

Observation of a subadult olive ridley turtle *Lepidochelys olivacea* from Gahirmatha marine sanctuary, Orissa, India

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KNOWLEDGE of marine turtles is mostly limited to adults and hatchlings. Juvenile and subadults rarely come to the shore and are difficult to observe in the open ocean due to their coloration, small size and agility (Witham, 1980). Therefore any information on juveniles or subadults is generally considered useful among sea turtle biologists as it can shed some light on the mysterious “lost years”.

Olive ridley turtles *Lepidochelys olivacea* are globally distributed and well known for their synchronous nesting behaviour, also called arribada (Spanish for “arrival”) in which several hundred thousand female olive ridleys nest en masse (Bernardo & Plotkin, 2007). They prefer to nest on tropical sandy beaches with major mass nesting beaches in Pacific Mexico (Marquez, 1990), Costa Rica (Hughes & Richard, 1974) and Orissa coast in India (Pandav et al., 2000).

Gahirmatha marine sanctuary (200 44' 57" N, 870 05' 19" E) is the northernmost olive ridley mass nesting rookery in the Bay of Bengal, Orissa and is one of the largest arribada beaches in the world (Bustard, 1976). On 11 August 2010 at approximately 09:00 (IST) a turtle was sighted swimming in the water between Ekakula and Babubali Island (200 44'08" N, 870 03'30" E). Even though sporadic nesting occurs in Orissa coast throughout the year (Dash & Kar, 1990), turtle sighting in the near-shore waters during this season is rare. The turtle was struggling to dive and filamentous algae was attached all over its carapace and head. The turtle was caught and examined for any injuries after hauling onboard a boat using a scoop net. The turtle was confirmed to be a female olive ridley from its morphometric characters,

as described by Marquez (1990). The turtle was a subadult measuring 44.1 cm curved carapace length (CCL) and 45.4 cm curved carapace width (CCW). The weight of the turtle was approximately 5 kg. The central portion of all the vertebral scutes were slightly elevated. The turtle appeared frail and malnourished. The filamentous algae on its carapace, plastron and head were gently scrubbed using the foliage of *Casuarina* (*Casuarina equisetifolia*). There were no facilities to treat injured or ailing marine animals nearby, neither with the local forest & wildlife department nor with the local veterinary hospital. The turtle was therefore released back to the water after removing the algae from its body (Fig. 1).

To the best of our knowledge this could be the first time a live subadult olive ridley has been recorded from the Gahirmatha Marine Sanctuary. During 1979, Kar (1980) and Dash & Kar (1990) reported three dead subadult olive ridley turtles from Gahirmatha. Pandav et al., (1995) reported two dead subadult olive ridley turtles from the sanctuary in 1995 (Table 1). During December 2009 a carapace of a juvenile olive ridley measuring 21 cm CCL and 19.5 cm CCW was found washed ashore on the beach of Babubali Island (Satyaranjan, Pers. observ.) (Fig. 2).

Subadult green turtles (*Chelonia mydas*) are known to migrate along with the adults to some breeding grounds (Cornelius, 1976; Meylan, 1982). We speculate that a similar event occurred on this occasion for the olive ridley that we encountered. It may have joined the adults during the breeding migration from feeding grounds and due to its ill health, may have stopped its return migration. Currently we do not have an explanation for the

Year	Number	Month	Fate	Life stage	CCL (cm)	CCW (cm)	Source
1979	3	April	Dead	Sub-adult	46.5	-	Kar, 1980
		October	Dead	Juvenile	22	16	Dash & Kar, 1990
		October	Dead	Juvenile	20	15	-do-
1995	2	March	Dead	Sub-adult	57	56	Pandav et al, 1995
		April	Dead	Sub-adult	58	57	-do-
2009	1	December	Dead	Juvenile	21	19.5	Present reporting
2010	1	August	Alive	Sub-adult	44.1	45.4	Present reporting

Table 1. Details of subadult and juvenile olive ridley turtles recorded from Gahirmatha marine sanctuary.

