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NESTING SITE AND HATCHING OF THE HAWKSBILL TURTLE ALONG TIRUNELVELI COAST OF TAMIL NADU*

In the year 1975, the Central Marine Fisheries Research Institute began regular investigations on turtles as a research project. As a part of this programme mapping of the nesting sites of turtles along south Tamil Nadu Coast including the islands of Gulf of Mannar was undertaken. In pursuance of this study, every year during the nesting season in this area, from September to early February periodically walking trips in the night hours were made along the coast, backed by the knowledge accumulated over the past by the local fishermen. Even though there are evidences of turtle nesting all along the coast of Tirunelveli and Kanyakumari Districts the core area of nesting is demarcated as the stretch between Manapad and Periathalai, villages 20 km south of Tiruchendur.

This stretch of seashore between the villages aforementioned is about 8 km long and is very much jagged with the presence of sandstone formations. The seashore either stretches flat landward to some 60 m or rises to a height of 9 m abruptly from the high tide water mark. In other locations the beach is 1 m high from the sea level without a slope. Owing to this condition there are relatively a few patches of sea shore which is gradually sloping up to allow a turtle to climb up from the sea and crawl beyond the high tide water mark.

From the night trampings carried out by the Institute staff it became known that olive ridleys usually were nesting in this belt and the season almost coincides with that of Madras Coast. From our observations it became known that olive ridleys seem to be less shy as evidenced by their selection of nesting sites right in the fish landing centre of Periathalai or Manapad which are ever pestered by stray dogs round the clock. During the period of our observation it was a matter of routine with the local fishermen to capture the egg laying turtle which unwittingly chooses the fish landing centre as their nesting site by overturning them and later butchering them. The eggs were boiled and sold for five paise each. It has been estimated that as many as 40 turtles were captured on the shore when they were laying eggs. Now owing to the intervention of Wild Life officers this method of easy capture of turtles is being phased out.

On 28th December, 1980, a nest with 103 eggs was noticed at about 0230 hrs on following the track left by a turtle. The eggs were found to be different from those of olive ridley. They were dirty white in colour as opposed to olive ridleys eggs which are bright white, 30 to 35 mm in diameter and weighing about 25 gm each. Upon seeing the difference in colour and size of the eggs, they were transported in a 50 litre plastic storage bin with sand from the seashore to Tuticorin Research Centre of CMFRI, 60 km away by jeep. Owing to the terrain of the seashore and poor condition of the road, the eggs had been subjected to heavy jolting.

The very same day the eggs were burried near the sea in a rectangular pit with coarse sand. The eggs were evenly spread in two tiers. The pit was 50 cm deep and was just one metre away from the high tide water mark. On rainy days the pit was covered with water proof canvass as the ground was clayey without the possibility of good drainage of rain water. On hot days in February sea water was sprinkled over the pit. On 23.2.81 that is, after 57 days, the first batch of hatchlings of hawksbill turtles *Eretmochelys imbricata* emerged as indicated in the following Table. In total 63 hatchlings came out bringing the rate of hatching to about 63 per cent.

Date	No. of hatchlings		
	Morning	Evening	Total
23-2-'81	5	4	9
24-2-'81	10	6	16
25-2-'81	9	8	17
26-2-'81	0	8	8
27-2-'81	3	2	5
28-2-'81	4	0	4
1-3-'81	2	0	2
2-3-'81	2	0	2
	35	28	63

It is believed that heavy jolting of eggs during transport, clayey soil of the pit where they were buried and sprinkling of water on eggs must have had some effect on the hatching rate of the eggs.

