

Indopacetus pacificus (Longman, 1926)

English: Longman's beaked whale, Indo-Pacific beaked whale

German: Pazifischer Schnabelwal

Spanish: Zifio de Longman

French: Baleine à bec de Longman

Family: Ziphiidae

1. Description

Longman's beaked whale is relatively large, measuring up to 6.5 m in length (Pitman, 2009). It has a prominent melon set off from a fairly long beak. The dorsal fin is located two-thirds back from the beak and is more prominent than in other beaked whales, resembling a dolphin's dorsal fin. Colouration on the dorsal side ranges from brown to blueish-grey, with light areas on the sides and on the head. In young animals, a diffuse dark band including both eyes and delimited by the blowhole extends down to the flippers (Jefferson et al. 2008). Adult females have very few of the linear scars found in adult males and both sexes have white oval scars stemming from cookie-cutter shark bites. One pair of teeth presumably only erupts at the tip of the lower jaw in males (Pitman, 2009).

2. Distribution

<http://www.iucnredlist.org/details/40635/0/rangemap>

Distribution of Indopacetus pacificus: tropical waters throughout the Indo-Pacific, from the west coast of Mexico to the east coast of Africa and the Gulf of Aden (mod. from Pitman, 2009; Taylor et al. 2008 © IUCN).

This was one of the least known cetaceans, whose existence was first derived from only two skulls (Queensland, Australia, 1882 and Somalia, 1955). Before 2003 there were no confirmed live sightings in the wild. Since then however, there have been 65 at-sea sightings and 8 new stranding records, and *I. pacificus* has now become one of the more frequently identified beaked whales. It is rare in the eastern Pacific and appears to be more common in the western Pacific and tropical Indian Ocean (Pitman, 2009).

Originally described as a species of *Mesoplodon*, this distinctive but poorly known whale has erroneously been thought to be a race of *Mesoplodon mirus* or a synonym of *Hyperoodon planifrons* (Rice, 1998). However, while a more recent molecular genetics analysis found support for species level differences and verified morphological characters, it failed to confirm the validity of the genus, yet concluded that the genus should be retained pending further evidence to the contrary (Dalebout et al. 2003).

3. Population size

There have been two population estimates (Barlow et al., 2006), one for the waters around Hawaii (1,007 animals, density 0.4 per 1,000 km²) and one for the Eastern Tropical Pacific (291 animals, density 0.2 – 0.4 per 1,000 km²) confirming that the species is uncommon or rare throughout most of its range.

4. Biology and Behaviour

Habitat: Most sightings have been in water more than 2000 m deep, where sea surface temperatures exceed 26°C (Pitman, 2009).

Behaviour: When travelling fast at the surface, Longman's beaked whales bring their head and beak far out of the water and may even porpoise like large dolphins. Diving and surfacing is mostly synchronous within groups. Dive times from 11 – 33 minutes and as long as 45 minutes have been recorded (Pitman, 2009).

Schooling: Group size tends to be larger than in other beaked whales and ranges (averages) from 7.2 in the western Indian Ocean to 8.6 in the eastern Pacific and 29.2 in the western Pacific, with a range of 1-100 animals per group. Travelling is in close groups consisting of adult males and females as well as calves. While most groups are composed of Longman's beaked whales only, , associations with short-finned pilot whales, spinner dolphins, and common bottlenose dolphins have also been observed (Anderson et al. 2006; Pitman, 2009).

Food: Many beaked whales are mostly squid-eaters and Longman's beaked whale seems to make no exception: a specimen stranded in the Philippines had only squid in its stomach and another, stranded in Japan, also contained only squid beaks and no fish in its stomach, 83% of which were *Taonius pavo* (Pitman 2009).

