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#### FIRST RECORDS OF THE INDO-PACIFIC FINLESS PORPOISE *NEOPHOCAENA PHOCAENOIDES* (G. CUVIER, 1829) (CETARTIODACTYLA: PHOCOENIDAE) FROM SRI LANKA

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## FIRST RECORDS OF THE INDO-PACIFIC FINLESS PORPOISE *NEOPHOCAENA PHOCAENOIDES* (G. CUVIER, 1829) (CETARTIODACTYLA: PHOCOENIDAE) FROM SRI LANKA

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**Abstract:** Thirty species of marine mammals have been recorded from Sri Lanka. Amongst them the Indo-Pacific Finless Porpoise *Neophocaena phocaenoides* is the only representative of the family Phocoenidae. The only previous record from Sri Lanka was a specimen caught on the Wadge Bank by a Smithsonian Carangid Survey team in 1970. Wadge Bank is west of the island and is, in fact, in Indian territorial waters. Here we present the first legitimate records of the Finless Porpoise from Sri Lanka, based on one stranding and three live sightings. Furthermore, the occurrence of threatened species such as the Indo-Pacific Finless Porpoise in the waters of the Palk Bay and the Gulf of Mannar indicates that a cross boundary research initiative between Indian and Sri Lankan scientists, simultaneously focusing on the conservation of the species, is essential. We believe, through such an initiative, a more holistic approach could be adopted when studying and conserving the species, which could then be expanded to encapsulate many other marine species and ecosystems.

**Keywords:** Gulf of Mannar, Indo-Pacific Finless Porpoise, *Neophocaena phocaenoides*, Sri Lanka, Wadge Bank.

Thirty species of cetaceans have so far been recorded from Sri Lankan waters, but one of these, the Indo-Pacific Finless Porpoise *Neophocaena phocaenoides*,

is disputed because the record is from Wadge Bank, which is to the west of the island and is, in fact, in Indian territorial waters (Fig. 1). As a result, while it was expected to be present, the presence of the species was noted as 'putative' by Yapa & Ratnavira (2013).

All Finless Porpoises were once regarded as belonging to a single species *Neophocaena phocaenoides*. Recent analyses, however, have revealed significant differences between the northern China/southern Japan/Korean peninsula form and the northern Indian Ocean to Southeast Asia and southern China form; accordingly, the latter form is now known as the Indo-Pacific Finless Porpoise *N. phocaenoides*, while the former has been designated the Narrow-ridged Finless Porpoise *N. asiaorientalis* (Jefferson & Wang 2011; Jefferson 2014). The unobtrusive behaviour of this small cetacean is underlined by the lack of records from Oman, the Philippines and Sri Lanka, all countries that are expected to host the species because they occur in nearby waters

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and have suitable habitats.

The specimen that has traditionally been considered to be the only Sri Lankan record was caught on Wadge Bank by a Smithsonian Carangid Survey team in 1970; it is presently preserved in alcohol at the Museum of Comparative Zoology at Harvard University (de Silva 1987; Leatherwood & Reeves 1989; Ilangakoon 2002). We regard the same as a misallocation for Sri Lanka. Since then there have been no reports on the species from Sri Lankan waters, either as a specimen record (i.e., carcass, strandings or incidental captures) or of a live sighting. As such, the present paper details the first substantiated record of the Indo-Pacific Finless Porpoise from Sri Lanka, which includes a beached stranded specimen and three observations of free-ranging animals in Palk Bay, northwestern Sri Lanka.

#### MATERIALS AND METHODS

A systematic survey in the Gulf of Mannar and Palk Bay for Dugongs *Dugong dugon* and Indian Ocean Humpback Dolphins *Sousa plumbea* was carried out in March–April 2014. We were on the lookout for Finless Porpoises as well, considering that the three species utilize much the same habitats as *Sousa*. The surveys were conducted using a 6m fibreglass boat fitted with 15 BHP outboard motor and the water was searched using Bushnell 7x50 H20 binoculars.

