

Sighting of ginkgo-toothed beaked whale (*Mesoplodon ginkgodens*) or Blainville's beaked whale (*Mesoplodon densirostris*) in the Lakshadweep Archipelago, India

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Beaked whales are the least-studied marine mammals due to their offshore, deep-sea distribution, cryptic nature, and infrequent surface activity. The present study records observations of six individuals of either the ginkgo-toothed beaked whale (*Mesoplodon ginkgodens*) or Blainville's beaked whale (*Mesoplodon densirostris*) during a dedicated vessel-based line transect marine mammal survey in the Lakshadweep Archipelago, between Minicoy and Kalpeni Islands. Despite the lack of substantial evidence to differentiate these two species, we have written this note given the importance of this observation in our waters and inspired by a similar undifferentiated observational record of these closely related species from the South China Sea.

Keywords: Blainville's beaked whale, cetacean sighting, ginkgo-toothed whale, Indian Ocean, Lakshadweep Archipelago.

THE beaked whales (Ziphiidae), comprising 23 species, are among the most mysterious cetaceans due to their oceanic lifestyle, which extends to depths of over 1,000 m, and their ability to spend long periods underwater, thereby limiting detection from the surface¹⁻³. The ginkgo-toothed beaked whales are among the most widely distributed *Mesoplodon* beaked whales, second only to Blainville's beaked whales, and are found in the tropical and subtropical waters of the Indo-Pacific^{4,5}. In the Indian subcontinent, these beaked whales have only been reported as stranded or encountered incidentally^{1,3,6}. Although new records are emerging from recent dedicated surveys⁷, offshore sightings remain uncommon, especially in the Lakshadweep Archipelago, where studies on marine mammals are scarce.

A pod of six beaked whales was observed on 19 February 2025 during a dedicated line transect marine mammal survey conducted by the Central Marine Fisheries Research Institute (CMFRI) in the Lakshadweep Archipelago. The observation took place on the 14th transect, between Minicoy and Kalpeni Islands (09.7769° N,

73.6708° E) (Figure 1), in waters 1,732 m deep. The animals were sighted at approximately 500 m ahead of the vessel, at an angle of 20° to the starboard bow. The whales appeared a few times in a synchronised formation, swimming fast and porpoising frequently. There was little interval between breaths, and the descents were vertical, at steep angles that suggested deep-diving activity.

Although six individuals were observed in the pod, not all could be identified to species level because they suddenly dived into deep waters, preventing detailed visual examination and the acquisition of sufficient photographs. Reliable photographs and comprehensive field notes were obtained for only two individuals, confirming their identity as ginkgo-toothed beaked whales or as Blainville's beaked whales. This identification is substantiated by careful examination of the available photographs and associated observational notes.

Both individuals swam closely together within the pod, surfacing briefly and not allowing a full view above the water. Consequently, the ventral sides of the animals were not clearly visible. However, clear views of the head, dorsal, and flukes were repeatedly possible. Most notably, the distinct observations of the gape and rostrum (Figure 2) initially suggested that the two individuals were ginkgo-toothed beaked whale or Blainville's beaked whale. Although no erupted teeth were observed in the lower jaws of either individual, the lower jaws were slightly arched above the upper jaws, a feature both share. The photographs showed that the eye is positioned posteriorly in relation to the gape. Additionally, a distinct dark eye patch and pale cheek were clearly visible in the images. The dorsal surface of the beaked whales appears brownish, while the lower margin of the eye is prominently yellowish. The individuals did not appear to be males but were either females or not mature enough for the lower jaw teeth to erupt external^{8,9}.

The record is one of the rarest documented at-sea observations of Blainville's, or ginkgo-toothed beaked whale, in Indian waters. It is also the second documented live record of the species in the Indian seas. Indian records of beaked whales have been (until recently) mostly confined to east- and west-coast strandings in Tamil Nadu, Kerala, and the Andaman and Nicobar Islands^{1,3}. There are occasional observations of beaked whales in the waters of the Maldives⁶, and the Arabian Sea⁷, suggesting that the central Indian Ocean basin could be an important Ziphiid habitat. This observation in waters over 1,700 m deep aligns with the ecological preference of beaked whales for pelagic habitats associated with submarine canyons, steep slopes, and other deep-sea features^{10,11}. The behavioural attributes observed, such as fast swimming and short surfacing periods, followed by deep dives, are highly consistent with accounts

