

Maui Ocean Center's Marine Life Profile: Green Sea Turtles

Originally Ran in the Maui News: Ka Moolelo Moana (Ocean Stories) Column

Common Name: Green Sea Turtles

Hawaiian Name: *honu*

Found in Exhibit: Harbor Plaza

For some people who have been swimming and diving in Maui waters in the last few years, it may come as a surprise to learn that the commonly seen green sea turtles are listed as threatened under the Endangered Species Act. A favorite of snorkelers and divers, the green sea turtle, or *honu* in Hawaiian, was fished nearly to extinction in the 1960's. Since their listing as a threatened species in 1978, the green sea turtle population has increased substantially. However, like many protected species, they still face an uncertain future.

The ancestors of the *honu* lived in tropical waters around the world for hundreds of millions of years. In ancient Hawaii, the *honu* were hunted and served as a valued food source, though the *ali'i* or royalty strictly controlled turtle hunting. Some families would not eat sea turtles because they revered the turtles as *'aumakua*, guardian spirits that watched over family members to keep them safe.

Sea turtles, like sea snakes and marine iguanas, are marine reptiles that spend most of their time underwater and have to come to the surface to breathe. During periods of rest, green sea turtles can hold their breath for several hours, and on secluded beaches they may also be seen coming ashore to bask in the warm sun. As adults, *honu* feed primarily on seaweed, or *limu*, growing on rocks and reefs near shore. The high volume of seaweed consumed turns the turtle's fat layer green, which gives them their common name: green sea turtle. In Hawaii, green sea turtles are generally faithful to one particular "feeding" area around the main islands.

The life span of a *honu* is similar to that of humans, perhaps living 80 years or more, and reaching sexual maturity between 25-35 years of age. When they reach sexual maturity, most Hawaiian green sea turtles will migrate hundreds of miles to the French Frigate Shoals

(in the Northwestern Hawaiian Islands) during the late spring and summer months. Females will generally make the voyage once every two or three years, males every one to two. The turtles will breed offshore in the warm waters, sometimes for hours. The females will then go onshore during the dark of night to lay around a hundred eggs per clutch, and will lay 5-6 clutches throughout the season. After covering her nest with sand, the females will leave the eggs to incubate for several months. When the turtles hatch, the babies dig themselves out of the nest and make their way to the ocean immediately. The hatchlings are extremely vulnerable and face many aggressive predators ranging from rats to sea birds to sharks. It is estimated that only one in 1000 eggs will survive to sexual maturity. When the hatchlings enter the water, it is believed that they follow ocean currents and possibly magnetic fields to make their way to the main Hawaiian Islands. As juveniles, sea turtles are primarily carnivorous, eating fish eggs and small invertebrates (animals without backbones), and become herbivores as they grow older.

When the turtles reach full size their hard, well-camouflaged shell protects them from most predators, but they are still not invulnerable and huge turtles have been found in tiger shark stomachs. Though hunting of all sea turtles is illegal in the United States, many are being caught incidentally in drift nets, long lines and discarded fishing line. Luckily, several organizations (e.g., the National Oceanic and Atmospheric Administration, the Department of Land and Natural Resources, and the U.S. Coast Guard) are working together to reduce these dangers in the ocean.

While great progress has been made to protect these magnificent creatures, a new problem has arisen. A tumor-causing virus called fibropapilloma has recently become a growing threat to green sea turtles throughout the tropics, but to Hawaiian green sea turtles especially. The fibropapilloma virus causes tumors to grow on the eyes, neck, flippers, mouth and internally. These tumors can grow quite large, limiting the turtle's ability to swim, eat, or breathe, all of which can ultimately lead to death. Neither the cause nor cure is known yet, further studies must be done before it is too late. It is currently estimated that there are only a few hundred females nesting in the French Frigate Shoals annually. Poaching, habitat degradation, and disease, if ignored, could lead to the further decline of the green sea turtles.

A combined effort is needed to learn more about the green sea turtles and to enforce the laws currently protecting them. Federal agencies such as the National Marine Fisheries

Administration and local organizations including Sea Life Park and the Maui Ocean Center are working to educate the public about Hawaii's *honu*. We can all do our part to protect turtles and other sea life by reducing pollution in the ocean and promoting safe boating where turtles may be present. Use wildlife viewing precautions and remember that touching or harassing sea turtles is illegal and can result in a fine. To report shoreline strandings of dead, sick, or injured sea turtles, please call 984-8110 or 879-2818.

