

## Sea Turtles .....

We were fortunate to have at our November general meeting, George Balazs of the Hawaii Institute of Marine Biology. For those members who missed his lecture and for our mainland and overseas readers, the following is a synopsis of this lecture on sea turtles.

Although our day to day problems are more involved with the maintenance of aquariums in the home, let us not disregard the greater problems of the sea which should be as much our concern and responsibility as it is the marine biologists'.

Marion Kin, Editor

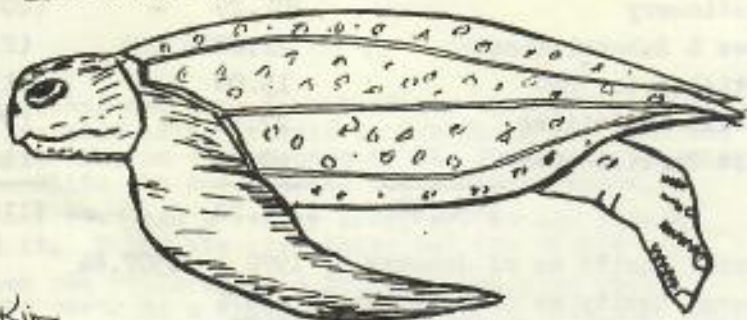
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Of the seven species of sea turtles in the world, three of them are found in and around Hawaii. Two are native to Hawaii: the Hawk's-bill and Green turtle. The third, called the Leatherback, belongs to the open ocean but wanders throughout Hawaiian waters.

The Leatherback is the rarest turtle and its name comes from its tough leathery hide. The average leatherback weighs from six to eight hundred pounds and is found in the cold waters near Nova Scotia, but has been known to wander through warmer Southern waters.

The leatherback has not been kept in captivity successfully as it bangs itself against the sides of the tank, not being used to living in confinement.

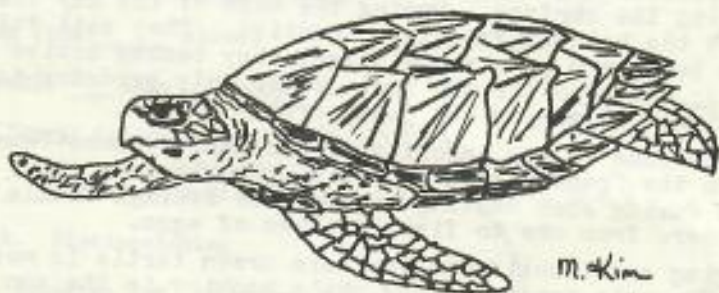
Leatherback turtle



The Hawk's-bill turtle appears in Hawaii in small numbers and is so-called because of its birdlike beak which is hooked, such like that of a hawk. The Hawk's-bill is a carnivorous turtle and feeds on marine invertebrates. The carapace of the

young Hawk's-bill is covered with horny plates with a dark mottling, overlapping toward the back like shingles, a source of the much-desired tortoise shell. The shingle plated shell disappears as the Hawk's-bill grows older.

Hawk's-bill turtle



The third species is well known to most of us, the Green Sea Turtle and has been kept at the Waikiki Aquarium. Although it is not on the list of endangered species as the Hawk's-bill, it may well be on that list soon. Its cartilage is processed to make turtle soup, regarded as a delicacy and its hide used to make shoes, purses, etc.

Very extensive research has been made on the Green turtle and they have been found nesting in the French Frigate Shoals and from Kure-Midway southeast to the Hawaiian chain. The French Frigate Shoals is sixteen miles of shoal area and green turtles appear all along the small islands northwest of the Hawaiian chain. Of these islands, East Island is the most used. Approximately thirteen acres are used by Green turtles and the turtles share the island with approximately twelve hundred albatross and seals.

The breeding Green sea turtles begin migrating into the shoals around the month of March and copulation continues through July. During mid-May the females come out of the water, onto the sand. She scoops out a body pit, digging out an area about the size of her body and presto! - she has an egg chamber. Using her hind flippers, she is able to dig in 45 minutes to an hour, a large enough place to deposit eggs. Sometimes she will abandon the area and begin digging again in another area.

The number of eggs may range from 40 to 148, averaging around 105 in one clutch. The eggs are round and rubbery.

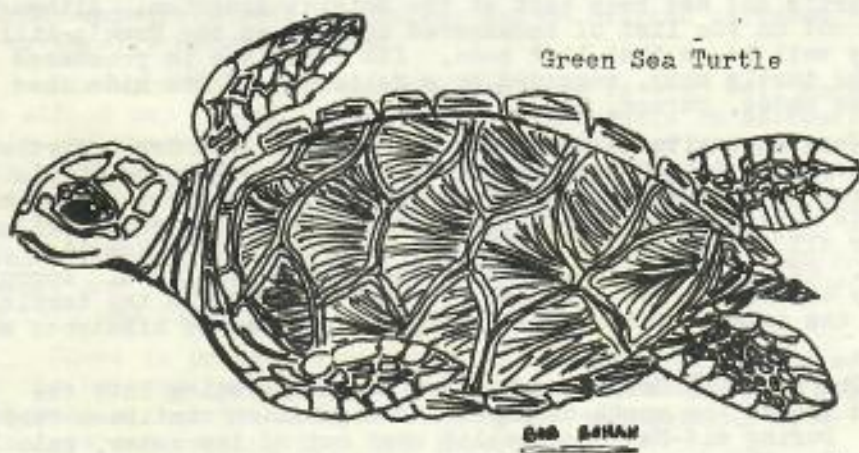
After the clutch is laid, her hind flippers pull the sand over to cover the eggs and she continues to knead the sand over

the eggs. During this time, the turtle is immune to disturbance so it is the best time for turtles to be tagged or marked for identification.