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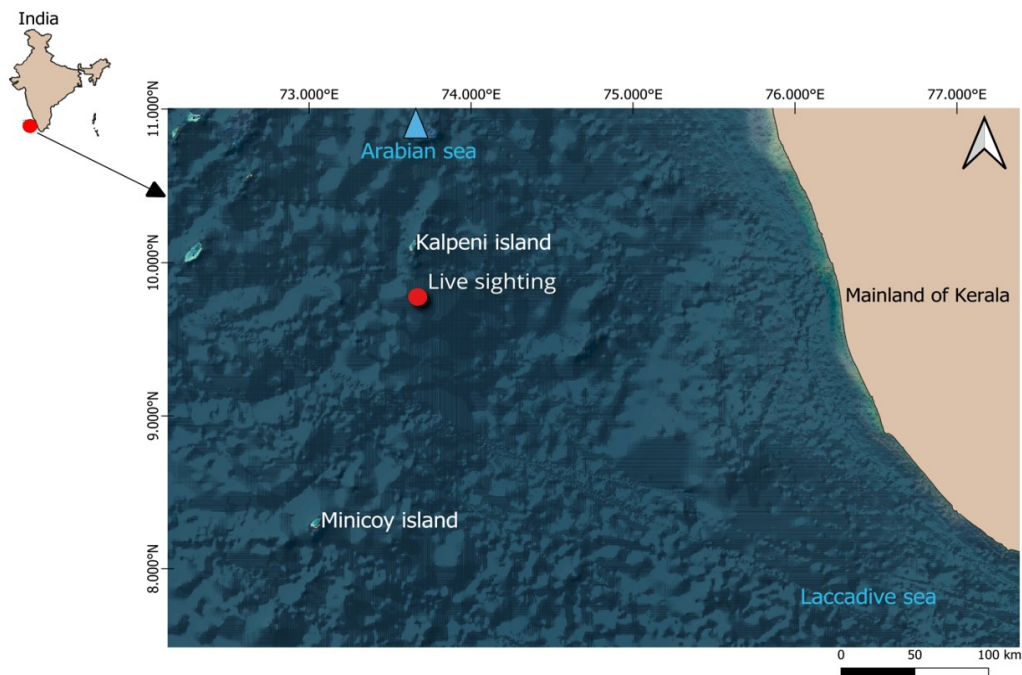


Figure 1. Sighting location.

