers, as has happened over the past two centuries because of unsustainable hunting; or
- ?? detrimental environmental impacts on habitat due to anthropogenic factors from pollution, climate change, increased fishing effort, shipping traffic etc. as is currently the case.

2.1 Distribution

Little is known about *C. marginata*'s distribution, however, they are generally found in both coastal and oceanic temperate waters of the Southern Hemisphere, between about 31 degrees South and 52 degrees South. The 20 degree C summer isotherm appears to mark the northern limit of distribution, and the 5 degree C isotherm the southern limit.

2.2 Population

There are no population estimates, and the species has been regarded as comparatively rare (IUCN, 1991). *C. marginata* have not been mentioned in reports from the IWC/IDCR cruises, perhaps because of identification problems (the key field marks differentiating it and the Antarctic Minke Whale (*Balaenopteridae bonaerensis*) may not always be observable (IUCN, 1991)). However, Nicol (1987) found that *C. marginata* was the most frequently stranding species on the Tasmanian coast (Australia), suggesting that it may be more common than previously thought.

The International Whaling Commission (IWC) is not currently prepared to give an abundance estimate, citing a lack of detailed assessment and statistical certainty.

2.3 Habitat

C. marginata is a pelagic species found in temperate waters of the Southern Hemisphere, between about 31 degrees South and 52 degrees South. The 20 degree C summer isotherm appears to mark the northern limit of distribution, and the 5 degree C isotherm the southern limit. *C. marginata* are known to feed on copepods (Jefferson, Leatherwood and Webber, 1994).

2.4 Migrations

Little is known about the *C. marginata*'s migration pattern.

3 Threat data

3.1 Direct threats to the populations

While *C. marginata* have not been deliberately targeted by whalers, a threat stems from the problem in distinguishing *C. marginata* from the Antarctic Minke Whale (*B. bonaerensis*) because their differentiating field markings may not be visible (IUCN, 1991). Under the International Convention on the Regulation of Whaling Parties may permit their nationals to target whales for 'scientific research'. Currently, Japan permits its nationals to take up to 440 Minke Whales per year in the Southern Ocean. Due to difficulties in distinguishing between *C. marginata* and Antarctic Minke Whales, the Pygmy Right whale may be accidentally taken by Japanese whalers conducting the hunt as part of the research program on Minke Whales.

The rarity of *C. marginata* in coastal areas makes it less susceptible to unregulated whale watching when compared with other more coastal great whale species. However, whale watching is a rapidly growing industry that range states need to regulate, because at certain proximities and intensities, operators and tourists may interfere with critical breeding and socialising behaviour (Gordon Moscrop, Carlson, Ingram, Leaper, Matthews and Young, 1998).

Some incidental mortality from coastal netting operations has been reported in South Africa (Leatherwood and Reeves, 1983), and South Australia (Bannister, Kemper and Warneke, 1996).

C. marginata is also susceptible to pollution. The increasing volume of marine debris, particularly buoyant and synthetic items such as plastic, may threaten this species through the possibility of entanglement and ingestion. Substantial volumes of rubbish discarded by humans have been found in the stomachs of stranded whales (Laist, Coe and O'Hara, 1999). Further, oil spills and the dumping of industrial wastes into waterways and the sea lead to bio-accumulation of toxic substances in the body tissues of the top predators, making such events dangerous to great whales (Cannella & Kitchener 1992; IWC, 2000).

Chemical pollution, in particular the persistent organic pollutants including PCBs, DDTs, PCDDs, HCB dieldrin, endrin, mirex, PCDs, PBs, PEDEs, polycyclic aromatic hydrocarbons and phenalos as well as metals and their organic forms methyl-mercury and organotins are of concern for marine mammals in the marine environment. Many of these pollutants can cause immune suppression, making them more susceptible to prey depletion, habitat modification, environmental changes (including global warming or ozone depletion) or disease. Synergistic and cumulative effects must be considered in the assessment of any risk to individual species or populations. (Reijnders & Aguilar,

2002), Currently marine mammals in mid-latitudes (industrialised and intense agriculture use) of Europe, North America and Japan have the highest loads. However levels of organochlorines are declining in the mid latitudes and are predicted that in the near to midterm future the polar regions will become the major sinks for these contaminants. (Reijnders & Aguilar, 2002). Of the 2 million tonnes of PCBs that have been produced world wide, only 1% has reached the oceans at this stage. Around 30% has been accumulated in dump sites and the sediments of lakes, estuaries and coastal zones and future dispersal into the marine environment cannot be controlled (35% are still in use) The open ocean water serves as the final reservoir and sink for the worlds PCB production. (Reijnders 1996).

Levels of PCB and DDT have been detected in *B. bonaerensis* and appear to vary depending on geography and diet, with adult migrating to less polluted areas. (Reijnders & Aguilar, 2002)

3.2 Habitat destruction

At the 50th meeting of the IWC, the Scientific Committee identified “environmental change” as the looming threat to whale populations and their critical habitats. This meeting discussed the impact of climate change, chemical pollution, physical and biological habitat degradation, effects of fisheries, ozone depletion and UV-B radiation, Arctic issues, disease and mortality events and the impact of noise and resolved an ongoing work program for continued investigation (IWC, 1998).

3.3 Indirect threats

Global environmental change is an indirect threat to *C. marginata*. Springer (1998) concluded that fluctuations in marine mammal populations in the North Pacific are entirely related to climate variations and change. One of the more important impacts of a changing climate on marine mammals is changes to abundance of and access to prey particularly for marine mammals that feed from the top of the food chain such as whales (IPCC, 2000).