The track line of the survey was standard line transect and the surveys were carried out 50m from shore, however the actual distance depended upon safe water depth since there are many sand bars in the Palk Bay and Palk Strait. The two observers searched on the port and starboard sides.

#### RESULTS AND DISCUSSION

Three pods of Indo-Pacific Finless Porpoises were encountered during the boat surveys, two in February

2014 and one in March 2014 (Fig. 1). The first sighting was made on 23 February 2014 at 07:12hr, at 9.14277778 N & 79.64444444 E; the approximate water depth at the location was 8m. A pod of 5–8 animals was detected through binoculars at an estimated distance of 400m; they were travelling in a westerly direction. The pod appeared to contain individuals of uniform size. The group was observed for about two minutes; they seemed shy of the boat and swam erratically out of sight.

The second sighting was made at 06:45hr on 24 February 2014 at 9.11222222 N 79.64611111 E. It involved 7–8 animals at an estimated distance of 700m and a water depth of approximately 7m. Once again the animals were travelling in a westerly direction. This pod was observed for approximately 10 minutes and contained individuals of various size-classes. Due to the poor weather conditions and the distance of the sighting, we could not secure photographs. Furthermore, the inconspicuous surfacing behaviour of the swimming animals made them hard to observe as they moved away.

The third sighting was on 17 March 2014 at 07:14hr at 9.17555556 N & 79.69583333 E. The animals were observed at an estimated distance of 400–600 m, the average water depth being about 10m. The group consisted of 6–8 individuals travelling in an easterly direction. The encounter was brief, lasting approximately two minutes and the group could not be observed well, owing to rough seas (Beaufort 5).

On 1 February 2014, a 120cm Indo-Pacific Finless Porpoise was washed ashore at Talaimannar at the western tip of Mannar Island (9.10750000 N & 79.73194444 E; Image 1). The specimen was measured and photographed. The external measurements were as follows: snout to centre of eye 6cm, snout to flipper 26.4cm, snout to umbilicus 68.4 cm, snout to genital slit 82cm, fluke width was 27cm. There were 18 teeth on



