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tropical countries worldwide).

I am interested in collecting more information on the use of turtles in medicines anywhere in the world. If you can supply any data on medicinal uses or quantities of turtles being utilized in your area, I would appreciate hearing from you.

Literature cited

Shibata, Y. (1975): The zoological origin of the imported crude drug "Gui-Ban" from Hong Kong (Reptilia: Testudinata) Bull. Osaka Museum Nat. Hist. (29): 73-80.

Nanking Pharmaceutics School 1961. Materia Medica. Peoples Sanitary Science Publ. Co. Peking.

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Size of the Travancore tortoise *Geochelone travancorica*

Smith (1931) records that the carapace length of *Geochelone travancorica* corresponds to that of *Geochelone elongata*, growing to 275 mm in length with a breadth of 165 mm and 105 mm depth.

In Calcutta Zoo *G. elongata* were measured at 330 mm. Recently a carapace shell of *G. travancorica* was collected in Kerala measuring 300 mm notch to notch length, 309 mm total carapace length, 199 mm breadth and 130 mm depth.

References

Smith, M.A. (1931): Fauna of British India Vol. 1

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Sea turtle survey on Suheli Island

Satish Bhaskar, sponsored by World Wildlife Fund-India, is on Suheli Island in the Laccadive group to see the sea turtle nesting season through. There is no fresh water on the island, or contact with the mainland, though the coast guard will look out for distress flares during their patrols. Satish is spending 5 months on Suheli on his own and reached the island in early May. His wife has had one letter from him; found in a bottle by a Sri Lanka fisherman who forwarded it to her. Tracing its course we find that the 'bottle-letter' dated 3rd July has travelled a distance of about 500 miles in an estimated interval of 24 days. The letter reached Sri Lanka around 27th July.

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I approached to within 3 feet of it. The turtle's behaviour like that of the one I had encountered off Bangaram, may approximate a Chelonians' reaction to the approach of large predators like sharks.

30 yards further, a large turtle, probably a Green, was hazily visible through my mask as it swam 30ft. from me. I tried getting closer but it was wary of me and maintained its distance. Half a minute later it glided away leisurely, in a manner quite unlike that of the frightened young Hawksbill.

A fisherman here states that within a single clutch laid by a Leatherback are found eggs of different sizes - some large, some small. The latter probably refer to the small yolkless eggs that are known to be laid by Leatherbacks along with normal eggs (Carr and Ogren, 1959).

On 30th January '78, at least five turtles were seen as they surfaced close to shore, near Minicoy's northern end. Two were very small, I entered the water (5ft. deep here) to observe them closely. A small turtle surfaced 20ft. from me. I finned towards it but it stayed away and soon swam off.

A big Green turtle appeared a few feet away, its 4-foot long carapace appearing far larger when seen underwater through my mask. The turtle angled its carapace towards me and swam away quietly. The tide was just past high.

From the rocky eastern shore of Minicoy close to the island's northern extremity, a young fisherman named Hassan showed me about 20 turtles near the reef in the course of an hour. Some were large, others appeared to be no bigger than 10". Hassan states that around Minicoy, Green turtles are more numerous than Hawksbills.

On many occasions, one could see turtles caught within the curl of the breakers that pound the reef edge barely 100ft. from shore. No turtles actually got carried over the "falls", however.

On the island's western side, Hassan caught a mature Hawksbill female using a 3-pronged foul-hook tied to a nylon line. The hook had bitten into a foreflipper, causing a slight bleeding wound there. Having bought the turtle from Hassan, I released it back into the sea the next day. It swam away vigorously. A gentleman residing near the lighthouse on Minicoy's southern end had, the previous year, seen three dead turtles without any apparent external injuries, lying on shore. trawl nets are not used at Minicoy.

S U M M A R Y

Man is steadily encroaching on the nesting beaches of the three species of turtle - the Green, the Ridley and the Hawksbill, that commonly occur in Lakshadweep. Plans are in the offing to colonize the presently uninhabited islands of Suheli. If this occurs, the last big nesting beach of turtles in India's Arabian sea islands will have rendered barren.

The sporadic nesting that may continue to occur will inevitably dwindle and disappear in view of the islands' spiralling population and of the fact that on almost all island turtles are zealously hunted for their fat and shell.

