

Irrawaddy dolphin (*Orcaella brevirostris*) washed ashore on Digha Coast, West Bengal, India

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Received 08 August 2017; revised 23 November 2017

The residual population of the Irrawaddy dolphin in India is one of the most vulnerable marine mammals. Stranded dead male animal of Irrawaddy dolphin length from Digha coast with severed tail and centre of the body is reported in this manuscript.

[Keywords: *Orcaella brevirostris*, Marine Mammals, Irrawaddy dolphin, Snubfin dolphins, Digha, West Bengal, East Coast]

Introduction

Irrawaddy dolphins are euryhaline and described under the order Cetartiodactyla and family Delphinidae. The reports on the diversity and distribution of the species along the Bay of Bengal and Southeast Asia are scanty. The species is known to inhabit shallow, estuarine, brackish water and coastal habitats throughout its range from 2.5 m to 18.0 m depth. Population of Irrawaddy has been reported from a very few sites along the Indian coast. One specimen was reported from Visakhapatnam coast¹ and another one from Ganges river². In Orissa coast, one dead specimen was reported from Gahirmatha beach, Bhitarkanika Wildlife Sanctuary³. Live animal was stranded on 19th November, 1977 in Madras⁴. In Kaladi Island of Chilka Lake, a dead male specimen was washed ashore, a dead female specimen in the northern sector and three live animals were cited in Chilka Lake⁵. Around 188 Irrawaddy dolphins were sighted in Orissa, among which 55 specimens were from Gahirmatha and Bhitarkanika Wildlife Sanctuary, Orissa⁶.

There is a dearth of scientific information in areas of behavioural, population ecology and conservation. We do not know if the distribution of the species in Indian water is continuous or discontinuous with concentrations near river mouth. There has been no long-term monitoring study on this species along with other species of dolphins in Indian water^{7,8}. International Union for the Conservation of Nature (IUCN) categorised the species as 'vulnerable' and its coastal habitat exposes

it to a wide range of threats. Present study focuses on the details of the endangered Irrawaddy dolphin, washed ashore along Digha Coast, West Bengal.

Materials and Methods

A detailed literature survey was conducted on all published records of Irrawaddy dolphin from Indian water. The Indian coastline is approximately over 7,516 km spread along the nine coastal states from Gujarat to West Bengal. Of which the species *Orcaella brevirostris* has been reported along the east coast of India, especially from Chennai (Madras), Visakhapatnam, Orissa, and Ganges River. At present, we have reported this species from Digha Coast, West Bengal (Fig. 1). Morphometric measurement of the dead sample was made on 11th July, 2017 at New Digha, West Bengal, India and the specimen was identified based on morphological characters (Fig. 2). A systematic and detailed description is presented below.

Results and Discussion

Phylum : Chordata

Subphylum: Vertebrata

Class : Mammalia

Order: Cetacea

Family: Delphinidae

Genus: *Orcaella*

Species : *Orcaella brevirostris* (Owen in Gray, 1866)

1866 *Orca (Orcaella) brevirostris* Owen in Gray

1951 *Orcaella brevirostris brevirostris* Ellerman and Morrison

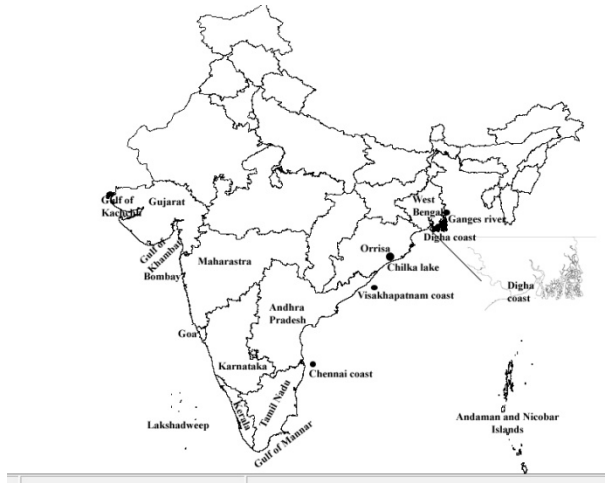


Fig. 1 — Occurrence of Irrawaddy Dolphins along the coast of India (large, solid dots represent locations from where records are available)

