

SC/67B/CMP/15

Baleen whales reports from the Eastern Arabian Sea based on interview surveys and stranding reports: update from India

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INTERNATIONAL
WHALING COMMISSION

BALEEN WHALE REPORTS FROM THE EASTERN ARABIAN SEA BASED ON INTERVIEW SURVEYS AND STRANDING REPORTS - UPDATE FROM INDIA

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ABSTRACT

In 2017-18, seven unidentified baleen whales, two Bryde's whales (*Balaenoptera edeni*) and two humpback whales (*Megaptera novaeangliae*) have been reported from the west coast of India (eastern Arabian Sea). The stranding and sighting reports are summarised here. Fishers were interviewed from south Gujarat to west Tamil Nadu, for baleen whale sighting events to identify hotspots, and to collect community perceptions towards baleen whales. Based on these interviews, along with data on strandings, opportunistic song recordings, and the recent presence of a satellite tagged whale from Oman, seven regions have been identified as hotspots and habitats used by humpback whales. Humpback whales in these areas seem to be common during the months of January to March. We continue our work in 2018-20 with systematic vessel based surveys using dipping hydrophones in four of the seven hotspots. We recommend dedicated baleen whale surveys and collaborative efforts with local and international teams, to carry out in-depth analyses of stranding events, and for a larger coverage in visual surveys with the future use of static passive acoustic monitoring systems.

KEYWORDS

INDIA, ARABIAN SEA, HUMPBACK WHALES, BRYDE'S WHALES, BLUE WHALES, VOCALISATIONS, STRANDINGS, SIGHTINGS

BACKGROUND

This note is in continuation of Sutaria et al. 2016 and Sutaria et al. 2017. In these previous papers we reviewed records of baleen whales (Blue whales, Bryde's whales, Humpback whales) reported from the west coast of India, and presented details of confirmed sightings and strandings from 2001 to May 2017. In this note we update the same information and also provide new information on interview surveys conducted along the southwest coast. This work is being carried out with funding from the IWC grant number 71481Res.

The information in this note is from the west coast of India - Gujarat, Maharashtra, Goa, Karnataka, Kerala and west Tamil Nadu).

RESULTS

Gujarat:

1. On June 6th 2017 a dead Bryde's whale stranded in south Gujarat, Bhavnagar (Gulf of Khambhat).
2. On August 4th 2017, a dead Bryde's whale stranded (10.5m) near to the fish market area in Veraval. Three prominent ridges were seen on upper rostrum.
3. On September 21st 2017 a young 27ft(8m) humpback whale stranded live. It was first seen circling in the shallows after midnight on the 21st and beached by 6am. When the local fishers realised it was alive they decided to take it back to sea as they revere the whales. Rescue operations had begun even though we tried to convince locals that it would not survive. It beached again on 23rd at a beach a km west of the first location.

Maharashtra:

1. On October 21st 2017 a baleen whale carcass washed ashore in Colaba in two pieces. The head region was measured to be 7.8 m. The total ventral pleat count was 43-44.
2. A baleen whale washed ashore in February 2018 at Tambaldeg, Maharashtra.
3. Another baleen whale washed ashore on 31st March 2018 in Malvan, Sindhudurg.

Goa:

1. On August 14th 2017 a dead whale was found on Polem beach. Two parts of the whale were found about 50m apart, measuring about 7m and 6.5m.
2. In March 2017, a humpback whale song was recorded near Grande Island, the details of which were covered in Sutaria et al 2017. Shyam et al have submitted a For Info paper towards this in 2018.
3. In December 2017, Lubaan the satellite tagged humpback whale first arrived in Goa and from there moved south till Kanyakumari (west Tamil Nadu)-Details in Wilson et al 2018.

Karnataka:

1. A dead whale washed ashore in a decomposed state on the Doddakopla beach in Surathkal. The approximately 40-feet whale washed ashore on Feb 18th 2018. Unidentified.
2. Lubaan the satellite tagged humpback whale transmitted south of Goa, close to shore near Netrani islands on 23rd December 2017, in Karnataka.

