Hawaiian Green Turtle
Life History

Green turtles are a long-lived, charismatic species that occur throughout the Hawaiian Archipelago. The following general life history information answers some of the most commonly asked questions about green turtles in Hawaii.

Q: What species occur in Hawaii?
A: Six species of sea turtles occur in the Pacific, but only two sea turtle species, the green *(honu)* and hawksbill *(honu 'ea ,* or, *'ea),* occur regularly in Hawaiian coastal waters. Sea turtles are part of the identity of the islands and hold a special place in the minds and hearts of the people of Hawaii. Nearly depleted during the 1960's, the green turtle population is on the road to recovery towards fulfilling their ecological role as part of the Hawaiian reef community. They are a true Hawaiian local, a genetically distinct stock that nests only in Hawaii.

Q: Why are they called green turtles?
A: On the outside, green turtles are usually some combination of brown, black and grey in color, with yellow accents. They are called "green" turtles because their internal fat tissue is green due to their herbivorous diet.

Q: Where do green turtles occur and how far, fast and deep can they swim?
A: Green turtles live in nearshore coastal habitats throughout Hawaii, with high fidelity (devotion) to specific reef, rock, bay, or lagoon feeding locations. Most of their time is spent at depths less than 100 feet but they can dive to depths of over 500 feet when migrating. During the breeding season males and females swim 500-800 miles from their feeding grounds in the main Hawaiian Islands to their nesting beaches, primarily at French Frigate Shoals, in the Northwestern Hawaiian Islands. This journey takes approximately 30 days. The average swimming speed of a green turtle is about one mile per hour during migration; however, they have been known to reach speeds of 20 miles per hour in short bursts when fleeing a potential predator.

Q: Why do green turtles bask (rest) on the shore?
A: One reason why they may bask on the shore is to conserve energy and regulate their body temperature. Green turtles are reptiles, so they do not maintain a constant core body temperature; instead their body temperature is influenced by the temperature of their environment. Green turtles are known to bask only in the Galapagos Islands, Australia and Hawaii. Basking turtles provide excellent wildlife viewing opportunities. However, please give basking turtles space. Never try to push a sea turtle back into the ocean or pour water on it. Allow them a clear path and never block their access to land or sea.

Q: What do green turtles eat?
A: Green turtles are primarily herbivores (vegetarians). They feed on sea grasses and algae (green and red) that grow on rocks and reefs in the nearshore environment. Of approximately 400 species of algae present in Hawaii, only a small portion account for the majority of what they eat. Sea turtles do not need a helping hand from humans. Please remember that feeding or attempting to interact with sea turtles can habituate them to humans, cause stress and adversely alter their behavior and long-term survival. Keep wild turtles wild; please enjoy from a distance and avoid the temptation to feed them.

NOAA FISHERIES SERVICE

Science, Service, Stewardship

January 2011

Q: How big do green turtles grow?
A: Green turtles worldwide are the largest of the hard-shelled sea turtles. Adult green turtles in Hawaii are smaller than their Atlantic counterparts. Hawaiian green turtles grow to a shell (carapace) length of about 36 inches (90 cm) and weigh approximately 250 pounds; whereas Atlantic green turtles can measure up to 48 inches (120 cm) and weigh more than 400 pounds. Females typically grow larger than males.

Q: How old are green turtles when they start to reproduce?
A: Green turtles, like all sea turtles, grow very slowly. Different populations of turtles grow at different rates based on habitat quality, availability and abundance of food sources, and environmental conditions. A typical, healthy green turtle in Hawaii will grow only half an inch (1-2 cm) per year until they reach maturity. It likely takes between 25-40 years for a Hawaiian green turtle to reach maturity and reproduce for the first time.

Q: How long do green turtles live and what affects their survival?
A: No one knows for sure but some Hawaiian green turtles have been documented nesting for more than 30 years, so that means they are at least 60-70 years old. In Hawaii, threats to their long-term survival include: habitat deterioration (from coastal development), nearshore recreational fishery interactions, boat strikes, ingestion of and entanglement in discarded fishing line, disease, illegal harvest and climate change.

Q: Do Hawaiian green turtles have predators?
A: Yes. Like all wild creatures, Hawaiian green turtles have predators throughout all stages of life. Nests or eggs in the Northwestern Hawaiian Islands are at low risk of predation, but eggs deposited on beaches in the main Hawaiian Islands may be consumed by mongooses, rats, feral dogs and cats, pigs, ghost crabs, ants, plants, bacteria, or fungus. Once the green turtle hatchlings emerge from their nest and crawl toward the sea, they must dodge crabs, feral animals and sea birds on the beach. In the water, hatchlings and small juvenile sea turtles face fish, sharks and other marine predators. The tiger shark is the major natural predator for large juvenile and adult Hawaiian green turtles. Although illegal, sea turtles in Hawaii are still harvested to some degree; therefore, humans can also be considered predators of turtles.

Q: How can you tell a female green turtle from a male green turtle?
A: It is impossible to tell juvenile female and male sea turtles apart by external observation. Once they are adults, males are distinguished from females by their significantly longer and thicker tails. Mature males also have a pronounced claw on each of their four flippers used to hold onto females during mating. The incubation temperature of a nest determines whether a sea turtle will be a male or female. Generally, higher nest temperatures produce more females and cooler temperatures yield more males.