

PHASE III - Surveys.

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Introduction

- Thirty-seven islands off the Andaman coast were surveyed over the period 5 Feb - 15 Apr 1993 for nesting by sea turtles. All except five, ^{namely} viz. Aves, East, Smith, Sound and Ross (near Port Blair) are uninhabited.
- Of the thirty-seven, 24 that were surveyed by the Madras Crocodile Bank for the first time have received no previous ^{published} attention relating to sea turtle nesting, though it is likely that ^{earlier} surveys have been conducted by the Forest Department on at least some of these islands.
- Also surveyed were three of the four main nesting areas of the olive ridley on the 'mainland' coasts of North Andaman and of Middle Andaman - those at Coffeadera, Karmatang and Cuthbert Bay.

Findings

- The total number of nests found in North and Middle Andaman excluding Cuthbert Bay and Ramnagar beaches (where the Forest Department had hatcheries) was 536*. Less than 74 of these were nests of the olive ridley. The rest i.e. more than 462 were those of green turtles and hawksbills. Individual totals for the latter two species could not be ascertained.
 - The most important nesting island ^{newly} located during the survey was uninhabited Hump, where on 3 Apr evidence of 48 nests was found. Over 35 of these belonged to green turtles, the rest being hawksbill
- *including an estimated 200 at South Reef island. See page 3.

nests. Six of the 48 nests had visible tracks - those of green turtles - associated with them.

Hump island now stands at par with South Reef, South Brother and Snark as a ^{prime} nesting island for the green turtle in the Andaman Islands, next only to Interview. The island is ringed by a prominent sandy beach about 600 meters long and lies within the Jarawa Reserve, less than 1½ km. off the Middle Andaman 'mainland' - a situation that affords its turtles considerable safety from exploitation by settlers. However, fresh human footprints and a green turtle carapace with a hole in it were present on the beach, evidence that Jarawas on occasion swim or raft across to Hump island during calm seas apparently in order to capture nesting turtles. The ^{is} level of exploitation appears negligible. ~~at A...~~

- On uninhabited Snark island, nesting intensity has been maintained over the 9 years following the 198³ survey. The encircling nesting beach is scarcely 400 meters long. ^aForty-nine nests were counted (on 8 Apr '93), resulting in high nesting density, as was the case on 28 Dec '83 when 39 nests were counted (Bhaskar 1984). At least 15 of the 49 nests were those of green turtles, the remaining being hawksbill nests. Nine green turtle nests had visible tracks associated with them.

- South Reef island was visited twice, 21-22 Mar and 2-4 Apr 1993. During the two-week period 21 Mar - 4 Apr green turtles came ashore only thrice and hawksbills twice. Sand temperatures measured on 22 Mar at nest depth were in excess of 30°C even under Scaevola bushes. Dry surface sand that collapsed into egg chambers being ^{dig} attempted by turtles thwarted at least 7 nesting attempts on these five occasions. A green turtle was tagged on 2 Apr.

116 hawksbill nests were estimated ^{on South Reef} for the period mid-July '92 to 12 Dec '92 (Bhaskar, Phase II report). Assuming that hawksbills then nested ^{at the rate of} one clutch per week upto 4 Apr 1993, we arrive at an estimated 131 hawksbill nests for the period mid-July 1992 - 4 Apr 1993. The Phase II report also estimated 45 green turtle nests for the period mid-July 1992 - 12 Dec 1993. On the assumption that green turtles then made 3 nests every 2 weeks upto 4 Apr 1993, we obtain an estimate of 69 green turtle nests for the period mid-July 92 - 4 Apr 1993. The estimated total for this period on South Reef is 200 nests, the sum of 131 and 69.