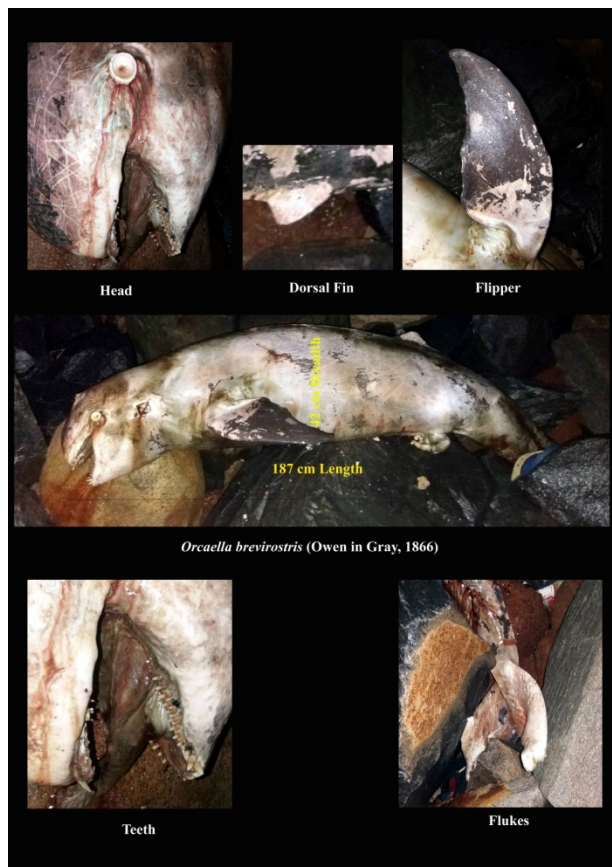


Fig. 2 — Morphological features of Irrawaddy dolphin (*Orcaella brevirostris*) from Digha Coast, West Bengal.

1951 *Orcaella brevirostris fluminalis* Ellerman and Morrison

1871 *Orcaella fluminalis* Gray

1871 *Orcaella brevirostris* Anderson

1871 *Orcella fluminalis* Anderson

1866 *Phocaena (Orca) brevirostris* Owen

Vernacular Names: Irrawaddy dolphin (Bengali), Irrawaddy dolfijn (Dutch), Snubfin dolphin and Larger Indian porpoise (English), Orcelle (French), Pesut and Lumba-Lumba Mahakam (Indonesian), Delfin del irrawaddy (Spanish), Plaloma irawadi (Thai), Irravady yunusu (Turkish).

Material Examined: Dead male Irrawaddy dolphin with a total length of 187.0 cm and a breadth of 42.0 cm from New Digha Coast, West Bengal.

Description: Usually young Irrawaddy dolphin is 1.0 m long and adult male and female are 2.7 m and 2.3 long, respectively. In the present study, we had observed a dead specimen, 187.0 cm long and 42.0 cm broad. The head was bulging with the forehead extending past the mouth. It had a broad, triangular, paddle like, pectoral fins and small triangular dorsal fins set around two-thirds of the body length. Colour of the skin was not clear, but normally slate-blue to slate gray in colour. Teeth was present in both upper (18 nos.) and lower jaws (17 nos.) with narrow, pointed peg like teeth of about 1.0 cm long (Fig. 2). Specimen weight was estimated to be around 120 kg. The shape of the Irrawaddy dolphin is similar to beluga whales (*Delphinapterus leucas*).

Remarks: The specimen of *Orcaella brevirostris* was washed ashore, the tail portion and middle of the body got severed (Fig. 2 - Flukes). It may be due to trawl or shore sine fishing activities along this coast.

A total 40 species of dolphins belonging to 17 genera were reported from elsewhere. The Irrawaddy dolphin is a threatened marine mammal and is in the IUCN lists, categorised as vulnerable. In India, as per 1972 Wildlife (Protection) Act, the species *Orcaella brevirostris* is listed under Schedule-I. Detailed information about the Irrawaddy dolphin from India is inadequate. The population is less known along the east coast and other reef regions (Gulf of Mannar, Gulf of Kachchh, Lakshadweep, Andaman and Nicobar). The species was reported from Bangladesh, Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam⁹⁻²⁴.

The gill net fishing activity is one of the major threats to the marine mammals including Irrawaddy dolphin; and trawlers operation has been directly implicated for the decline in the population along Indian coast²⁵⁻²⁶. By-catch of marine mammals from different landing centres (Mangalore, Chennai and Kakinada) has been reported from India²⁶. The present

study reported dead *Orcaella brevirostris* from Digha Coast, severed on tail portion, maybe it was captured accidentally on fishing net then released to this coast. A more detailed study is required which will reveal clarity in marine mammal distribution along this coast.

Conclusion

The future for marine mammals in India is uncertain, but appears bleak. The reports on Irrawaddy dolphin populations and their distribution accounts are very less and as such no quantitative information on the status of endangered marine fauna including other dolphins is available from this place. Pressures from gill netting and fishing practices along with habitat destruction may lead to the extinction of these marine mammals from Indian coast. The present study has reported the morphometry features of male Irrawaddy dolphin stranded dead along Digha coast.

Acknowledgements

Authors are grateful to Dr. K. Candra, Director, Zoological Survey of India, Kolkata and also thanks Ministry of Environment, Forests and Climate Change, Government of India.

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