5. Migration

Unknown

6. Threats

By-catch: Dayaratne and Joseph (1993) recorded the by-catch of 3 juvenile “southern bottlenose whales”, but possibly *I. pacificus*, during a study of cetacean by-catch in the gillnet fishery of Sri Lanka. However, as large cetaceans are cut free or cut-up and used as longline bait for sharks (Leatherwood and Reeves, 1989; Dayaratne & Joseph, 1993) the number of takes may be larger than superficially estimated. Sri Lankan fishing boats range widely in the Indian Ocean, presently at least as far as Seychelles. Furthermore, according to Anderson et al. (2006) there are currently thousands of vessels of several nations carrying out pelagic gillnetting across large swathes of the northern Indian Ocean, although much of this fishing effort is poorly documented. These vessels are likely to pose some threat to Indian Ocean population(s) of *I. pacificus*, but the extent of this threat is unknown.

Pollution: A specimen stranded in Japan and another in the Philippines had ingested plastic debris (Pitman, 2009).

Noise: An apparently healthy female and calf stranded in Taiwan in 2005 together with several other cetaceans following naval exercises (Parsons et al. 2008), presumably due to sonar deployment. “Bubble-like lesions” were reported in at least one of these whales by Yang *et al* (2008).

7. Remarks

Known and inferred Range states: Australia; Comoros; Japan; Kenya; Malaysia; Maldives; Mayotte (France); Mexico; New Caledonia; Philippines; Saudi Arabia; Somalia; South Africa; Sri Lanka; Taiwan, Province of China; Hawaii (United States of America) (Taylor et al. 2008).

Longman's beaked whale is listed by the IUCN as "Data Deficient" and is not listed by CMS. Listed in Appendix II of CITES.

8. Sources

- Anderson RC, Clark R, Madsen PT, Johnson C, Kiszka J, Breyse O (2006) Observations of Longman's Beaked Whale (*Indopacetus pacificus*) in the Western Indian Ocean. *Aq Mamm* 32: 223-231
- Barlow J, Ferguson MC, Perrin WF, Balance L, Gerrodette T, Joyce G, Macleod CD, Mullin K, Palka DL, Waring G (2006) Abundance and densities of beaked and bottlenose whales (family Ziphiidae). *J Cetacean Res Manage* 7: 263–270
- Dalebout ML, Ross GJB, Baker CS, Anderson RC, Best PB, Cockcroft VG, Hinsz HL, Peddemors V, Pitman RL (2003) Appearance, distribution and genetic distinctiveness of Longman's beaked whale, *Indopacetus pacificus*. *Mar Mamm Sci* 19: 421-461.
- Dayaratne, P., & Joseph, L. (1993). *A study on dolphin catches in Sri Lanka* (Report of the Bay of Bengal Programme Madras, BOBP/REP/56). 43 pp.
- Jefferson TA, Webber MA Pitman RL (2008) *Marine mammals of the world*. Elsevier, Amsterdam, 573 pp.
- Leatherwood S, Reeves RR, Perrin WF, Evans WE (1988). *Whales, dolphins and porpoises of the eastern North Pacific and adjacent Arctic waters: A guide to their identification*. New York: Dover Publications. 245pp.
- Parsons ECM, Dolman SJ, Wright AJ, Rose NA, Burns WCG (2008) Navy sonar and cetaceans: Just how much does the gun need to smoke before we act? *Marine Pollution Bulletin* 56: 1248–1257
- Pitman RL (2009) Indo-Pacific beaked whale – *Indopacetus pacificus*. In: *Encyclopedia of Marine Mammals*, 2nd Ed. (Perrin WF, Würsig B, Thewissen JGM, eds.) Academic Press, Amsterdam, pp. 600-602.
- Rice DW (1998) *Marine mammals of the world: systematics and distribution*. Society for Marine Mammalogy, Special Publication Number 4 (Wartzok D, ed.), Lawrence, KS. USA.
- Taylor BL, Baird R, Barlow J, Dawson SM, Ford J, Mead JG, Notarbartolo di Sciara G, Wade P, Pitman RL (2008) *Indopacetus pacificus*. In: IUCN 2009. *IUCN Red List of Threatened Species*. Version 2009.1. <www.iucnredlist.org>.
- Yang WC, Chou LS, Jepson PD, Brownell RL Jr, Cowan D, Chang PH, Chiou HI, Yao CJ, Yamada TK, Chiu JT, Wang PJ, Fernández A.(2008) Unusual cetacean mortality event in Taiwan, possibly linked to naval activities. *Vet Rec* 162:184-6.

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