



CONVENTION ON MIGRATORY SPECIES

Distribution: General

UNEP/CMS/ScC17/Doc.5/Rev.1
28 September 2011

Original: English

17TH MEETING OF THE
CMS SCIENTIFIC COUNCIL
Bergen, 17-18 November 2011
Agenda Item 20.0

THE TAXONOMY OF *NEOPHOCAENA* (CETACEA: PHOCOENIDAE) AND THE CONSERVATION STATUS OF *N. PHOCAENOIDES* AND *N. ASIAEORIENTALIS*

(Submitted by William F. Perrin, Conference-appointed Councillor for Aquatic Mammals)

Taxonomy

1. The genus *Neophocaena* formerly contained only one recognized species, the finless porpoise *N. phocaenoides* (G. Cuvier, 1829). It has recently been split into two species: the Indo-Pacific finless porpoise *N. phocaenoides* and the narrow-ridged finless porpoise *N. asiaeorientalis* (Pilleri and Gahr, 1972), formerly recognized as the subspecies *N. phocaenoides asiaeorientalis* in the IUCN Red List¹ (Wang *et al.* 2008, Committee on Taxonomy 2009, Perrin 2009, Jefferson and Wang 2011). The two species are morphologically distinct, reproductively isolated as determined from genetic evidence and partially sympatric in the western Pacific. The external morphological difference is sufficiently pronounced to be evident in animals observed at sea in the wild (Wang *et al.* 2010). The two species differ in cranial features as well as external morphology (Amano *et al.* 1992, Jefferson 2002). *N. asiaeorientalis* is a temperate-water species occurring in coastal waters from Korea and Japan south to the southern East China Sea and in the Yangtze River. *N. phocaenoides* is a tropical species occurring in coastal waters from the southern East China Sea to the Indo-Malay region (but not the Philippines) and west discontinuously through the Indian Ocean to the Persian Gulf. The two species are sympatric in the southern East China Sea.

2. Two subspecies are retained within *N. asiaeorientalis*: the Yangtze finless porpoise, *N. a. asiaeorientalis*, and the East Asian finless porpoise or sunameri, *N. a. sunameri*. Studies of genetics and cranial morphology have suggested subpopulation structure in both (Yoshida *et al.* 1995, 2001; Yoshida 2002; Jefferson 2002).

Conservation status

3. The recommended Red List category¹ for both species is Vulnerable (same category as formerly listed for *N. phocaenoides sensu lato*), justified by perceived and continued population decline. Threats include bycatch in gillnet fisheries, ship strike and habitat degradation. The Yangtze subspecies of *N. asiaeorientalis* (as *N. phocaenoides asiaeorientalis*) was listed as

¹ Updated Red List accounts have been submitted to the IUCN Global Mammal Assessment programme by the Cetacean Red List Authority and are presently under review prior to posting in the Red List in the next update.

Endangered, justified by documented continuing population decline. *Neophocaena phocaenoides* is presently included in Appendix II of CMS.

Recommendation

4. In accordance with CMS practice when a listed species is split, it is recommended that both *Neophocaena phocaenoides* and *N. asiaeorientalis* be included in Appendix II.

Range states

5. *Neophocaena phocaenoides*: Bahrain, Bangladesh, Brunei Darussalam, Cambodia, China, Hong Kong (Special Administrative Region of China, India, Indonesia, Iran, Iraq, Kuwait, Malaysia, Myanmar, Pakistan, Saudi Arabia, Singapore, Sri Lanka, Taiwan Province of China, Qatar, Thailand, United Arab Emirates, Viet Nam.

6. *Neophocaena asiaeorientalis*: China, Japan, Republic of Korea, Taiwan Province of China. Uncertain: Democratic People's Republic of Korea.

Action requested:

The 17th Scientific Council is invited to:

- a) Consider the background information submitted by William F. Perrin, Conference-appointed Councillor for Aquatic Mammals, on the taxonomy of *Neophocaena* and the splitting of the existing species, *Neophocaena phocaenoides*, in two species, *N. phocaenoides* and *N. asiaeorientalis*.
- b) Decide whether both species should be listed in Appendix II of CMS, considering that the Cetacean Red List Authority recommends that both species are listed as Vulnerable in the IUCN Red List of Threatened Species.

Literature cited:

- Amano, M., N. Miyazaki and K. Kureha. 1992. A morphological comparison of skulls of the finless porpoise *Neophocaenaphocaenoides* from the Indian Ocean, Yangtze River and Japanese waters. *Journal of the Mammalogical Society of Japan* 17:103-110.
- Committee on Taxonomy. 2009. List of marine mammal species and subspecies. Society for Marine Mammalogy. www.marinemammalscience.org (12 May 2011).
- Cuvier, G. 1829. *Le Règne Animal, distribué d'après son organisation, pour servir de base à l'histoire naturelle des animaux et d'introduction à l'anatomie comparée*. Edition 2. v. 2: i-xv + 1-406.
- Jefferson, T. A. 2002. Preliminary analysis of geographical variation in cranial morphometrics of the finless porpoise (*Neophocaenaphocaenoides*). *Raffles Bulletin of Zoology Supplement* 10:3-14.
- Jefferson, T. A. and J. Y. Wang. 2011. Revision of the taxonomy of finless porpoises (genus *Neophocaena*): the existence of two species. *Journal of Marine Animals and Their Ecology* 4:3-16.
- Perrin, W. F. (ed.). 2009. World Cetacea Database. <http://www.marinespecies.org/cetacea/> (12 May 2011).
- Pilleri, G. and M. Gühr. 1972. Contribution to the knowledge of the cetaceans of Pakistan with particular reference to the genera *Neomeris*, *Sousa*, *Delphinus* and *Tursiops* and description of a new Chinese porpoise (*Neomeris asiaeorientalis*). *Investigations on Cetacea* 4:107-162.
- Wang, J. Y., T. R. Frasier, S. C. Yang and B. N. White. 2008. Detecting recent speciation events: the case of the finless porpoise (genus *Neophocaena*). *Heredity* 101:145-155.
- Wang, J. Y., S. C. Yang, B. J. Wang and L. S. Wang. 2010. Distinguishing between two species of finless porpoises (*Neophocaenaphocaenoides* and *N. asiaeorientalis*) in areas of sympatry. *Mammalia* 74:305-310.
- Yoshida, H. 2002. Population structure of finless porpoises (*Neophocaenaphocaenoides*) in coastal waters of Japan. *Raffles Bulletin of Zoology Supplement* 10:35-42.
- Yoshida, H., K. Shirakihara, M. Shirakihara and A. Takemura. 1995. Geographic variation in the skull morphology of the finless porpoise *Neophocaenaphocaenoides* in Japanese waters. *Fisheries Science* 61:555-558.
- Yoshida, H., M. Yoshioka, M. Shirakihara and S. Chow. 2001. Population structure of finless porpoises (*Neophocaenaphocaenoides*) in coastal waters of Japan based on mitochondrial DNA sequences. *Journal of Mammalogy* 81:123-130.