

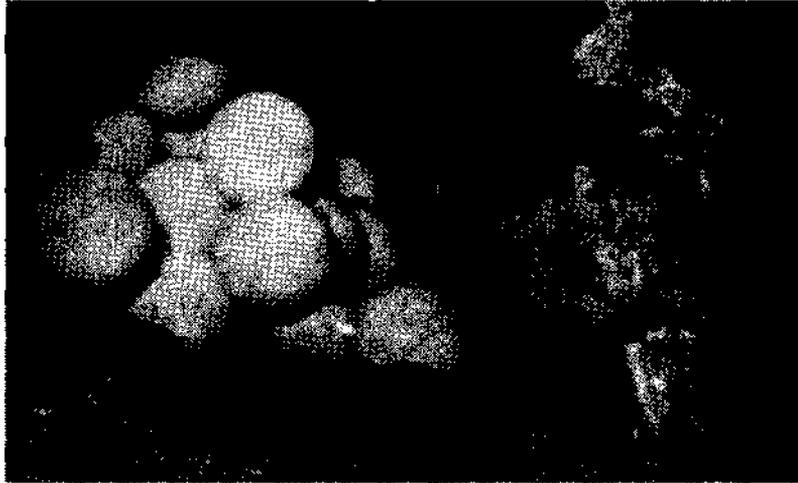
THE VANISHING TURTLE

OF the four commonly exploited sea turtles of our east coast, namely, Olive Ridley (*Lipidochelys olivacea*), Green Turtle (*Chelonia mydas*), Hawksbill (*Eretmochelys imbricata*) and Leatherback (*Dermochelys coriacea*), the olive ridleys and the green turtles are the most severely hunted. Anyone who has visited the Tuticorin market on a Sunday is familiar with the number of green turtles brought there for slaughtering. It is estimated that 3000 to 4000 green turtles are captured annually from the Gulf of Mannar for meat. Besides, quite a few are killed for the calipsee (the light yellowish meat found in patches attached to the plastron) and calipash (the green fatlike meat inside the carapace below the scutes) which are exported to West Germany and United Kingdom. The olive ridleys are exploited for the same purpose on a greater scale from the coasts of Orissa and West Bengal. The other two species are also killed, though in lesser numbers, either for calipsee and oil, or for shell.

Thus indiscriminately killed are not only the adult turtles. A startling number of their eggs are regularly removed from the nesting grounds and sold in markets all along the coast. Though these reptiles are aquatic — confining to the sea for all their activities — they compulsively resort to land for egg-laying. The females periodically climb the unfrequented sandy shores and leave their eggs buried, to be hatched by warm sands, in nests easily locatable by their

own foot-prints. (It is, however, interesting that she would try, and would succeed to a certain extent, to confuse the nest-robbing animals by habitually crawling around a few spots in the vicinity and creating a few pseudo-nests that

mals levy a heavy toll on the eggs and hatchlings. A few metres' journey the hatchlings have to perform while they scramble for the waterline is replete with disaster, as they may, more likely than not, fall an easy prey to the ever-vigi-



The turtle laying eggs.

would simulate for all appearance the true nests, before retreating to water.) Apart from this large-scale removal of eggs by man, the birds and mam-

lant carnivorous birds and mammals. With this continuous slicing away, as it were, a block from its two ends, the turtle today is fast diminishing to the point of extinction.



TO THE KINDLY WAVES: The freshly hatched out youngones scramble down the shore when released.

How to prevent the depletion of this valuable living resource of our sea was for some time a tormenting question harrying our marine biologists and conservationists alike. The Madras Snake Park Trust have been collecting the turtle eggs from the coasts in and around Madras for the three years starting from 1973-74, incubating them in a hatchery and releasing the offsprings to the sea. Recently, a huge ridley's rookery in Orissa coast was protected by the State Forest Department there, and it is of some relief to hear that quite

a large number of eggs were saved by this timely action.

IN 1976-77, the CMFR Institute, launched a detailed programme, with the valuable collaboration of Mr. Romulus Whitaker of Snake Park Trust of Madras, for hatching eggs. During the brief period from 23-1-77 to 12-2-77, 14,546 eggs collected from 132 nests were kept in a hatchery set up at Thiruvammiyur, Madras, of which 8800 were hatched and the hatchlings returned to sea after an average incubation period of 48 days.

During the end of 1977, in answer to the plea from the marine ecologists and conservationists, the Tamil Nadu Forest Department placed the sea turtles on Schedule I of the Wild Life Act protecting by statute the nesting grounds of the sea turtle in the State, thus making the unauthorised egg-collection illegal.

In the beginning of 1978, the Institute has taken up the investigations on the distribution-biology, feeding habits, reproduction and behaviour of marine turtles as a full-fledged project, under the personal leadership of Dr. E. G. Silas, Director, with location of nesting grounds and breeding seasons, collection of data on landings, and biological studies to enable taking up turtle farming, as its objectives of practical utility. Obtaining permission from the Chief Wild Life Warden, Tamil Nadu Forest Department, to collect 20,000 eggs to carry out these investigations, a hatchery was set up at Kovalam Field Centre for hatching olive ridley eggs. So far this year, 11,423 eggs were collected from the stretch of coast between Adayar and Kovalam, out of which 5386 — 47% — were hatched after 45-50 days and hatchlings released to sea. Fifty of these hatchlings were tagged — with green, button-type plastic tags bearing numbers, respectively from 5001 to 5050 — prior to release. A few are kept in aquaria in the laboratory for experiments. If everything goes shipshape according to plan, by the completion of the 5-year period of the project we may be able to go a long way in rehabilitating this precious marine resource.

Seaweeds Contd.

of the different products that could be obtained from each species and the probable uses they could be put to.

At present, the seaweeds (chiefly, the agarophytes) are collected on commercial scale from the neighbouring villages of Mandapam, namely, Vedalai, Pamban, Keelakarai, Periyapatnam, Pudumadam and Ervadi, and are sent mainly to the Cellulose Products of India, Ahmedabad. As estimated by the scientists at Mandapam, Shri. V. S. Krishnamoorthy Chennubhotla and colleagues, who are presently involved in the projects relating to the seaweed investigations, 20 to 25 thousand tonnes of fresh seaweed are harvested annually from this region. Fortunately, as the harvesting has strictly been seasonal, and as nature has more or less been favourable for the past few years, there is no need of apprehen-

sion of an immediate overexploitation. But, the nature could just as easily turn against us; and may be, the need might go up—there are visible signs of a growing interest for seaweed-based industries—then the only way to meet the demand would be by culture methods.

The culture experiments carried out so far, in both Palk Bay and Gulf of Mannar sides of Mandapam, yielded good results: on low-cost indigenous infrastructure, under properly monitored conditions, different species have grown to harvestable size in considerably less time than they would normally take in their natural habitats. Encouraged by these results, a pilot project has already been initiated and is presently well under way, to farm intensively the chosen species in larger areas.