Recent record of Indo-Pacific Hump-backed Dolphins (*Sousa Chinensis*, Osbeck, 1765) from the coastal waters of Andhra Pradesh, India

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Received 03 February 2017; revised 30 March 2017

A school of seven Indo-Pacific Hump-backed Dolphins were observed during a boat survey of land cover characterization and sea surface temperature data collection in the coastal waters adjoining the Coringa Wildlife Sanctuary. Notes were taken on the number, coloration, behavior and geographic location of the school of the cetaceans. This note confirms presence of *Sousa chinensis* in the northern part of the East Coast through direct sighting after more than two decades.

**Keywords:** East Coast, Coringa Wildlife Sanctuary, Indo-Pacific Hump-backed Dolphin, direct sighting

**Introduction**

The Indo-Pacific humpback dolphin has wide distribution range in tropical water from south-coast of Africa to east-coast of Australia and central China. Generally it inhabits in shallow coastal habitats, estuaries, mangrove forests and deltaic sand bars. Indo-Pacific Hump-backed dolphins are large and soft bodied animals with a thick caudal peduncle. Adults reach maximum size of 2.8 m in length, weighing about 200 kg. They can be easily distinguished from other dolphins by presence of characteristic hump at the base of dorsal fin. There are many variants/ species of Indo-Pacific Hump-backed dolphins reported from different region of Asia-Pacific, however, currently all of them are considered to be part of a single widespread, highly variable species, *Sousa chinensis*. In India reports of stranding, incidental catch and direct sighting of *Sousa chinensis* have been reported from both west coast and east coast regions. Compared to the west coasts, limited information is available on records of *S. chinensis* from the east coast of India. The range distribution maps based on published literature do not confirm any direct sighting of *S. chinensis* from the coast of Andhra Pradesh since 1987 and from the north-east coast of India (comprising Andhra Pradesh, Orissa and West Bengal) since 1999. At the same time, encounter and group size data are unavailable for Andhra Pradesh.

During a recent survey on mangrove species zonation and sea surface temperature in and around Coringa Wildlife Sanctuary (CWLS) in the East Godavari river estuary in Andhra Pradesh, we recorded direct sighting of *S. chinensis*. The present report was on the first direct sighting of the Indo-Pacific Humpbacked Dolphin in the coastal waters of the East Godavari District, Andhra Pradesh. CWLS is a part of the large East Godavari River Estuarine System, formed in the river mouth of the east flowing river Godavari.
Materials and Methods

The Godavari mangroves (321 km²) are the second largest contiguous patch of mangroves along the east coast of India after Sundarbans. The area is rich in floral and faunal diversity with 15 species of true mangroves and sizeable populations of Fishing Cat Felis viverrina, Golden Jackal Canus aureus and Smooth Indian Otter Lutra perspicillata. It is also a nesting site for Olive Ridley Turtle Lepidochelys olivacea. The sanctuary is interspersed with several creeks and water channels, Matlapalem creek, Ramanapalem creek and Bhairavapalem channel being the major channels. However, the area surrounding CWLS has been witnessing industrial development in recent years, which has had some ecological impacts on the ecosystem.

A local fisherman boat was hired for surveying the mangrove species zonation and coastal ground truthing. It was required to foray towards the sea for sampling sea surface temperature. The boat was moving at a speed of 20 Km/hr, in the north east direction from the mouth of the channel locally called as ‘Bellara Karava’. During this survey a school of seven dolphins was observed at the eastern boundary of the CWLS, at the mouth of a stream locally known as ‘Bellara Karava’, at 16° 44’ 43.4’’ N latitude and 82° 21’ 1.93’’ E longitude, (Fig. 1) on 21 February 2015 at 10.45 a.m. Bellara Karava lies at the northern end of the Bhairavapalem channel. The weather was clear and sunny at this time. The sea surface temperature at this time was 28.1°C and air temperature was 30.3°C. The relative humidity was 72% and wind speed was 48 mph. The sighting location is 0.35 Km perpendicularly away from the coastline and 0.85 Km away from the mouth of the Bellara Karava channel. The coast is east facing and frequented with turbulent winds, because of which about 72 m of coast is sandy beach. Mangrove trees of Avicennia marina and Rhizophora spp dominate the coast here, but are often uprooted by turbulent winds.

The school was observed to be wave surfing near the boat and could be easily seen with bare eyes without help of binoculars. The individuals were moving swiftly in the north east direction and resurfacing at a frequency of one time per two seconds. The school was followed for about 10 minutes before they stopped surfacing. Young individuals were observed to be surfing alongside adult individuals. As inferred there are many colour variants which occur within Sousa chinensis population. As can be seen in the photographs, these individuals bear dark-brownish grey coloration and dorsal fin with pinkish tip (Fig. 2). Further the characteristic hump on the dorsal profile also well marked in this population. The individuals were identified as Sousa chinensis.

Figure 1- Location of Direct Sighting of Dolphin on the coast of Coringa Wildlife Sanctuary

Figure 2: Pictures of Sousa chinensis taken by author from the coast of Coringa Wildlife Sanctuary
based on a visual guide. A recent review on humpback dolphins in India pointed out that population residing in Bay of Bengal along the east coast do not have a prominent hump and are far more pink, but the morphology and colour pattern of the present record is more similar to the population residing in southern east and west coasts of India.

Results and Discussion

This sighting of Indo-Pacific Hump-backed Dolphins is a confirmation of the territorial presence of the cetacean in the coastal waters of Andhra Pradesh, after the last record in 1987. Direct sighting of this marine mammal has not been confirmed or published from the states of Andhra Pradesh, Orissa and West Bengal since 1999. In this regard, this confirmation of *S. chinensis* from the Andhra Pradesh coast is a crucial information in the record history for this species. Hence this record brings to light the upward movement of the dolphins along the east coast as well.

Conclusion

Lack of dolphin sighting reports from this region points to the low abundance and low movement of Indo-Pacific Hump-backed Dolphins in the coast of Andhra Pradesh. Rarity of sightings was evident from the excitement among fisher folk to see the images. However, this report confirms the presence of Indo-Pacific Hump-backed Dolphins in this region.

Acknowledgement

This study is supported by the GOI-UNDP-GEF EGREE Project. Authors thank the Andhra Pradesh Forest Department, EGREE Foundation, UNDP-India, Wildlife Institute of India for their support for this study.

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