

Proposal for Inclusion of Species on the Appendices of the Convention on the Conservation of Migratory Species of Wild Animals

A. Proposal: Inclusion of Stenella attenuata (eastern tropical Pacific populations) in Appendix II.

B. Proponent:

C. Supporting Statement

1. Taxon

- 1.1. Classis Mammalia
- 1.2. Ordo CETACEA
- 1.3. Familia Delphinidae
- 1.4. Genus/Species/Subspecies Stenella attenuata
(Gray, 1846)
- 1.5. Common Name(s)
 - English: pantropical spotted dolphin
 - Spanish: delfin manchado
 - French: dauphin tachete

2. Biological data

2.1. Distribution (current and historical)

The pantropical spotted dolphin has a worldwide distribution in tropical and subtropical waters. In the eastern Pacific it has been recorded as far north as 25°N, off southern Baja California (Mexico); the southern limit is about 17°S off southern Peru. In the western Pacific it is found from Japan south to Australia. Records from Alaska and New Zealand probably represent extralimital specimens (Perrin et al., 1987).

2.2. Population (estimates and trends)

Three stocks of pantropical spotted dolphin were proposed by Perrin et al. (1985) in the eastern tropical Pacific: coastal, northern offshore and southern offshore stocks. Recent studies over the period 1975 to the present have produced indices of relative abundance, since figures of absolute abundance are at present difficult to achieve. These estimates of relative abundance indicate that there has been a decline of the northern offshore stock (Buckland and Anganuzzi, 1988; Anganuzzi and Buckland, 1989). For the southern offshore stock the data show a low and variable effort and hence the fluctuations of estimates are considered large. However, there may be some evidence of a decline in this stock as well (Anganuzzi and Buckland, 1989).

There are no estimates for the coastal stock.

2.3. Habitat (short description and trends)

Offshore pantropical spotted dolphins are found in tropical, equatorial and southern subtropical waters. These animals show preference for waters with temperatures over 25°C with relatively low salinity (Au and Perryman, 1985), where they are found in mixed schools with tuna and spinner dolphins (Stenella longirostris). A coastal form occurs along the coast from Mexico to Peru.

Pantropical spotted dolphins feed primarily on epipelagic fish, squid and, in some instances, crustaceans. Pregnant females may feed more heavily on squid than lactating females do (Bernard and Hohn, 1985; Perrin and Hohn, in press).

2.4. Migrations (kinds of movements, distance, proportion of the population migrating)

Tagging experiments in the eastern tropical Pacific show that movement of pantropical spotted dolphins may be generally onshore in fall and winter and offshore in late spring and summer. The minimum distance travelled by the tagged animals ranged from 7 to 582 nautical miles (Perrin et al., 1979; Hedgepeth, 1985). Offshore spotted dolphins may be found as close to the coast as 16 nautical miles, where they overlap with the coastal form (Perrin et al., 1985).

3. Threat data

3.1. Direct threats to the population (factors, intensity)

In the oceanic eastern tropical Pacific, pantropical spotted dolphins are found associated with tuna, in particular yellowfin tuna (Thunnus albacares), as well as spinner dolphins (Stenella longirostris), oceanic birds and less commonly other small cetaceans. The reason for this association remains unknown, but tuna fishermen exploit the aggregation, using dolphins as an indication of the presence of tuna. Purse seiners encircle entire dolphin schools to catch the tuna, and in the process dolphins become entangled or trapped underwater in folds of the purse seine and die (Perrin, 1968; Perrin and Hohn, in press). In the 1960s and 1970s several hundred thousand dolphins were killed in the tuna fishery annually. Subsequently, research on fishing gear modification and the development of regulations for the fishery reduced the numbers to the low tens of thousands (Hammond and Tsai, 1983; Hammond and Hall, 1985; Hall and Boyer, 1988). In the last few years, however, the statistics have shown an increase in dolphin mortality in the fishery, with around 130,000 killed in 1986 and almost 100,000 killed in 1987 (Perrin, 1987; IATTC, 1989). The northern offshore stock of spotted dolphins shows the highest proportion of these catches, with mortalities of 70,000 and 56,000 for 1986 and 1987, respectively. Mortality for the southern offshore stock in the period 1979-1987 has not been greater than 7,000 animals (IATTC, 1989).

3.2. Habitat destruction (quality of changes, quantity of loss)

Relatively high concentrations of DDT and PCB have been found in some dolphin species in the eastern tropical Pacific and the western North Pacific. For example O'Shea et al. (1980) reported that DDT and PCBs concentrations were higher in striped dolphins from the ETP than in those from Japanese waters. The source of contamination in these tropical waters is unknown.

3.3. Indirect threat (e.g. reduction of breeding success by pesticide contamination)

No information

3.4. Threats connected especially with migrations

Offshore migration of spotted and spinner dolphins during spring and summer would increase the density of these species in the tuna fishing grounds, where dolphins and tuna are caught together (Au and Perryman, 1985).