Kerala:

1. On 17th and 18th December 2017, two unidentified baleen whales, one on each day, were sighted by a marine mammal sighting methods cruise - NOAA Fisheries, WHOI, CMLRE, UW, and NCBS, off the coast from Kochi harbor.
2. Lubaan the satellite tagged humpback whale, spent between December 26th and Dec 30th in central Kerala. Her movement showed signs of staying out of the shipping channel (Bryde's whales are often sighted inside the shipping channel). We (Prof Biju Kumar and team) spent two days surveying near shore waters here with the Indian Coast Guard.

Year	Total Number of records	Mortalities	Sightings
2017-18	10	8	2
2016	23	20	3
2015	24	16	8
2014	2	1	1
2013	3	2	1
2012	4	4	0
2011	4	4	0
2010	1	0	1
2009	2	2	0
2008	3	3	0
2006	2	2	0
2005	3	2	1 (3)
2004	4	4	0
2003	1	1	0
2001	3	3	0

Table 1. Number of baleen whale records per year from the west coast of India from 2001 to 2018

State	Number of records
Goa	4
Gujarat	14
Karnataka	12
Kerala	11
Maharashtra	40
Tamil Nadu (west)	1+lubaan
Lakshadweep	1

Table 2. State-wise records of baleen whales from the west coast of India from 2001 to 2018.

Tamil Nadu:

Satellite tagged Whale Lubaan arrived from Oman to Goa, in India on December 21st 2017. She traveled south from Goa to Karnataka to Kerala and then finally to Kanyakumari, stopping on the way off the coast of south Kerala for four days. She remained in the waters of Kanyakumari district (west Tamil Nadu and Wadge Bank) for close to 45 days before returning to Oman in mid March. She showed 'searching mode' movement (Pers comm Andrew Wilson)

