

**Status of Marine Turtles
in the Gulf of Mannar, India**

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ABSTRACT. - *Lepidochelys olivacea* was the most frequent sea turtle documented in the Gulf of Mannar during 2000-2001, whereas during the 1970s it was *Chelonia mydas*. Reduction in overall proportions of *C. mydas* and its size classes is attributed to exploitation of eggs, turtles, and incidental catch in fishing gear.

Five species of sea turtles occur in the Gulf of Mannar off the southeast tip of India, including the olive ridley (*Lepidochelys olivacea*), the green turtle (*Chelonia mydas*), the loggerhead (*Caretta caretta*), the hawksbill (*Eretmochelys imbricata*), and the leatherback (*Der-mochelys coriacea*). Our study focuses on the status of marine turtles in Gulf of Mannar with particular emphasis on the changes in the population of green turtles, which occur there in considerable numbers but whose actual status is poorly documented. The Gulf of Mannar extends from Cape Comorin (lat 9°9'9"N, long 79°26'46"E), and has Dhanushkodi (lat 8°4'40"N, long 77°33'4"E) to about 250 km of coastline (Fig. 1). Extensive coral and

seagrass beds on the northern side and deep sea on the southern side make this area suitable for all 5 species of sea turtles found in this region. Over 20 islands are found in the Gulf of Mannar, including Krusadai and Rameswaram. Turtle fishing was practiced in this area for ages, and turtles were exported to Sri Lanka and other countries until 2 decades ago (Agasthiesapillai and Thiagarajan 1979). Although the export of sea turtles was banned during the early 1980s by the Indian Wildlife Protection Act of 1972 (Anonymous 1991), the subsistence exploitation of turtles continues there even today.

Methods. - We surveyed the beaches south of Tuticorin (70 km) and Rameswaram Island (15 km) bimonthly, from November 2000 to April 2001. At least 10 km was covered during a day's survey, and the sampling was restricted to 0500-0800 hours. The number of tracks and shells of dead turtles found were recorded. We also monitored the fish market of Rameswaram Island and 6 others along the Tuticorin coast. On locating a turtle, we recorded the species and its curved carapace length (CCL). The shells of dead turtles were marked with paint to avoid repeat count.

Results and Discussion. - In this area, fishermen collect turtles using multifilament gill nets. These nets measured over 50 m in length and 6 m in width, and had mesh size from 15 to 22 cm. Entrangled live turtles were taken for consumption, and the dead ones discarded in the sea. Considerable trawler fishing is also practiced throughout this range. Altogether, we observed 178 specimens, including 122 along the Tuticorin coast and 56 in Rameswaram Island (Table 1). In addition, 15 nests (14 on the Tuticorin beach and 1 on Rameswaram Island) were observed. Overall proportion of species showed that

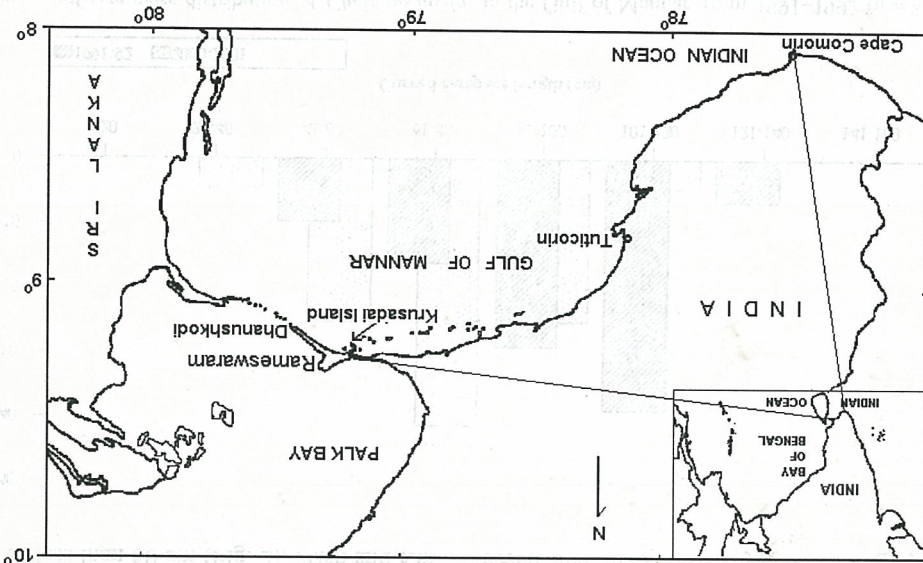


Figure 1. Map of southeast India showing the Gulf of Mannar.