It was interesting to note that all the hatchlings did not come out on one day or two but through eight

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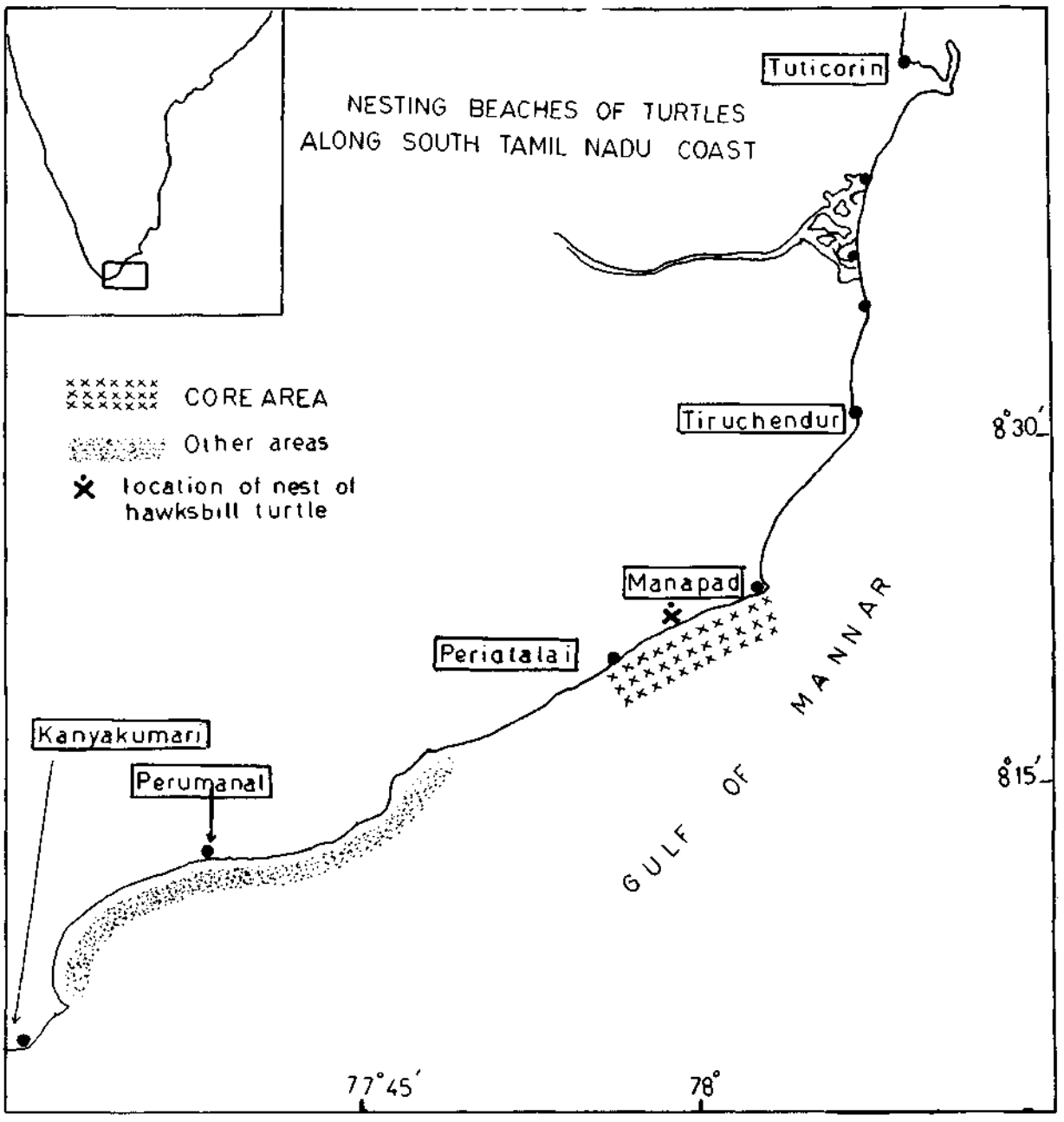

days. Young ones emerged from the pit either in the morning or in the evening between 1600 hrs and 1800 hrs. They moved away from the pit in all directions.

The colour of the carapace of the hatchlings was chrome yellow with brown margins. The carapace margin was smooth, not serrated as seen in adults, and scutes on carapace were fused, not imbricated. The plastron was yellow. When released into plastic tubs with 10 cm column of water the hatchlings showed much agility and soon they began to float with the front flippers tucked under the plastron as if dead, probably to conserve their energy as their intake of food had not begun. Measurements were made before releasing them into the sea.

Carapace length	35 mm
Carapace width	26 mm
Weight	12 gm

A few of the hatchlings were kept in the laboratory for studies and the rest were released into the sea from the nearby island Karaichalli Tivu where coral reefs and sea weeds are available.