

Letter to the Editor

Observations of Olive Ridley turtles (*Lepidochelys olivacea*) along the northern shores of Puducherry, India

Pradheeps Muthulingam¹, Sidharth Ramachandran², Hariharan Lakshmanan³

¹Department of Ecology & Environmental Sciences, Pondicherry University, Puducherry, India.

²Puducherry, India.

³ Assistant Professor, Kongu Engineering College, Tamilnadu, India.

Eastern coastal regions of India are renowned for their marine turtle nesting beaches. The Gahirmatha beach of Orissa (Figure 1a) is one of the few remaining places where 'arribadas' or mass nesting of Olive Ridley turtles (*Lepidochelys olivacea*) occurs. Along the Coromandel coast of Tamilnadu and Puducherry, the nesting beaches are spread from the Chennai coast to Point Calimere (1). Travelling south 100 kms from Chennai one arrives at Puducherry, a union territory situated in Tamil Nadu. It is spread across an area of 492 Km² and comprises 4 districts namely Puducherry, Karaikal, Mahe and Yanam. The Puducherry region is the largest of all four, and lies on the east coast, between 11° 42' - 12° 30' N, and 76° 36' - 79° 53' E. The coastal length of the Puducherry region extends for as much as 45 kms. Plants such as beach morning glory or *Ipomoea pes-caprae* (Linnaeus and R. Br. 1818), ravan's mustache or *Spinifex littoreus* (Burn.f. and Merr. 1855) and papyrus sedges or *Cyperus arenarius* (Retz, 1786) are the coastal flora found in abundance here and serve as the natural nesting sites for sea turtles, such as the Olive Ridley (*Lepidochelys olivacea*; Figure 1a), Leatherback (*Dermochelys coriacea*) and Hawksbill (*Eretmochelys imbricate*) turtles. The conservation status of these turtles is as Vulnerable (Olive Ridley, Leatherback) and Critically Endangered (Hawksbill) according to the IUCN Red list of Threatened species. Because of this, the importance of awareness and conservation of turtles especially in this area is critical.

Earlier observations made by researchers, fishermen and wildlife enthusiasts in Puducherry identifies that Veerampattinam, Thengaithittu, Panithittu in the southern shores of the state as having wide shore areas with rich coastal vegetation and where most sightings were recorded when compared with the beaches in the northern shores of Puducherry (6). The nesting seasons for Olive Ridley turtles are unpredictable but nesting at

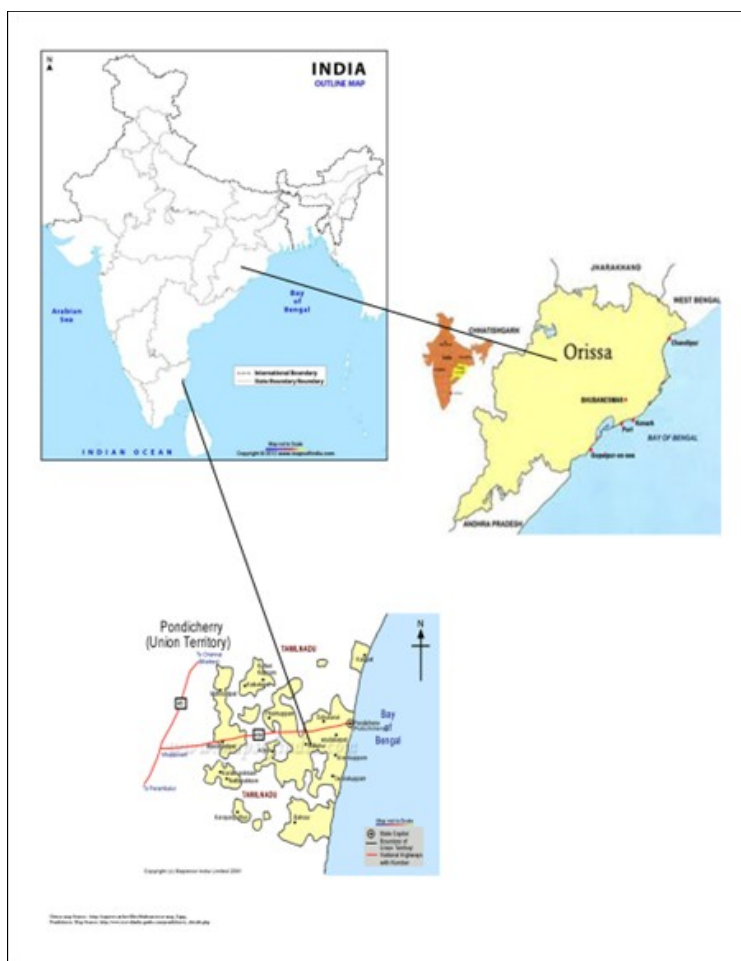


Figure 1a: Map of turtle nesting sites in India (Sources- travel India guide; Google & Google maps)

'Arribadas' at Gahirmatha appears focused between December and March. So in 2011, between the months of January-March, we monitored a 3 km stretch of Pillaichavadi and a 4 km stretch of Chettikuppam beaches located on the northern shores of Puducherry region (Figure 1b). On the 6th January we spotted an adult female Olive Ridley turtle nesting on the Pillaichavady beach (Figure 2a). It moved gradually to the shore to find a place to deposit the eggs (Figure 2b).

