

PRELIMINARY OBSERVATIONS ON THE NESTING OF THE  
OLIVE RIDLEY SEA TURTLE  
(*LEPIDOCHELYS OLIVACEA*) ON THE MADRAS COAST,  
SOUTH INDIA

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**ABSTRACT:** As part of a long-term programme to protect the nesting populations of the olive ridley sea turtle (*Lepidochelys olivacea*) and their nesting grounds along the east coast of India, a hatchery was established near Madras in the winter of 1988-1989. Nests were collected and brought to a hatchery to be incubated in near natural conditions, and the hatchlings released upon emergence. 8,625 eggs, representing 69 clutches, were collected and 5,725 living hatchlings obtained, indicating a hatchling success of 63.38%. Mean clutch size was 126.83 and incubation period ranged from 49-52 days. During the 1988-1989 season, nesting peaked towards the end of January.

THE olive ridley sea turtle (*Lepidochelys olivacea*) is the commonest species of sea turtle nesting on the east coast of India. In Tamil Nadu, this species is referred to as *sith aamai* or *kadal aamai*. The biology of the species in the region has been studied by Valliappan and Whitaker (1974), Biswas (1984), Silas (1984), Biswas *et al.* (1977), among others. Nevertheless, data on reproductive biology and other key facets of its natural history is scant.

A conservation programme was started in 1989 at Madras, Tamil Nadu, by the Students Sea Turtle Conservation Network (SSTCN), to protect the nesting populations of the olive ridley and the nesting grounds along the east coast of India. The area selected was a 30 km stretch from the Adyar estuary to the Madras Crocodile Bank Trust (13° N, 80° E). The site selected for the sea turtle hatchery was Neelangarai, adjacent to the Tamil Nadu Fisheries Department Prawn Hatchery, approximately 20 km south of Madras City. It was chosen for its accessibility to the city and availability of basic amenities. An account of the programme is given by Abraham (1989).

NEST COLLECTION

The Madras coastline is sandy with few or no rocks. Dominant vegetation includes *Ipomoea*, *Pandanus* and *Spinifex*, and part of the coastline is backed by *Casuarina*, an exotic species, introduced for fuel wood and as a wind-break. There is one fishing village every 1.3 km and an expanding urban population.

The survey area was patrolled on foot every night between December 15, 1988 and February 28, 1989. Nests were located from the tracks of turtles without the use of probes. Eggs were transferred to the hatchery in soft cloth bags and attempts were made to minimize stress and jolting during transport. Nests were relocated within 3-4 hours of laying in pits 46 cm deep. Each nest was numbered and kept under observation throughout the incubation period. On appearance of a cup-shaped depression on the sand over the nest, a wicker basket was placed over it. Nests were allowed to remain undisturbed for a period of 24 hours after the emergence of the first hatchling. On excavation the remaining hatchlings were collected and released, at a distance of 6 m from the water line.



A major threat is the use of gill and trawl nets. During the 1988-1989 season, 10-12 olive ridley carcasses were seen on the coast in the study area, which were presumed to have drowned in fishing nets.

The other cause for concern is the encroaching urban population which could be detrimental to the sea turtle nesting habitats and the coastal environment in general. Tourism, pollution and sand mining activities are increasingly evident on the Madras coast, and beach lighting is on the increase; the deleterious effect of these developments on hatchlings and nesting sea turtle populations is well known.

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