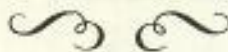
After covering the eggs with sand, the female returns to the water. Two to four days later, the hatchlings prepare themselves to come to the surface. With a hundred or more hatchlings it becomes a group effort for them to come twenty-nine inches up to the surface. During the heat of the day the soil is hot and the hatchlings remain inactive. They wait 'til sunset, then between 9 p.m. and midnight they become active and all come up and head for the sea. Their only predator in the French Frigate Shoals is the ghost crab.

In the case of the majority of turtles the same female returns to the French Frigate Shoals approximately every four years and during each nesting season, the average female may have anywhere from one to five clutches of eggs.

Tagging and identifying the male Green turtle is more difficult. The male can be tagged while basking in the sun but this is not recommended as interference with his sleep is traumatic to the male.



(Editor's note: On the following page is a Sea Turtle Sighting report. If while fishing or on one of your dives you sight turtles, fill in the report and send to George Balazs. )



SEA TURTLE SIGHTING REPORT

(Please return to: George H. Balazs;  
Hawaii Institute of Marine Biology;  
P. O. Box 1346; Kaneohe, HI 96744;  
Tel. 247-6631)

Observation made by: \_\_\_\_\_

Address & Tel. No. (optional): \_\_\_\_\_

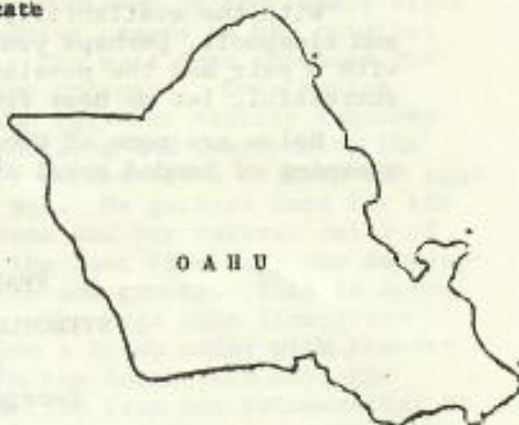
Date: \_\_\_\_\_ Time: \_\_\_\_\_ Location (indicate  
on chart): \_\_\_\_\_

Observation made from: \_\_\_\_\_ shore;  
\_\_\_\_\_ boat; or while \_\_\_\_\_ skin \_\_\_\_\_ SCUBA diving.

Estimated size (shell length): \_\_\_\_\_

Turtle seen on: \_\_\_\_\_ surface; or at depth of  
approx. \_\_\_\_\_ ft. Distinguishing

characteristics (species I.D. if known, long  
tail, shell color, tags, injuries, etc.):



\_\_\_\_\_  
\_\_\_\_\_

Other comments: \_\_\_\_\_  
\_\_\_\_\_

THANK YOU FOR YOUR COOPERATION

"THE MARKETPLACE"

This column will be available to members (free of charge) and to non-members (at a small fee of \$1.00) who wish to advertise items for sale or items they wish to purchase whether it be an aquarium, piece of equipment, fish or even a non-aquarium item.

Are you moving? Do you have a non-member friend who wishes to purchase a tank or maybe you are searching for a long-desired article? Whatever you wish to sell, buy or just wish to know of its availability, give the editor a call (941-6275- evenings before 9 p.m.) and we shall write your request in this column.

THE SALT WATER AQUARIUM SOCIETY OF HAWAII THE SALT WATER AQUARIUM SOCIETY OF HAWAII THE

# marine aquarium observer

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VOLUME VIII

# SHAW

THE SALT WATER AQUARIUM SOCIETY OF HAWAII



# MARINE AQUARIUM OBSERVER

January 1977

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January 10, 1977

Mr. George H. Balazs  
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P. O. Box 1346  
Kaneohe, Hawaii 96744

Dear Mr. Balazs:

I am enclosing a copy of our January newsletter in which I wrote a synopsis of your lecture given at the SWASH November meeting.

As Editor of the Marine Aquarium Observer for 1977 this was my first attempt. It's quite a new experience for me, so I hope I got all the facts straight.

On behalf of the members of SWASH I would like to thank you for taking the time to speak to our group. There were many favorable comments and personally I found your lecture interesting. I recall seeing a film by Cousteau on sea turtle hatchlings elsewhere (but I don't remember where) and few survived as they were picked off by birds in the area.

Mahalo!

Sincerely,

*Marion Kim*

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