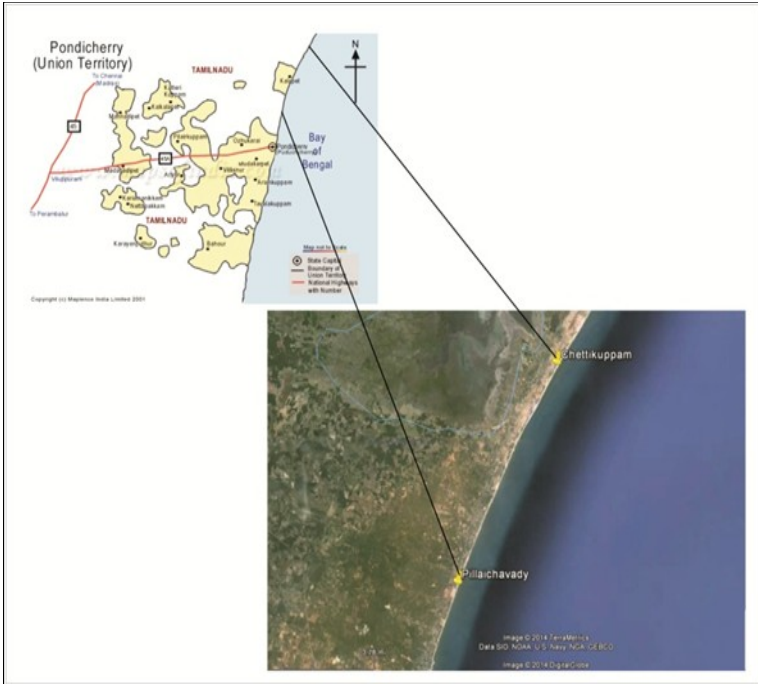


Figure 1b: Observed sites of turtle nesting in Puducherry, India.
(Sources- travel India guide; Google & Google maps)



Figure 2a: An Olive Ridley turtle making its way on shore to nest.
Photograph reproduced with permission.



Figure 2b: Eggs from the recent nesting. Photograph reproduced with permission.

It took 35-40 minutes to finish depositing the eggs which was then followed by concealing them with sand and vegetation such as beach morning glory.

During our observation period we recorded one dead Olive Ridley turtle (Figures 3a, 3b), which was contused on its ventral surface. Throughout our 21 day observation period we spotted the turtles only twice. Villagers from the local communities stated they have noted a decline in nesting comparatively over the years. This in the face of reported increases in mortality across these regions (4). Also, these regions are under severe threat due to environmental issues such as rising sea levels and coastal erosion (2, 3, 5). Despite this, however, in most cases turtle mortality is due to fishing, anthropogenic activities (littering) or predation by dogs and jackals. Meanwhile, the consumption of eggs by the



Figure 3a: A stranded carcass of an Olive Ridley turtle dorsal view. Photograph reproduced with permission.



Figure 3b: A stranded carcass of an Olive Ridley turtle ventral aspect. Photograph reproduced with permission.

local people and habitat encroachment by the planting of beach oaks or *Casuarina equisetifolia* post tsunami to try to create a natural wall to lessen the impact of tsunamis and cyclones, have become a major threat to turtle nesting habitats (1, 7). At several locations in the southern shores, incidence of turtle eggs poaching have been reported by the local people. This demonstrates the need for immediate action to initiate awareness among the state government and local communities about turtle conservation and set up hatcheries on the Puducherry beaches to conserve these breeding areas.

References

1. Bhupathy S. Monitoring of marine turtles along the Kerala and Tamil Nadu coasts. *Indian Ocean Turtle Newsletter* 5:1-6. 2007.
2. Diana. Quiet's wall crumbles into the sea. *Auroville today*. pp. 3. 2010.
3. Fish MR, Cote IM, Gill JA, Jones AP, Renshoff S, Watkinson AR. Predicting the Impact of Sea-Level Rise on Caribbean Sea Turtle Nesting Habitat. *Conservation Biology* 19: 482-491. 2005.
4. Kurian A. Marine turtles along the Indian Coast, Distribution, Status, Threats and Management Implications. *Report to the WWF, India*. pp. 23. 2013.
5. Mohanty PK, Panda US, Pal SR, Mishra P. Monitoring and Management of Environmental Changes Along the Orissa Coast. *Journal of Coastal Research* 24(2A): 13-27. 2008.
6. Poaching of turtle nests rampant. *The Hindu* 2011. <http://www.thehindu.com/news/national/tamil-nadu/poaching-of-turtle-nests-rampant/article2142776.ece>. Accessed on July 14, 2013.
7. Tripathy B, Shanker K, Choudhury BC. Important nesting habitats of olive ridley turtles *Lepidochelys olivacea* along the Andhra Pradesh coast of eastern India. *Oryx* 37(4): 454-463. 2003.