- The following is the location-wise breakup of nests found :

Location	Dates of survey in 1993	Total no. of nests
Hump I.	3 Apr	48
South Reef I.	22-23 Mar & 2-4 Apr	200*
North Reef I.	23-25 Mar	13
Latouche I.	24 Mar & 7 Apr	16
Kwangtung I.	7-8 Apr	22
Snark I.	8 Apr	49
Point I.	8 Apr	6
Paget I.	8-9 Apr	2
Reef I.	9 Apr	6
Whitecliff I.	9 Apr	8
West I.	10 Apr	12
East I.	11-12 Apr	9
Landfall I.	12 Apr	15
Pocock I.	12 Apr	6
Coffeederia	12-13 Apr	13**

* estimated
** all olive ridley nests

Location	Dates of survey in 1993	Total no. of nests
Excelsior I.	13 Apr	8
Delgarno I.	13 Apr	23
Trilby I.	13 Apr	15
East Turtle I.	13 Apr	8
Smith I.	13-15 Apr	21
Ross I. near Diglipur	14 Apr	4
Craggy I.	15 Apr	1
Sound I.	15 Apr	17
Karmatang no.9	27 Mar	14**
Overall total		536

** all olive ridley nests.

- Hatchlings emerged from an olive ridley nest at the tourist resort of Corbyns Cove on 23 Feb 1993. Only one nesting turtle, possibly the one that made the nest mentioned above, was observed by hotel staff at Corbyns Cove, in January.
- No nests were found on the following islands that were surveyed, though this does not rule out the possibility of sporadic nesting occurring occasionally:

Island	Date of survey	Island	Date of survey
Tree I. (near Hump)	3 Apr	Thornhill I.	9-10 Apr
Channel I.	12 Apr	Temple I.	13 Apr
Tree I. (near Trilby)	13 Apr	W. Turtle I.	13 Apr
Ross I. (near Port Blair)	13 Mar	Aves I.	5 Apr
Jolly Boys I.	2 Mar	Snake I. (near Corbyns Cove)	5 Feb & 26 Feb
Brush I.	14 Apr	Ogilvie I.	15 Apr

In addition, a prominent sandspit (apparently unnamed) situated to the west of Louis inlet and two rock-and-sand outcrops, one situated south of East Island, the other north of the Turtle Islands were surveyed but showed no evidence of nesting by turtles.

* Island known to be important - (from 11/8/01)

PREDATION OF NESTS

Practically every nest on the following islands had been ^{preyed} ~~predated~~ upon by humans, dogs brought by humans, and monitor lizards :

East I., Excelsior I., Delgarno I., Trilby I. and East Turtle I. Predation on nests was less heavy but still severe on several other islands ^{namely} viz. Point, Paget, Reef, North Reef, Latouche, Kwangtung, Whitecliff, Thornhill, West island, Pocock and Sound.

Factors adversely affecting turtles in the islands surveyed

Predation on eggs and on turtles at islands that are relatively remote from heavily settled areas poses almost as great a problem as that at easily accessible islands because of the absence of sea-going boats ^{and} ~~in the possession of~~ ⁱⁿ the Forest Department and ~~because of a shortage of adequate personnel in it.~~

- The skeletal remains of 14 olive ridley turtles were present in a casuarina plantation that backs the nesting area near the site of the turtle hatchery at Cuthbert Bay. This suggests that protection staff ^{is} spread too thinly even at ~~key~~ areas ^{on} the Middle Andaman 'mainland'.
- Beach sand mining for construction purposes continues at several ^{good turtle} nesting locations. The nesting beach at Karmatang no. 9 is an example.
- Illegal felling of trees on uninhabited islands such as ^{seen at} West I. (~~where about 300 cubic feet of timber neatly sawn into beams was found hidden behind mangroves, awaiting transportation~~) will, if not curtailed, eventually ruin the islands' ~~ecosystems~~ ^{ecosystems}.

REFERENCES

- Bhaskar, S. 1984. Sea turtles in North Andaman and other Andaman islands.
Contract report to WWF-India. 46 pages.
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Final report, phase II. 35 pages

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