**Image 1. Indo-Pacific Finless Porpoise specimen stranded in Sri Lanka**



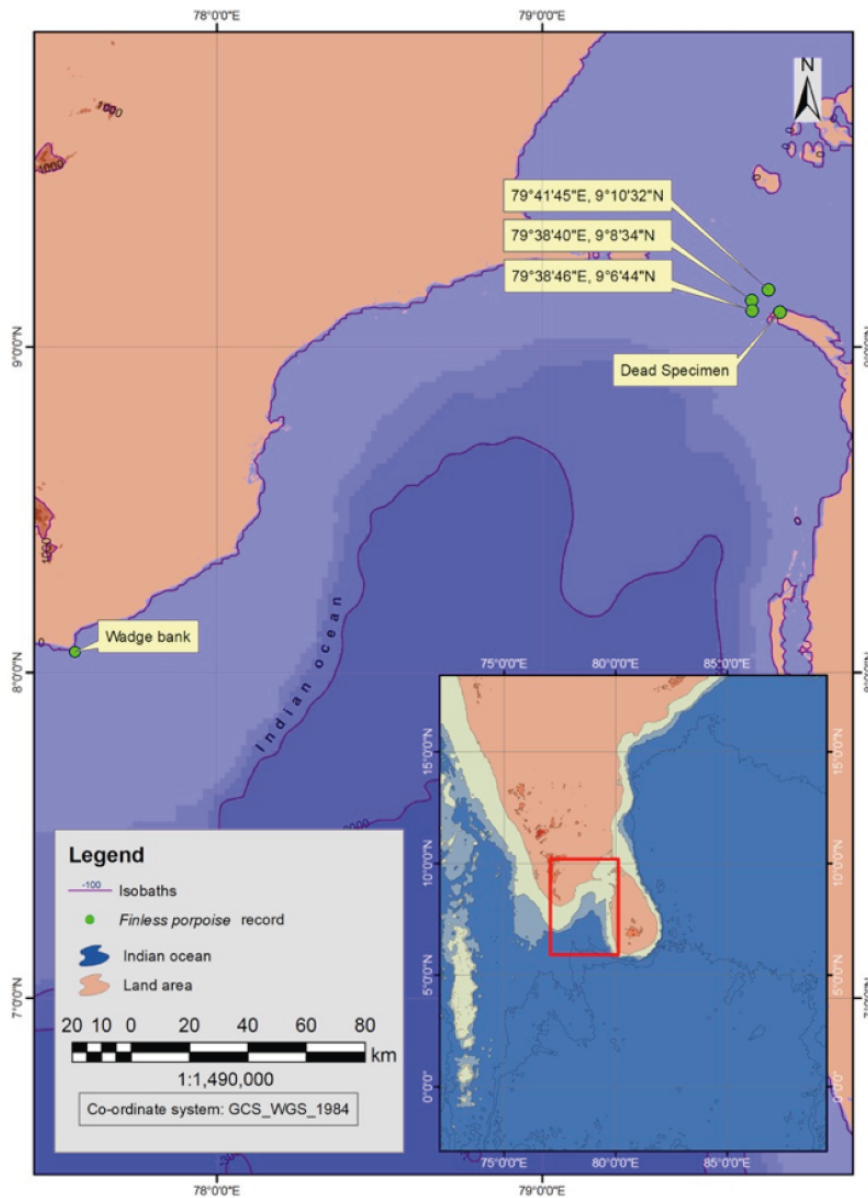


Figure 1. Map depicting the current and historical records of Indo-Pacific Finless Porpoises in Sri Lanka.

the each side of the upper jaw and 19 in the lower jaw. The animal appeared blackish-grey dorsally with the throat to belly region being grey with a cream tinge.

The occurrence of *N. phocaenoides* in the Gulf of Mannar and Palk Bay is not surprising. Habitats such as the shallow estuaries and bays in the study area are ideal for the species. The species is also present along the southeast coast of India just 30km away (see Jefferson & Hung 2004). The previous lack of scientific records in Sri Lanka may have been due to the war that prevailed there for three decades, rendering the northwestern seas unavailable for research.

According to anecdotal reports from fishermen we interviewed, the animals prefer shallow waters and groups move to and from the Indian side of Palk

Bay. Some fishermen reported that they had seen this species around the waters of the offshore islands of Adams Bridge in Sri Lanka. Further, the species regularly got entangled in gillnets used by fishermen, albeit in small numbers.

The Indo-Pacific Finless Porpoise, although definitely occurring in Sri Lankan waters, appears uncommon and potentially at risk. The area of porpoise occurrence is also the most heavily-used part of the bay and has the highest volume of boat traffic. Fishing pressure is heavy and both multi-hooks and gillnets are employed. Alarmingly, illegal dynamite use and the use of leila nets that enable bottom purse-seine fishing also occur in these areas, even in Sri Lankan waters. In addition, there is the Sethusamudram Shipping Canal Project

championed by politicians in Tamil Nadu, India, which proposes to link Palk Bay and the Gulf of Mannar by digging a 44.9 nautical mile long deepwater shipping channel. If approved, the project could have devastating effects on the ecological balance of the entire strait between Sri Lanka and India, increasing water turbidity and destroying corals and seagrass beds. The inevitable dumping of dredged material from the Palk Strait and the Gulf of Mannar into deeper waters would endanger those areas as well; these are havens for species such as Dugongs, Indian Ocean Humpback Dolphins, and Indo-Pacific Finless Porpoises, all of which are species at risk (see Marsh 2008; Reeves et al. 2008; Wang & Reeves 2012).

The fact that the species and other endangered species of marine mammals are regularly encountered off the southern coast of India indicates that a cross boundary research initiative between Indian and Sri Lankan scientists, simultaneously focusing on the conservation of the species is essential. We believe, through such an initiative, a more holistic approach could be adopted when studying and conserving the species, which could then be expanded to encapsulate many other marine species and ecosystems.

Furthermore, we hope this paper will assist in the formulation of policies to conserve the marine biodiversity of the region and further direct surveys and community-based conservation action plans.

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