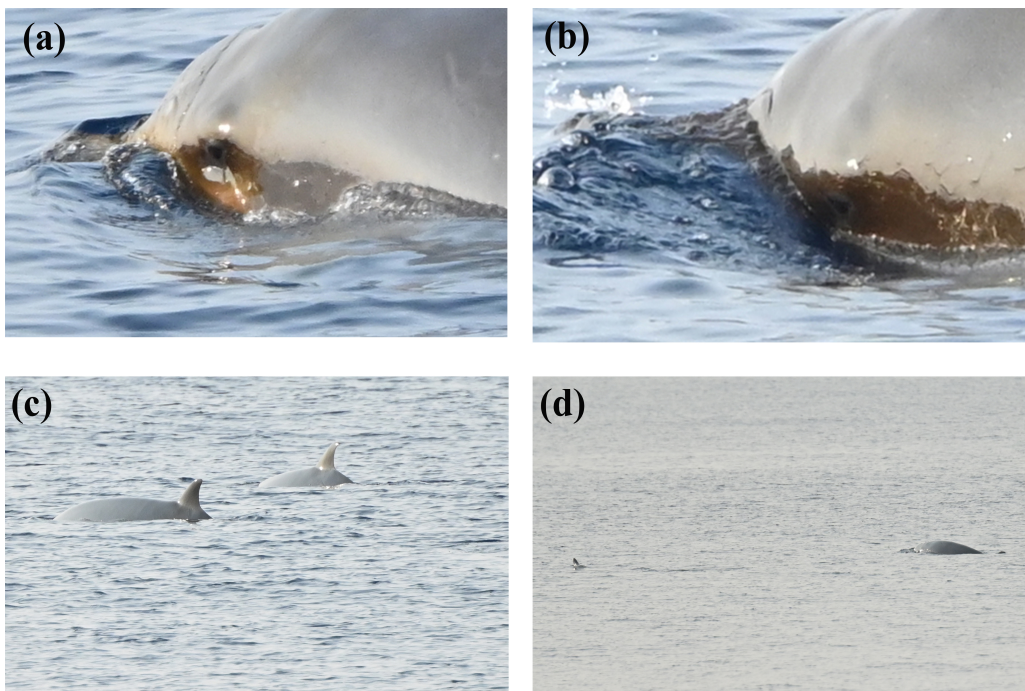


Figure 2. Showcasing the features of the whales (a) Head with diatom infestation and typical dark eye band distinct from the facial colour, (b) Arched lower jaw, (c) Typical well-falcated dorsal fins placed behind two-thirds of the body, and (d) Surfacing behaviour of two whales with the beak reaching the surface first and another whale exhibiting the anterior dorsal portion of the body.

of foraging-based activity in beaked whales¹². This observation underscores the significance of the deep-sea

ecosystems of Lakshadweep, which remain underexplored yet may harbour more oceanic cetaceans than are currently

recorded. As anthropogenic pressure in the area grows, with shipping, fisheries, and new interests in offshore resource extraction, documenting deep-diving species such as *Mesoplodon densirostris*/*Mesoplodon ginkgodens* underscores the immediate need for systematic surveys and conservation planning.

The current observation of the Blainville's or ginkgo-toothed beaked whale in the Lakshadweep Archipelago is a significant addition to the marine mammal biodiversity of India. It provides background information for future ecological and conservation studies of beaked whales in the Northern Indian Ocean. Additional dedicated surveys and long-term monitoring are critical to better understand the occurrence, distribution, behaviour, and threats to this elusive species in Indian waters.

1. Kumaran, P. L., Marine mammal research in India—a review and critique of the methods. *Curr. Sci.*, 2002, **83**(10), 1210–1220.
2. Macleod, C. D., Review of the distribution of *Mesoplodon* species (order Cetacea, family Ziphiidae) in the North Atlantic. *Mammal Rev.*, 2000, **30**(1), 1–8.
3. Sathasivam, K., *Marine mammals of India*. Universities Press, Hyderabad, 2004, pp. 180.
4. MacLeod, C. D. *et al.*, Known and inferred distributions of beaked whale species (Cetacea: Ziphiidae). *J. Cetacean Res. Manage.*, 2006, **7**(3), 271–286.
5. Perrin, W. F., Wursig, B., and Thewissen, J. G. M., *Encyclopedia of Marine Mammals*. London, Elsevier, 2017. pp. 1195.
6. Anderson, R. C., Observations of cetaceans in the Maldives, 1990–2002. *J. Cetacean Res. Manage.*, 2005, **7**(2), 119–135.
7. Arshad, P. R., Nashad, M., Ramachandran, S., Pradeep, S. D., Saroj, V. and Jeyabaskaran, R., Live sighting of Blainville's beaked whale *Mesoplodon densirostris* (de Blainville, 1817) in the Indian seawaters. *Curr. Sci.*, 2024, **127**(7), 860–862.

8. Rosso, M. *et al.*, First live sighting of Deraniyagala's beaked whale (*Mesoplodon hotaula*) or ginkgo-toothed beaked whale (*Mesoplodon ginkgodens*) in the western Pacific (South China Sea) with preliminary data on coloration, natural markings, and surfacing patterns. *Integr. Zool.*, 2021, **16**(4), 451–461.
9. Jefferson, T. A., Webber, M. A. and Pitman, R. L., *Marine Mammals of the World: A Comprehensive Guide to their Identification*. Elsevier, Amsterdam, 2011, pp. 112–120.
10. Baird, R. W., Webster, D. L., McSweeney, D. J., Ligon, A. D., Schorr, G. S. and Barlow, J., Diving behaviour of Cuvier's (*Ziphius cavirostris*) and Blainville's (*Mesoplodon densirostris*) beaked whales in Hawai'i. *Can. J. Zool.*, 2006, **84**(8), 1120–1128.
11. Claridge, D. E., Population ecology of Blainville's beaked whales (*Mesoplodon densirostris*) (Doctoral dissertation, University of St Andrews), Scotland, 2013, pp. 312.
12. Tyack, P. L., Johnson, M., Soto, N. A., Sturlese, A. and Madsen, P. T., Extreme diving of beaked whales. *J. Exp. Biol.*, 2006, **209**(21), 4238–4253.

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