

Live sighting of Blainville’s beaked whale *Mesoplodon densirostris* (de Blainville, 1817) in the Indian seawaters

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Two individuals belonging to the species *Mesoplodon densirostris* (de Blainville, 1817) were sighted in the Indian waters during a marine mammal survey conducted on-board the vessel *MFV Yellowfin* associated with the Mormugao Zonal Base of the Fishery Survey of India. This survey was part of the project titled ‘Marine mammal stock assessment in India’. Among the sighted individuals, one was a female based on its morphological characters while the sex of the other was unknown. To the best of our knowledge, there are no previous sightings of this rare beaked whale from the Indian Exclusive Economic Zone.

Keywords: Beaked whale, live sighting, marine mammal survey.

MARINE mammals are important components of the marine ecosystem, with 130 valid species in the world oceans¹. Among them, 26 species belonging to six families have been reported from the Indian waters². During the marine mammal survey undertaken on-board the vessel *MFV Yellowfin* associated with the Mormugao Base of the Fishery Survey of India, two individuals of Blainville’s beaked whale *Mesoplodon densirostris* (de Blainville, 1817) (family: Ziphiidae) were sighted from the Indian Exclusive Economic Zone (EEZ) during December 2022.

Movement of these rare, deep-sea whales was sighted while surfacing 66 nautical miles southwest of Mangalore coast, Arabian Sea, India (lat. 11°53’26N; long. 74°16’30E). These are popularly known as beaked whales due to their distinct beaks. Blainville’s or dense-beaked whale *M. densirostris* (de Blainville, 1817) is the one of the rarest species of the genus *Mesoplodon* (Figure 1). The genus *Mesoplodon* currently has 16 valid species of small-sized whales ranging from 3.9 m long (pygmy-beaked whale *Mesoplodon peruvianus*) to 6.2 m long (strap-toothed whale *Mesoplodon layardii*).

The mesoplodont whales are characterized by a spindle-shaped body, small melon without crease; blends smoothly into the thick rostrum, lack of groove between rostrum and forehead, two throat grooves on the ventral side of the

head between the lower jaws, small sub-triangular dorsal fin situated at about two-thirds of the total body length, short and narrow flippers, no deep median notch on flukes; posterior margin straight or slightly crescentic^{3,4}. *M. densirostris* has a broad, semi-circular blowhole with the open side oriented anteriorly and dark grey to brown body colour dorsally and lighter ventrally, especially in the vicinity of the genital, umbilical and throat grooves and flippers⁴.

M. densirostris is widely distributed in the tropical waters of the world. It has been reported from South Africa,

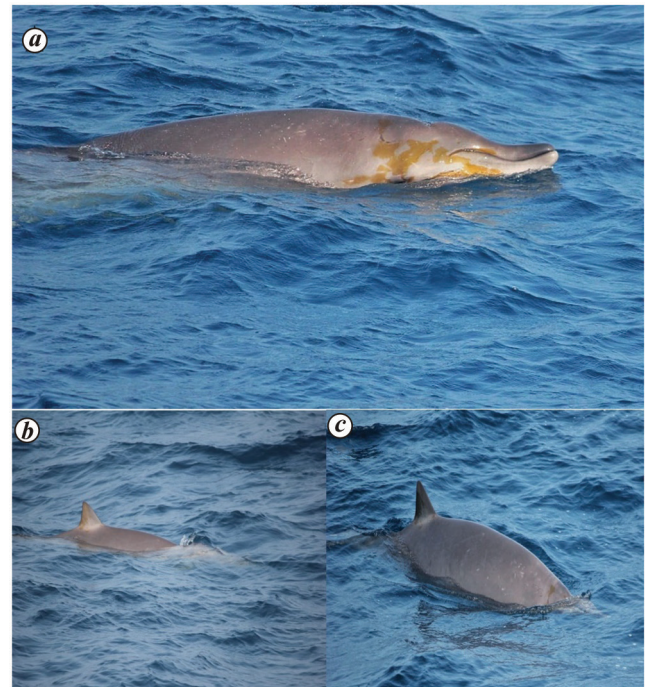


Figure 1. Blainville’s beaked whales *Mesoplodon densirostris* (de Blainville, 1817).