3.5. National and international utilization

Dolphins taken in the eastern tropical Pacific fishery for tuna do not have a commercial value, and they are discarded.

4. Protection status and needs

4.1. National protection status

Protected by law in the USA, Ecuador, Colombia, El Salvador, France and Mexico (Klinowska, in press). No information is available from other countries.

4.2. International protection status

Stenella attenuata is listed in Appendix II of CITES. Dolphin populations in the ETP are currently under assessment by the IATTC and the U.S. National Marine Fisheries Service. The northern offshore stock in the eastern tropical Pacific is listed as "At Risk" by the IUCN (Perrin, 1989).

4.3. Additional protection needs

Cooperative research is needed in order to study stock discreteness and distribution, reduce the incidental mortality and identify potential sources of habitat degradation such as pollution.

5. Range States

Colombia, Costa Rica, Ecuador, El Salvador, France (Clipperton Islands), Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, Spain, the Netherlands, Vanuatu and the U.S..

6. Comments from Range States

7. Additional remarks

8. References

- Anganuzzi, A.A. and S.T. Buckland. 1989. Reducing bias in trends in dolphin relative abundance, estimated from tuna vessel data. Rep. Int. Whal. Commn 39:323-334.
- Au, D.W.K. and W.L. Perryman. 1985. Dolphin habitats in the eastern tropical Pacific. Fish. Bull. 83(4):623-643.
- Bernard, H. and H. Hohn. 1985. Food habits of pregnant and lactating spotted dolphins in the eastern tropical Pacific Ocean: a progress report. Sixth Bienn. Conf. Biol. Mar. Mamm., Vancouver 22-26 November 1985. Abstracts.
- Buckland, S.T. and A.A. Anganuzzi. 1988. Trends in abundance of dolphins associated with tuna in the eastern tropical Pacific. Rep. Int. Whal. Commn 38:411-437.
- Hall, M. and S.D. Boyer. 1988. Incidental mortality of dolphins in the eastern tropical Pacific tuna fishery in 1986. Rep. int. Whal. Commn 38:439-441.
- Hammond, P.S. and M.A. Hall. 1985. Dolphin mortality incidental to purse-seining for tunas in the eastern tropical Pacific inflicted by the US fleet in 1983 and non US fleet in 1979-1983. Rep. Int. Whal. Commn 35:431-433.
- Hammond, P.S. and K.T. Tsai. 1983. Dolphin mortality incidental to purse-seining for tunas in the eastern tropical Pacific Ocean, 1979-1981. Rep. Int. Whal. Commn 33:589-597.
- Hedgepeth, J.B. 1985. Database for dolphin tagging operations in the eastern tropical Pacific, 1969-1978, with discussion of 1978 tagging results. NMFS SWFC Adm. Rep. LJ-85-03. 40 pp.
- Inter-American Tropical Tuna Commission. 1989. Incidental mortality of dolphins in the eastern tropical Pacific tuna fishery, 1979-1988. Working Document 2. Tuna-Dolphin Workshop. San Jose, 14-16 March, 1989. 27 pp.
- Klinowska, M. (In press). Whales, Dolphins and Porpoises of the World. The IUCN Cetacean Red Data Book. IUCN, Gland, Switzerland.

O'Shea, T., R.L. Brownell, Jr., D.R. Clark, W.A. Walker, M.L. Gay and T.G. Lamont. 1980. Organochloride pollutants in small cetaceans from the Pacific and South Atlantic Oceans, November 1968-June 1976. Pesticides Monitoring J. 14:35-46.

Perrin, W.F. 1968. The porpoise and the tuna. Sea Frontiers 14:165-174.

Perrin, W.F. 1987. Dolphin kill in tuna fishery skyrockets. Newsletter IUCN/CSG 3:7-8.

Perrin, W.F. 1989. Dolphins, Porpoises, and Whales. An Action Plan for the Conservation of Biological Diversity:1988-1992. IUCN, Gland. 27 pp.

Perrin, W.F. and H.H. Hohn. (In press). Pantropical spotted dolphin Stenella attenuata (Gray, 1846). In: S.H. Ridgway and R. Harrison (Eds). Handbook of Marine Mammals, Vol 5. Academic Press, London.

Perrin, W.F., W.E. Evans and D.B. Holts. 1979. Movements of pelagic dolphins (Stenella spp.) in the eastern tropical Pacific as indicated by results of tagging, with summary of tagging operations, 1969-1976. NOAA Tech. Rep. NMFS SSRF-737. 14pp.

Perrin, W.F., M.D. Scott, G.J. Walker and V.L.Cass. 1985. Review of geographical stocks of tropical dolphins (Stenella spp. and Delphinus delphis) in the eastern Pacific. NOAA Tech. Report NMFS 28. 28 pp.

Perrin, W.F., E.D. Mitchell, J.G. Mead, D.K. Caldwell, M.C. Caldwell, P.J.H. van Bree and W.H. Dawbin. 1987. Revision of the spotted dolphins, Stenella spp. Marine Mammal Science 3(2): 99-170.