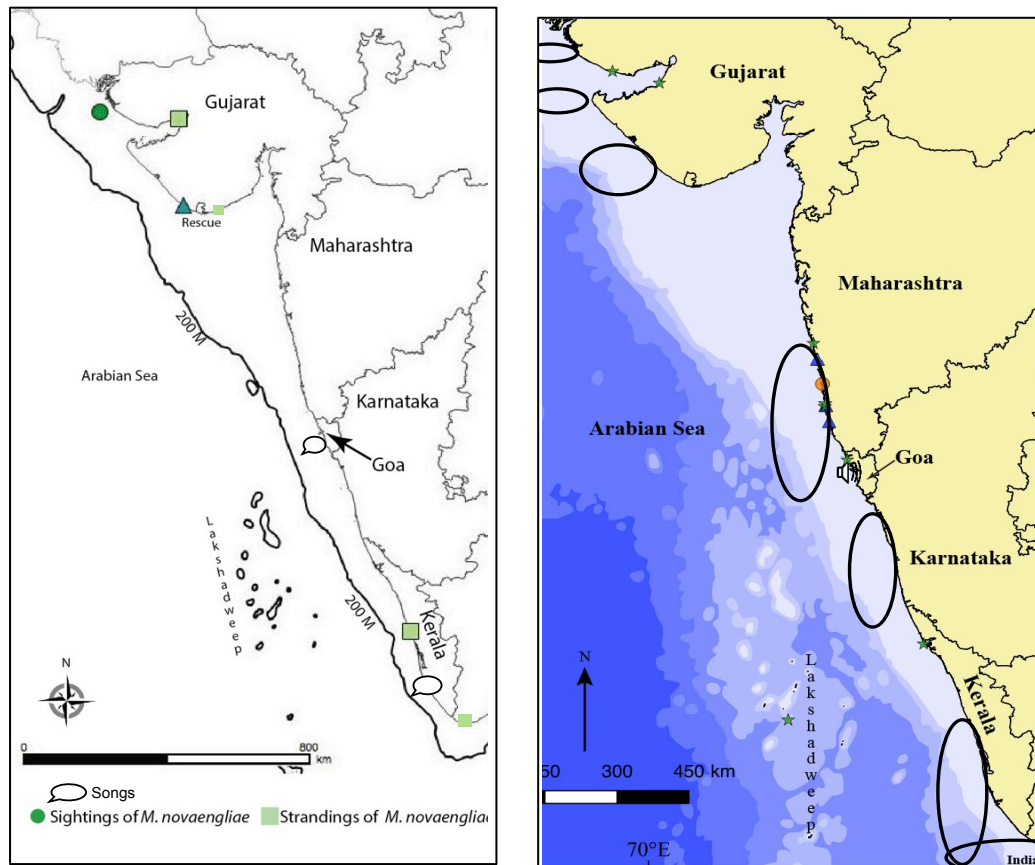


Figure 1. Map of the west coast of India showing regions where interview surveys have been carried out. Boat based surveys will be carried out in areas of Goa, Karnataka, Kerala, and Kanyakumari, (where humpback whale songs have been recorded / humpback whales have stranded / from where satellite tagged Lubaan transmitted/ or Interviews and opportunistic sighting data suggest the presence of whales.

Interview surveys

Interview surveys were continued in south Gujarat (districts of Diu & Daman, Surat, Valsad and Bharuch), Goa, Trivandrum in Kerala and Kanyakumari in Tamil Nadu.

In **Gujarat**, 101 interviews have been carried out and three Hotspots have been identified as seen in the Figure 1. January-March and August-September seem to be the time when fishers encounter whales most often. During the surveys we came across a whale temple in Valsad district of south Gujarat.

In **South Maharashtra** 45 interviews have been carried out and Ratnagiri and Sindhudurg districts are hotspots for Bryde's whales.

In **Goa**, 14 interviews were carried out and fishers here identified two hotspots in Goa and south Maharashtra, sighted mainly August-September and January-March.

In **Trivandrum**, Kerala we interviewed seven fishers. Baleen whales were common here all throughout the year, but most of them reported whales with large dorsal fins, mostly off the Cochin harbour. Whales are called 'Kadal anna' or 'Thimingalam' in Malayalam language.

In **Kanyakumari**, west Tamil Nadu we interviewed eight fishers. In our interviews we have found that humpback whales are seen and heard here, both in deep waters and shallow waters of 30-40m usually in Jan-March, but baleen whales are common overall since September. Five out of eight have heard singing whales, two humming the song for us. Three fishers had described rescuing whales from gill nets. Whales are called Periyameen in the local language Tamil.



Figure 2. Whale temple in Valsad, Gujarat.

FUTURE WORK

Vessel based surveys using visual and acoustic methods will be carried out in north Goa, Netrani in northern Karnataka, Trivandrum in south Kerala and Kanyakumari in west Tamil Nadu. Interview surveys will be carried out more intensely in these southern states as well. We will continue follow-ups with informants in Gujarat and Maharashtra. In December 2017, an international marine mammal research methods workshop was carried out by NOAA (Lead by Dr Mridula Srinivasan) in collaboration with The Government of India (CMLRE, NCBS and CMFRI), and University of Washington, Seattle, as part of which an offshore survey was carried out. We recommend that this exercise be carried out every year to build a cetacean assessment and monitoring program in Indian waters.

Acknowledgements

We would like to thank the International Whaling Commission grant 71481Res. (2015) for funding the on-going baleen whale research in India. We would like to thank Mihir Sule for the maps. We would like to thank the Arabian Sea Whale Network for encouraging our research in India. We are thankful to Thomas Jefferson and Robert L Brownell Jr for always being there to help identify or list as unidentified sightings and strandings. Finally we would like to thank all the fishermen who give us their time and their sighting details, researchers based in different regions of the coast, all those who share information on our database, the Indian Coast Guard staff for supporting our work and the State Forest Department for encouraging and permitting our work.

Details of sighting and stranding reports are available on www.marinemammals.in