

SEA TURTLES IN THE SOUTH ANDAMAN ISLANDS

Areas Surveyed:

1. The coasts of the main island of South Andaman barring those along the Jarawa Tribal Reserve.
2. The Rutland Island coast including its eastern face,
3. The 12 small islands that form the Labyrinth group which lies off Wandoor, South Andaman.
4. The Twins, two islands situated approximately due east of Wood-Mason Bay, Rutland Island.

Period of Survey: 7 October to 4 November '78.

Prior to the Government ban in October '77 on the killing of sea turtles and on the collection of their eggs, turtles were actively hunted by fishing communities from the small townships of Maymyo and Wandoor.

Wandoor became the largest "turtle depot" and butchering center in South Andaman, where sea turtles that had been speared using hand-propelled harpoons or less frequently, caught in nets or while nesting were brought and carved up before transportation to Port Blair where the meat fetched Rs.3 to Rs.5 per kg. Turtle eggs were consumed locally and occasionally sold for 5 paise apiece.

The turtle species usually killed for meat was (and to some extent still is) the green turtle (Chelonia mydas), as was evident from the presence of 34 C. mydas skulls at Wandoor in September '78, a year after the ban. Juveniles as well as adults were taken. The skull width ranged from 9 1/2 to 13 cms and averaged 11 1/2 cms.

Local estimate of the catch before October '77 range from 5 to 20 turtles during fishing days, the number of which is curtailed mainly by the prevalence of the south-west monsoon. Fishermen of Bengali origin who are reputedly experienced in the use of spears and adept at wielding harpoons state that the heaviest nesting occurs during August but do not state the species involved. At least 3 other species occur in the Andaman sea - the hawksbill (Eretmochelys imbricata), Ridley (Lepidochelys olivacea) and the Leatherback (Dermochelys coriacea).

Hawksbills in South Andaman nest well into October (at least) - 23 sets of fresh hawksbill tracks were found on the Twins, known locally as Kachua Tikeri ("turtle island"). The Twins were the most remote of the areas surveyed but even so fishermen occasionally undertake the 3 to 7 hour journey from Wandoor and other coastal hamlets expressly in order to collect turtles and their eggs. Evidence of this was the presence of a stripped carcass of a green on the Eastern Twin island and many turtle egg shells strewn nearby.

Fishermen hesitate to use nets in the shark infested waters around the twins. On a broad, kilometer-long sandy beach on Rutland Island directly opposite the Twins, both sets of green turtle tracks visible had been made by a turtle lacking the left fore-flipper in all likelihood the result of a shark attack. The time elapsed between the laying of two clutches probably represented an incubation interval for the turtle,

roughly a fortnight. Another green nest site visible nearby but with tracks obliterated may have been excavated during a still earlier nesting venture by the same turtle- if so, she must have first come ashore to nest about mid-September. This evidence is of course too meagre to delineate the green's nesting season in the Andamans.

Also on the same beach was a fresh hawkbill nest and 5 leatherback egg shells scattered over a 75 meter front. Of these 5, 2 were intact and unbroken and though discolored and dessicated, retained their roughly spherical shape thus facilitating a rough measurement of the diameters. One of these contained the remains of a hatchlings' carapace. That the other did not make it likely that the eggs came from different clutches (75 mts of sand carpeted by sparse vegetation and separating the two eggs reinforces this possibility). The two intact eggs exclude predation by man or predator and the likely explanation for their presence on the sand surface is that they were uprooted inadvertently by another nesting turtle of the same or another species. If correct, these presumptions lead one to the exciting possibility that the beach was, sometimes during the past few months, a reasonably heavily nested area used probably by leatherbacks, because these large turtles dig deeper body pits and egg chambers than other species do and are therefore more likely to accidentally excavate other nests. Though suitable as a leatherback nesting beach (being sandy and remote) this beach lies immediately south of wood-mason Bay offered no other signs of digging activity by leatherbacks; but the excavations could have been obliterated during the south-west monsoon (the beach faces west). About 5 kms away were two leatherback nest sites excavated about 2 months earlier, ie in July or August, on a little disturbed beach on Rutland's Southern coast.

About midway between the beaches mentioned were 6 sets of fresh hawkbill tracks on a 1 km wide front. This harrow beach is remote and fringed by tall pandanus. There was evidence of 5 nests. Of these, three had lately been robbed by monitor lizards (V.salvator). Unlike dogs and Jackals, monitors leave behind few if any egg shells. I surprised a 2 1/2 ft monitor as it rested on a turtle nest after eating all the eggs. It was sluggish in making its getaway after the heavy meal. There were abundant monitor tracks on Rutland's beaches and on the larger islands of the Labyrinth group, especially on Tarmugli and Redskin, where nesting occurs as also on Boat Island.

Wild pigs inhabit Rutland Is. but no evidence of predation by them on turtle eggs was found. The relatively heavy nesting on the Twins is at least partly attributable to the absence of monitors there.

Sea turtle nesting also occurs on about 20 small, narrow debris-strewn coves on the rocky eastern coast of South Andaman island from Shoal Bay to Burmanallah, but the density of nesting is low, at least during the survey period. A Lepidochelys nest was found in late October on a narrow sandy cove 1/2 km north of Madhuban. There was also a fresh Ridley nest site and two older nest sites about 2 1/2 kms north of Madhuban. One of these had been raided by humans. The reported penalties for possession of turtle eggs (Rs.5/- per kg) and for the killing of turtles (Rs.50/-) will serve as effective deterrents if the turtle protection laws are enforced rigidly.

Species	No. of eggs per clutch	Egg size, mm (Max. dimension obtainable)	Range in egg size, mm
Hawksbill	139 (range-96-177)	34.3 (avg. of 8 eggs)	33.0-37.8
Ridley	119	36.6 (avg. of 4 eggs)	36.2-36.9
Green	93	41.8 (avg. of 2 eggs)	41.4-42.1
Leatherback ?		50 (avg. of 2 dried eggs)	49-51 (dried eggs)

The above data refers to turtles in South Andaman. Data relating to the green and Ridley turtles are each from a single nest; the hawksbill figures are average values from 4 clutches. The leatherback egg diameter is the average of 2 dry but intact eggs found on a Rutland beach. This is the first definitive evidence of leatherbacks nesting in the Andamans.

The representative figures suggest trends to aid in distinguishing between eggs of the four species. The overlap in egg size of the hawksbill and Ridley eggs prevent size alone being a criterion for distinguishing between eggs of the two species. Clutch size may overlap between any two of the species and is therefore even less distinctive.

S. BHASKAR