Further, climate change appears to be related to reductions in sea-ice: one study concludes that the Antarctic sea-ice receded by 2.8 degrees latitude (168 nautical miles) between 1958 and 1972 (de la Mare, 1997). This would interfere with feeding patterns as well as altering the seasonal distributions, geographic ranges, migration patterns, nutritional status, reproduction success, and ultimately the abundance of Arctic marine mammals (Tynan and DeMaster, 1997)

3.4 Threats connected especially with migrations

While migrating between feeding and breeding grounds, *C. marginata* are susceptible to shipping strikes. The increase in oceanic traffic increases the likelihood of collision with large vessels on shipping lanes in critical *C. marginata* habitat beyond the edge of continental shelves.

Underwater noise pollution is often a direct threat to migrating cetaceans, given their reliance on sound for navigation through their highly developed echolocation systems. *C. marginata* are particularly sensitive to low and moderate frequency sounds, from approximately 12Hz to 8kHz (Richardson, Greene, Malme and Thomson, 1995). It is difficult to identify conditions under which *C. marginata* is particularly sensitive, given the varying acoustic transmission conditions from shallow water to deep, and relative to the animal's position within a water column. However, a number of anthropogenic sound sources are known to produce underwater acoustics within the frequency range of *C. marginata*, and potentially within migratory routes.

For example, seismic operations may disturb the movements and natural activities of the species through the production of continuous, high-level, low-frequency (below 1kHz) sound (Würsig and Richardson, 2002). Most Baleen whales continue normal activity up to

150db re 1 μ Pa, but, as these levels are some 50+ dB above typical ambient noise levels, lower received levels may have subtle effects on surfacing and respiration (Richardson, et al, 1995).

Military activities that produce significant underwater sound pressure may also potentially interrupt whales' movements and natural activities, including critical migratory, feeding and breeding patterns. These sounds include those associated with underwater detonations of explosives, and the penetration of active sonar (Richardson, et al, 1995).

3.5 National and international utilisation

C. marginata is the only baleen whale that has not been the target of large-scale commercial whaling (Jefferson, Leatherwood and Webber, 1994).

4 Protection status and needs

Due to the lack of information about *C. marginata*, it is not a listed species on the IUCN red list.

4.1 National protection status

National legislation protecting *C. marginata* is mainly derived from international agreements.

4.2 International protection status

Articles 65 and 120 of the United Nations Convention on the Law of the Sea (UNCLOS) accord a special status to marine mammals, and specifically allows for more strict protection of marine mammals by coastal States or international organisations. Also in relation to cetaceans, Articles 65 and 120 oblige coastal States to work through appropriate international organisations for their conservation, management and study.

C. marginata is protected from whaling by the IWC, through its general moratorium on commercial whaling. Given uncertain stock analyses, the moratorium imposed a zero catch limit on every whale stock, effective from 1985/86. However, this limit is subject to annual review by the IWC. The IWC also protects whales, including *B. physalus*, through the declaration of sanctuaries, to provide freedom from disturbance for migrating and breeding great whales that were once hunted to the brink of extinction. The IWC established the Indian Ocean Sanctuary in 1979, and the Southern Ocean Sanctuary in 1994. These sanctuaries are important zones of protection for whales, but they are subject to periodic review.

International trade in *C. marginata* products has been controlled by the listing of the species in CITES Appendix I. However, Peru entered reservations against this listing, and are thus not bound.

The Convention on the Conservation of Antarctica Marine Living Resources (CCAMLR) applies to the Antarctic Convergence, a natural oceanographic boundary formed where the circulation of cold waters of the Antarctic ocean meets the warmer waters to the north. Although whales are not specifically referred to in the Convention, CCAMLR's objective is the conservation of Antarctic marine living resources.

The Jakarta Mandate is an agreement implementing the Convention on Biological Diversity, 1992 in the marine environment. The Jakarta Mandate encourages a precautionary approach to resource management and promotes the adoption of ecosystem management principles. It also recognises that wide adoption and implementation of integrated marine and coastal area management are necessary for effective conservation and sustainable use of marine and coastal biological diversity.

4.3 Additional protection needs

Due to uncertainty over the abundance of the *C. marginata* population the IUCN has not listed this species. The *C. marginata* is subject to a number of ongoing threats. Due to the species being a “K strategist” it is likely that it will take even longer to recover from any further impacts.

The main vehicle for the protection and conservation of *C. marginata* is the International Convention for the Regulation of Whaling (ICRW) which establishes the moratorium on commercial whaling, and two regional whale sanctuaries (the Indian Ocean Sanctuary and the Southern Ocean Sanctuary).

In the event of a resumption in commercial whaling, the efficacy of the Convention on International Trade in Endangered Species of Wild Fauna (CITES) as a protection measure for whales would also be compromised. This is because Peru entered a reservation against the listing of this species, and are thus not bound by the Convention. Further, some Parties have regularly proposed the downlisting of great whales from Appendix I to Appendix II.

Under UNCLOS, Parties have an obligation to protect the marine environment within their exclusive economic zones and on the high seas in cases where they have jurisdiction. However, effective conservation for migratory species of cetaceans requires a consistent and coordinated approach to the development and application of conservation measures throughout the full range of a species’ habitats, regardless of which jurisdictions they fall within. This includes important feeding, mating and calving sites and the migration routes between them.

Inclusion of *C. marginata* on Appendix I and II of the Convention on the Conservation of Migratory Species of Wild Animals allows non-parties to the Convention to provide protection for the species, and participate in regional agreements ratified under the auspices of the Convention. This makes the protection measures more accessible than under other international agreements. *C. marginata* would also benefit from such cooperative research and conservation actions. A listing under the CMS would also complement the current protection provided by the ICRW and CITES.

5 Range states

Range States include Australia, New Zealand, South Africa, Argentina and Chile, all of whom are parties to the Convention.

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