

THE GREEN TURTLE, AND THE POSSIBILITIES OF ITS PROTECTION AND CONSEQUENT INCREASE ON THE FLORIDA COAST.

By RALPH M. MUNROE.

Early travelers on the tropical coasts of America made much mention of the abundance of turtles which were to be seen in the waters at all times and on the beaches in the spring season engaged in laying their eggs. How many of these belonged to the species *Chelonia mydas* is mere conjecture, for, aside from the tables of the rich and the cabins of the mariner, to the latter of which it often came as a Godsend in times of hunger and scurvy, it was comparatively unknown, and as other species were edible and somewhat similar in appearance, the old chroniclers put them all under the one head of turtle. As a matter of fact, the loggerhead (*Thalassochelys caretta*), common now on our coast, when not oversized and when properly butchered and cooked, is not to be despised by a man even not hungry, and so also the hawksbill (*Eretmochelys imbricata*), from which comes the tortoise shell of commerce.

With the advent of steam vessels, penetrating as they do the labyrinths of the West Indian islands and adjacent coasts, enabling the perishable tropical products to be transported in safety, the green turtle has become a more common food and less of a luxury in our seaboard cities, and, as most people take kindly to it, the demand has increased with the usual result in connection with natural products, a growing scarcity and higher prices. Being, as it is, a nutritious delicacy, it is quite time that its habits, reproduction, and methods of capture should be looked into before its enforced classification with the extinct reptiles, even if this should be an event far distant; and it might be well worth our time and attention to reduce, by cultivation and protection, the present rather prohibitive price of a valuable food.

As is the case with very much of marine life, but little is known as to the habits of the green turtle. Its food is a marine grass growing on the bottoms of lagoons and bays more or less shallow. It mates on the Florida coast in the month of May, or thereabouts, the females with eggs, except in rare cases, at once disappearing from these waters, and, until recently, going no one knew where, but it may now be asserted that their hatching-grounds are the beaches of various isolated islands off Central America or the Bahama banks. How this migration is accomplished across the Gulf Stream for hundreds of miles is past comprehension. As high as four hatches of eggs, containing from 130 to 180 each, are believed to be laid by one female during the months of June, July, and August, and the process is not repeated until an interval of one or two years has elapsed. Incubation takes from ten to twelve weeks. We have little information as to where the young that escape the gulls and other birds on the beach, the fish and sharks, pass their time on entering the water again like their

elders, until we occasionally see them in what is called the chicken stage of growth, so called from the resemblance of their flesh to that of the feathered barnyard favorite.

The foregoing few items are about all that is known as to habits, but sufficient seems to be established to form a reasonable hypothesis that much might be done toward protecting the young and possibly caring for them until of marketable size.

At present the probabilities are that but an exceedingly small number survive the first week of existence, as low, perhaps, as 2 to 3 per cent. To prevent this loss may or may not be an extremely simple problem, depending on whether turtles will mate and deposit eggs in suitably inclosed feeding-grounds, or if the female alone, in a condition to lay (these average about 20 per cent of the catch in May and June on one reef at present), will carry out her maternal functions in captivity. If these two points are negative, then is it feasible to import the eggs from the foreign depositories, considering the expense and possible complications as to ownership? And, lastly, would our supposed food areas prove sufficient and suitable? The latter point, I think, can be favorably answered, as our lagoons have long been known as feeding-places for the smaller turtles, and it is fair to suppose that the younger ones could find, in the same localities, a diet congenial to them; therefore, if no serious obstacles were found in their production, the subsequent existence up to the age of taking care of themselves seems assured, and at a trifling cost, after once hatched.

The statistics in regard to this branch of our fisheries are meager and of little value. The few at hand seem to show that the average catch of mature turtles along the reef by nets in the past twenty years seems to be but slightly diminished. When the fleet is augmented by boats and men, the catch per boat decreases and vice versa, but it is very evident, from personal observation covering the same period, that our feeding-grounds or inshore resorts for the smaller and more valuable sizes have become almost depleted. This results apparently not from excessive fishing, but probably from the gradual capture on the outer grounds of females which occasionally depart from the instinct of going to remote places for incubation and lay their eggs on home shores; for it is hardly possible that the young from the distant hatcheries across the Gulf Stream should find their way back until fully matured and able to cope with their natural enemies in transit.

For verification of some mooted points, and for additional information on others, I am indebted to Mr. B. Vincent Archer, a lifelong fisher and close observer of the green turtle in these waters.

COCOANUT GROVE, FLORIDA.