



**THIS TURTLE DECOY** was made recently for the author by a native of British Honduras, from a piece of driftwood picked up on one of the isles of the great reef that runs from Yucatan southward. Approximately 2' long and about 4" high at the center of the back, its triangles are green with black spots; three of the diamonds are yellow, also with black spots; and the back of the head is yellow also, while the center diamond and the two triangles at either end of the body are a sort of dull pink.



**GREEN TURTLES** have long been a favorite food of man, so much so that the giant chelonians are verging on extinction. But in the early days of this country they were much used for food, and the old Spanish natural historian Oviedo says in his book, written in 1526: "I say that in the island of Cuba large turtles are found, sometimes so large that ten or fifteen men are necessary to pull one of them from the water." These turtles were taken in the manner shown in this old print, when they were laying their eggs. They were turned over on their backs by bars and, since the turtle could not right itself on land, "in this way many are caught."



**FISH 'FALCON'** is what one might call the remora. Live, but tethered, remoras were once used to catch sea turtles by an unusual method described in the text.

# Satellites May Help Green Turtles; Odd Catching Methods Once Used

By Jack Baughman

CORPUS CHRISTI, TEX.—The great green turtles once so common along the Texas coast, and now surviving in the Caribbean, may soon be wearing transistorized tracking radios and be spied on by one of the NASA satellites.

Today, the turtles are a threatened species and efforts are being made to increase the number of the big soup turtles by learning more about them. Scientists have already tried fitting the turtles with radios to make a long-range study of their habits and migrations. But these studies have been hampered by the earth's curvature, which limits the range of radio transmission.

Now, Dr. Archie Carr, in a recent issue of "National Geographic Magazine," says NASA has suggested that use of a satellite might become available for tracking the great reptiles as they go about their business in remote areas of the sea. Signals from the turtles could be picked up by an orbiting satellite and relayed to a ground station, where they could be plotted on a map.

Carr, a University of Florida zoologist, has long been interested in the green turtles and is one of the leaders in the fight to save the big reptiles from extinction. (See "The Sea Turtle," *NF*, P. 33, May 1962.)

Sponsors of Operation Green Turtle, aimed at preserving the great chelonians, are Florida University, the National Science Foundation, the non-profit Caribbean Conservation Corp. and the Costa Rican government.

## NAVY INTERESTED

The U. S. Navy, interested in the green turtle's phenomenal ability to navigate, helps by airlifting baby turtles to former nesting sites in Central and South America, Mexico, the West Indies, Bahamas, Florida and even Texas.

"The only flaw in the green turtle resource," says Carr, "is the fact that the females have to come shore to lay their eggs. They leave the safety of the sea — where their size makes them almost immune to danger — and expose themselves and their offspring to the hazards of the land."

Most of the green turtles left today nest on a 25-mile strip of Costa Rica's eastern shore called Tortuguero Beach. The female

scoops a pit in the sand and lays about 100 golf-ball-sized eggs. After incubating about 80 days, the baby turtles hatch, wriggle up through the sand in which the eggs were buried and make a frantic dash for the sea.

Clumsy on shore, green turtles swim nearly as fast as a man can run, surfacing to breathe every few minutes, and they rarely dive deeper than 70'.

Males never come ashore, and all those taken on the beach are females. However, in parts of the Caribbean, they are caught in great nets to which painted wooden turtle decoys are affixed. In British Honduras, native fishermen make these decoys from carved driftwood, and decorate them with bright and fanciful patterns of paint. These are then used as floats for large meshed nets, usually from 100' to 200' long and 20' to 40' deep. The decoys, presenting a turtle silhouette from below are approached by amorous turtles which become entangled in the webbing.

But far and away the most colorful method by which men catch turtles is that which employs the remora or shark sucker. Comparable to falconry in its appeal to the imagination, this ancient custom was apparently prevalent among the Carin Indians who inhabited the sea named after them, and it still persists among some of their descendants as well as among various peoples in the Pacific and Indian oceans. Columbus observed this exotic method on his second voyage.

A ring was put around the tail of the sharksucker or remora, to which a line was attached. The remoras were carried in live wells in the Indian canoes, and when placed in the sea sought to escape by swimming in all directions. Eventually one would spy the turtle asleep on the surface and attach itself to the chelonian by the sucking disc on its head. The fishermen, as soon as they perceived this, were able to land the turtle by means of the cord fastened to the fish's tail.

There used to be a considerable fishery for green turtles on the Texas coast and in the early 1890s a correspondent for one of the St. Louis newspapers wrote about the fishery around Rockport and

Aransas Pass. In the bays around those towns were great undersea pastures of eel grass on which the green turtle fed. And on these grounds the fishermen took "bull turtles, cow turtles and turtle calves" using nets in the same manner as described above except that decoys were not utilized.

## CAUGHT IN PASTURE

The turtle fishermen knew the hours at which the herds of turtles sought these pastures. They strung their nets in convenient places about the underwater pastures, stretching them to cover as much space as possible. Turtles going to or coming from the undersea feeding grounds would become entangled in the large-mesh nets.

Today the eel grass and turtles are practically extinct on the Texas coast and far southward, until the Caribbean Sea is reached. Fishermen along the coasts from Yucatan southward to Central America still catch them.

## GREAT TRAVELERS

Carr and his colleagues have been interested in the rapidly vanishing species for many years, and have marked more than 4000 nesting turtles at Tortuguero. His work has revealed that the turtles travel immense distances — one turned up at the island of Trinidad, more than 1500 miles from Tortuguero.

But they almost always return to the beaches where they were hatched. Females rarely change their nesting places.

It is against Costa Rican law to dig up the eggs or disturb the turtles on land, but predators like coyotes and human poachers take a heavy toll of the eggs and nests. Unfortunately, the great reptiles return only to secluded beaches, well known to the nest robbers, but not easily protected by the law officers and game wardens.

Carr says that "our tagging studies have shown that the green turtle has a strong homing urge and great navigational ability. So far the process by which they hold courses and make pin-point landings at the end of long journeys is not known. The most likely explanation is that smells of certain localities are carried by ocean currents, and that a sun-compass sense is used to point the way to homing turtles."