Table 1. Live sightings of <i>Mesoplodon densirostris</i> in the Indian Ocean	
Sighting locality	Month and year
Sri Lanka ⁶	April 1986
Coastal waters of Mauritius ¹¹	Between April 2008 and September 2014
Inner islands of the Seychelles to Saya de Malha ¹²	March 2021
Around the islands of Anjouan, Moheli, and Comoros ¹³	From 4 August to 4 October 2002
Waters around the Maldives ¹⁴	2–21 April 1998 (20 days)
Mayotte Island ¹⁵	Between July 2004 and June 2006
Around the Comoros archipelago (Mozambique Channel) ¹⁶	Between August and September 2002
Around the islands of Comoros, Mayotte, Glorieuses and Madagascar ¹⁷	–
Seychelles ¹⁷	–
Between Pemba and Unguja Islands off Tanzania ¹⁸	–

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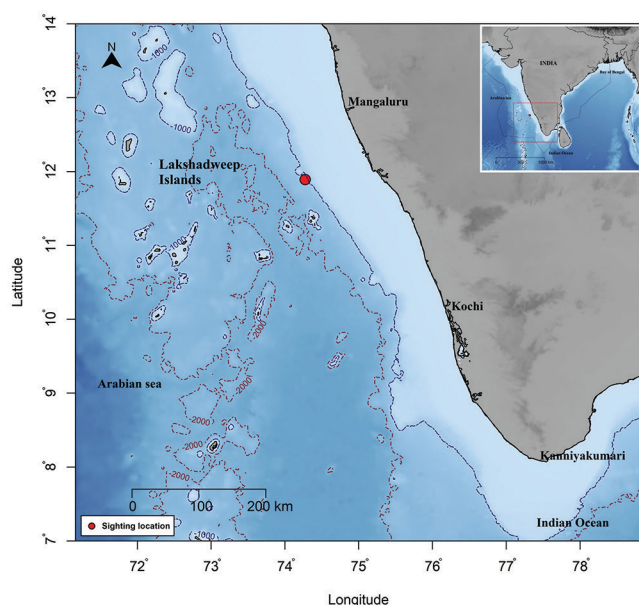


Figure 2. Sighting location of *M. densirostris* in the present study.

Mauritius, Seychelles, Maldives, Sri Lanka, Australia, the Philippines, China, Taiwan and Japan³ (Table 1). The distribution map of marine mammals published by MacLeod⁵ shows the possible presence of three species of mesoplodont whales, namely Ginkgo-toothed beaked whale *Mesoplodon ginkgodens* Nishiwaki and Kamiya, 1985; *M. densirostris*, and Deraniyagala's beaked whale *Mesoplodon hotaula* Deraniyagala, 1963, in the Indian waters. Four species of beaked whales belonging to three genera were documented from Sri Lanka in the oceanic territories⁶. These encompass Cuvier's beaked whale *Ziphius cavirostris* Cuvier, 1823; ginkgo-toothed beaked whale *M. ginkgodens*; Longman's beaked whale *Indopacetus pacificus* (Longman, 1926) and incidentally, *M. densirostris*, which was encountered as an unintended bycatch⁶. However *Mesoplodon* sp. and *I. pacificus* were documented from the EEZ of Pakistan as incidental bycatch⁷. The marine mammal checklist of India^{8,9}, listed *M. densirostris* according to the possible distribution given by Jefferson *et al.*¹ and Macleod⁵. The present live sighting of this beaked whale confirms its occurrence in the Indian EEZ.

Blainville's beaked whales were found preferentially in waters of depth between 200 and 1400 m (ref. 1). The maximum size of the Blainville's beaked whale reported was 4.7 m in length and 1033 kg in weight³. One pair of teeth (tusks) projects outside the mouth in fully mature males, which are absent in females. Position of tusks may vary between the tip of the lower jaw to halfway, which is used in the discrimination of mesoplodont whale species. *M. densirostris* generally dives up to 1400 m depth and remains there for a long period, up to 1 h; it comes to the surface only for a short while for breathing⁵. Therefore, information on its prey preferences is limited and based on

the gut content analysis of stranded animals. *M. densirostris* usually prefers mesopelagic squids belonging to the families Histioteuthidae, Cranchiidae and Gonatidae^{3,10}. Other species like *Mesoplodon bidens* (Sowerby, 1804) and *Mesoplodon grayi* von Haast, 1876, prefer fish. Mesoplodont whales do not capture their prey with their teeth; instead, they swallow the prey as a whole by suction¹⁰. The present study confirms the distribution of *M. densirostris* in the Indian EEZ with authentic records (Figure 2). However, the distribution of other mesoplodont whales in the Indian EEZ needs further confirmation.

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