A substitute for turtle fat which is presently used to water proof country boats, should be found and made cheaply and readily available to the islanders. The law regarding killing of turtles must be strictly enforced.

Suheli's turtle population faces an immediate threat on two counts: the projected erection of a light trestle on Suheli Valiyakara, which if implemented, will deter Green turtles from nesting there; and the fencing off of Lakshadweep's most heavily nested turtle beach to make way for a few coconut trees. Legislation should be passed to prevent these from happening, and steps taken to re-plant natural vegetation (Pennisetum, Scaevola) on this and on other beaches similarly denuded, in order to facilitate nesting by Green turtles in numbers as in years gone by. If sea turtles are ever again to become a resource in these islands these simple recommendations should be considered in the general development plans of the islands. For example, the clearing of native vegetation for coconut planting at the beach edge and for rat control must be urgently examined both from the erosion and turtle nesting standpoints. Further detrimental activities such as coral and coral sand mining must be strictly guarded against both for the survival of the wealth of marine life as well as survival of the islands themselves.

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MARINE TURTLES IN INDIA'S LAKSHADWEEP ISLANDS

Three sea turtle species - the Green Turtle (Chelonia mydas), the Hawksbill (Eretmochelys imbricata) and the Olive Ridley (Lepidochelys olivacea) - commonly occur and nest in the Lakshadweep Islands which lie 120 to 200 miles off India's south-west coast. The rare Leatherback (Dermodochelys coriacea) is occasionally met with by fishermen; rarely does it come ashore to nest.

Of the ten inhabited and sixteen seasonally uninhabited islands that form the Union Territory, nesting appears to occur in substantial numbers only on four islands of the latter category - Suheli Valiyakara, Suheli Cheriyakara, Tinnakara and Bangaram. Surveyed during the period October '77 to January '78, the number of old nesting pits of Green turtles visible were found to be 200, 15, 40, and 15 at the respective islands. Nesting was sporadic on Suheli Valiyakara and on Tinnakara during the period October-January; the main nesting season is believed to occur during the months of the south-west monsoon, June to September.

Of the inhabited islands, Kadmat, Androth, Agatti and Minicoy appear to be the most favoured by nesting turtles. During survey visits averaging four days at each island, the number of egg-laden nests located were, respectively, 4, 4, 2 and 1; of these 11 nests, 7 had been made by Olive Ridelys, 3 by Hawksbills and one, at Minicoy, by a Green turtle. Off Minicoy, which is the southern-most in the group, Greens and Hawksbills are commonly sighted the year round, close to shore. The Ridley appears to be absent from Minicoy waters, but is quite common elsewhere, particularly at the 5 northern-most islands (the Amindivi group).

Excepting at Minicoy, turtles are sighted within the lagoons only during the monsoon months and during the few weeks that follow. In spite of protective legislation, turtles are actively hunted on all islands barring Minicoy, where turtling is sporadic (the men here are usually seamen, making good wages).

Green turtles and, to a lesser extent, Ridelys, are valued for the fat they contain; Hawksbills for the beautiful, glossy laminae on their shells. Leatherbacks, when encountered, are avidly harpooned (two instances related during the period September -December '77, one each off Kadmat and Androth). Its fat, like those of the other species, is used to waterproof the joints of country boats.

Suheli Valiyakara Island is evidently the most important turtle rookery in Lakshadweep. Plans are afoot to permanently settle islanders from Kavaratti there. At present, Valiyakara is inhabited (and sparsely so) only during the fair season (October-May). Coconut cultivators have begun fencing off parts of the half mile long main nesting beach, with the express purpose of preventing nesting turtles from coming ashore and inadvertently uprooting their coconut saplings.

Lakshadweep's turtle population, which is stated by local people to have dwindled over the years, urgently needs protection. Some suggested measures are: providing a substitute oil for the islanders' boat repairs; demarcating an un-cleared, uncultivated zone between the beach and the coconut plantation (both to prevent erosion and to facilitate turtle nesting); re-examining the proposal to populate and build a light house on Suheli Valiyakara Island; publicizing the international plight of sea turtles, especially the rare Leatherback; designating at least two major nesting islands (Minicoy and Suheli Valiyakara) as Sea Turtle Preserves; investigating and sealing the continuing illegal outlet for Hawksbill shell to the mainland.

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