

for Biological Research at La Jolla, California, which is large enough to have been included in the "Table of Information Regarding the Aquariums of the World. It exhibits more fishes than the Boston, Honolulu or New Orleans aquariums.

Dr. T. Wayland Vaughan, the Director, has filled out a questionnaire in order that particular data concerning this aquarium may be included in the next printing of the "Table."

This aquarium at La Jolla (pronounced La Hoya) has 19 exhibition tanks with a capacity of from 60 to 261 gallons each, and, except one tank, is devoted exclusively to salt water, exhibiting at the last census 1,300 fishes and 50 invertebrates. It was opened in 1916 by the University of California, and is open free every day in the year, but its visitors number only about 8,000 persons annually.

California is the only state in the Union having two aquariums.—*I. M. M.*



MARINE TURTLE ASLEEP ON THE BEACH

From a photograph published in the National Geographic Magazine by Dr. Alexander Wetmore of the Smithsonian National Institution. Reproduced by permission.

### MARINE TURTLES SLEEP ON HAWAIIAN SANDS

*Two Long-standing Errors Corrected*

*By* IDA M. MELLEN

**O**UR old aquarist, Mr. Washington I. De Nyse, who never forgot an interesting incident, told me that once Ella Wheeler Wilcox visited the Aquarium and threatened to have everybody there arrested because no provision was made to permit of sea turtles leaving the water.

Her "ignorance" was indulgently smiled upon and she was enlightened with the information that marine turtles never leave the water except the female when she deposits her eggs by night in tropical sands. Subsequently a label was hung over the turtle pool reading:

"Sea Turtles never leave the water except

when the female deposits eggs. This pool was formerly fitted with a sloping platform but it was never used by the turtles, some of which have lived here eighteen years."

Accommodations for leaving the water had never been taken advantage of and were finally removed. Director Townsend has visited not less than fifty islands in the tropics and has participated in the capture of female turtles at night while they were engaged in digging holes for their eggs; and he never saw a marine turtle leave the water except for females during the breeding season.

Moreover, when questions regarding the proper transportation of sea turtles to northern markets from Florida arose in court, testimony was given to the effect that marine turtles always died when transported on their plastrons and it seemed therefore unquestionable that the

weight of the heavy carapace upon the lungs was fatal, and transporting them in that position constituted cruelty to animals. When turned upside down the turtles always survived the journey.

Now comes Dr. Alexander Wetmore, Assistant Secretary of the Smithsonian Institution in Washington, with an Hawaiian Islands article in the July 1925 *National Geographic Magazine*, in which he presents a photograph of "A Green Turtle Asleep on a Sandy Beach: Lisiansky Island," with the further notation: "These grotesque creatures browse in submarine fields of algæ until hunger is satisfied, and then crawl heavily out to sprawl in the sand, safe from enemies in the sea. On one occasion, the author, while walking 300 yards along the beach on Lisiansky Island, counted 80 of these creatures from fifteen inches to four feet in length. Others, feeding a few yards offshore, were hidden by ripples on the water and so escaped the casual census. Their only enemies seem to be sharks."

The supremely comfortable attitude of the animal depicted in the photograph belies the thought that the weight of the carapace presses painfully (to say nothing of fatally) upon the lungs, although of course it must be remembered that in hauling out on land they probably spend only a few hours or half a day, which is different from spending three or more days in that position on shipboard.

The point is, however, that the turtle is taking a nap, and not laying eggs!

Naturally we wrote to Dr. Wetmore for more details, and asked him if the turtles were perhaps females awaiting the fall of night to lay their eggs. His reply is conclusive:

"Dear Miss Mellen:—In reply to your letter of August 25, I may say that in the Hawaiian Islands at least it is the usual practice for marine turtles to crawl out on beaches to rest. The picture to which you refer was taken on Lisianski Island where these turtles were very common and where I frequently saw from 25 to 50 or more on the beaches at one time. These included males and females, from animals 18" long to those that were fully grown. Though some of the females that we killed contained eggs ready to be laid, there was no question that these creatures came out regularly, apparently for the sole purpose of sleeping in the sun.

"This practice was not confined to islands with sandy beaches alone, since I found a few turtles pursuing the same course on Necker Island, where they simply hauled out on shelving

rock ledges where there was no covering of sand.

"Whether your captive turtles would haul out in a similar manner is, of course, something that can be proved only by experiment. I fail to see where such action can harm them in any way since during my work in 1923, to which I have alluded, I found these animals on the beaches on practically all of the islands visited, and found them there daily. They were so common in fact that we captured them frequently for food. Very truly yours,

A. WETMORE."

And so it is that in zoology we need to stand ready at all times to renounce our most confirmed beliefs for opposite ones!

In another letter, Dr. Wetmore says, "Marine turtles asleep on beaches were so much a part of daily life and observation in the islands of the Pacific, that I never questioned but that it was the usual habit for these creatures the world over."

In answer to a question as to whether the turtles ever haul out on inhabited islands, or only upon those that are uninhabited, Dr. Wetmore says:

"Turtles do not crawl out regularly on the sands of inhabited islands, since they are subject to so much persecution that any indiscreet enough to commit such an act would end up on someone's table in short order. On the desert islands we found that in spite of their apparent stolidity they were somewhat disturbed by the presence of men, as after our party had patrolled the beaches for a few days turtles usually forsook the immediate vicinity of our camps and resorted to more remote sections where our people were less in evidence. This was done in spite of the fact that only occasionally did we molest them. Their avoidance of inhabited islands is thus merely a matter of experience and caution."

But the question still remains, Why do marine turtles rest comfortably on their plastrons on sand and rock and die when left in that position on board ship? Dr. Wetmore suggests the possibility that the deck's vibration upon their plastrons affects them adversely.

The Alaska whale fishery did a tremendous business this summer. More than 500 whales were harpooned, the largest 86 feet long and weighing close to 100 tons.

Many thousands of barrels of oil were marketed to eastern manufacturers for use in soap, leather and steel factories, and an enormous quantity of fertilizer was processed.