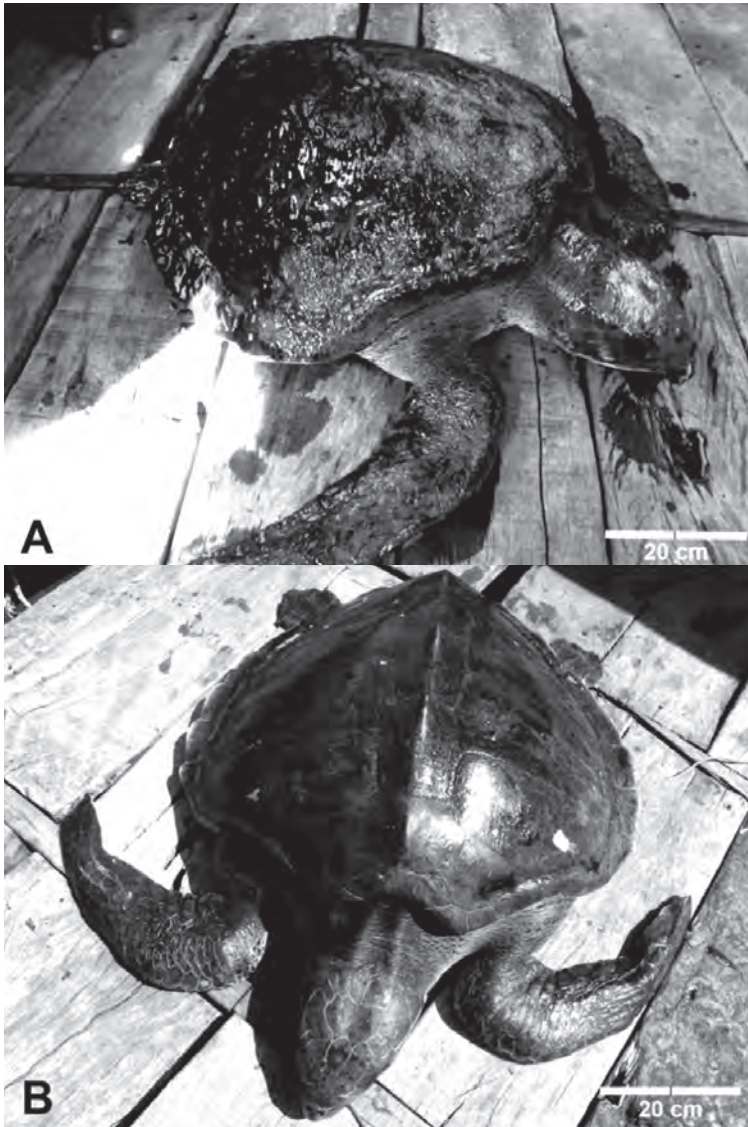


Figure 1. Live subadult olive ridley from Gahirmatha marine sanctuary onboard boat. A - turtle with algae all over its body. B - Cleaned turtle ready for release. Photographs by Satyaranja Behera.

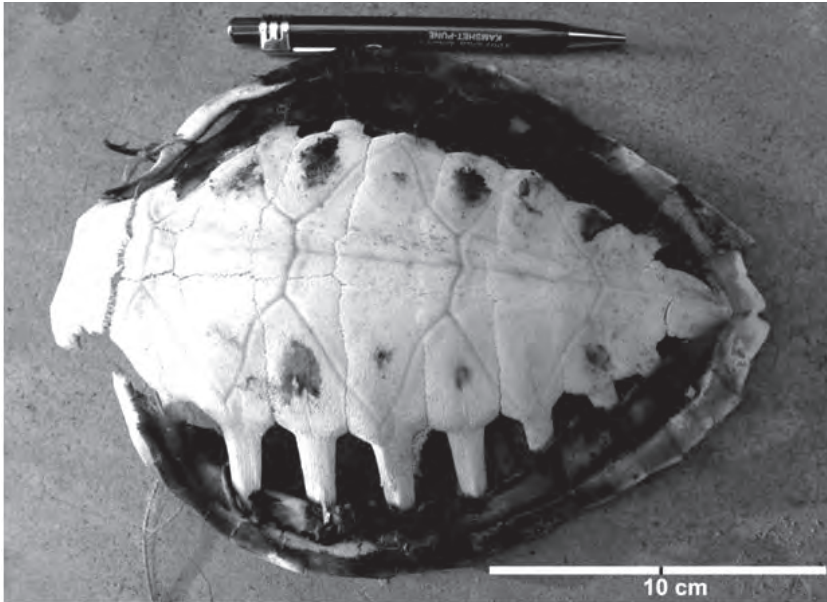


Figure 2. Stranded carapace of juvenile olive ridley from Gahirmatha marine sanctuary. Photograph by Satyaranja Behera.

presence of a juvenile olive ridley turtle in the adult's breeding ground however future studies in the near and offshore areas of the sanctuary may provide some interesting observations on the elusive lives of juvenile and sub-adult olive ridley turtles.

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