



SPECIES FACT SHEET

Green sea turtle *Chelonia mydas*

Classification

Kingdom:	Animalia
Phylum:	Chordata
Class:	Reptilia
Order:	Testidunes
Family:	Cheloniidae
Genus:	<i>Chelonia</i>
Species:	<i>mydas</i>

Conservation Status: Endangered



Identification: Green sea turtles are one of the largest sea turtles. Although they are much smaller than the leatherback turtle, adult green turtles can have shells 1.2-1.5 m in length and they can weigh up to at least 200 kg. Green turtles are relatively streamlined and their bodies are dorsoventrally flattened. This shape combined with large front flippers allows the green turtle to reach speeds over 15 km/hr in short bursts. The carapace has four pairs of costal scutes and is irregularly patterned, resembling a radiation of hues of black, gray, brown, and olive, while the ventral plastron is a whitish/yellow color. Green turtles have a relatively small head with one pair of prefrontal scales between the eyes and a minutely curved beak. Females have very short tails while adult males have a very elongate tail that protrudes well past the carapace. Green turtles can be distinguished from loggerhead turtles by their smaller heads, flatter shells, and longer flippers.

Distribution: Green sea turtles can be found in almost all tropical and subtropical marine waters. They often travel very long distances (thousands of kilometers) between feeding grounds and nesting beaches. Female sea turtles are thought to return to nest at the same beach where they hatched. During the years after hatching (referred to as the lost years), baby sea turtles swim out to sea and live in flotsam and sargassum (algae) rafts that provide shelter and food. When the turtles reach about 35 cm carapace (shell) length, they move to coastal feeding grounds. Green turtles are found in very high abundance in Shark Bay, Western Australia, where the expansive seagrass beds provide rich foraging grounds.

Growth and Age: Green turtles reach sexual maturity when they are around a meter in length and at around 20 years of age. They can live to be 80 years or older and grow slowly at rates of 0-3.5 cm/year. For example, one turtle in the Bahamas took 17 years to grow 45 cm! The combination of high hatchling mortality, slow growth rates, and late maturation age make them very sensitive to habitat degradation and overexploitation.

Reproduction: Female turtles return to sandy beaches to dig nests and lay their clutches of eggs. An individual female will nest every two to three years and lay one to seven clutches of 50-200 golf ball sized eggs every 12-14 days during the nesting season. Egg incubation times are around two months and are temperature dependent. One study showed that a temperature increase as small as one degree Celsius can decrease the incubation period by five days. Sex determination is also temperature dependant with lower temperatures yielding more males and higher temperatures yielding more females in a clutch. Hatchlings are about 5 cm long and generally emerge at night in search of reflections from the ocean to guide the start of their dangerous journey. Many terrestrial predators such as crabs, raccoons, and shorebirds gorge themselves at these hatching events. Of the turtles that make it to the waters edge, many drown trying to make it through the surf zone or become meals for fish and seabirds. It is estimated that only 1 in 1000 hatchlings survive to adulthood. Relatively little is known about male reproduction since mating occurs at sea. It is believed that most mature males attempt to reproduce every year. There appears to be intense competition for mates. Sometimes, several males will compete for a single female and the hatchlings from a single nest will often have more than one father.

Diet: Juvenile green turtles are omnivorous and feed on a variety of organisms found in and around flotsam and sargassum. Once they move to coastal habitats, green turtles switch to a largely vegetarian diet and will eat seagrasses and macroalgae. SBERP has found that green turtles in Shark Bay also consume a large number of jellyfish and ctenophores as well. New studies in other locations suggest that the importance of jellyfish and ctenophores in adult green turtle diets may be underappreciated.

Ecological Importance: Because they are large herbivores, green turtles can play an important role in shaping the structure of seagrass ecosystems and the processing of nutrients. In some areas of the Caribbean, turtles may even stay in small areas and continually crop the seagrasses, changing the structure of the beds.

SBERP Research: SBERP's sea turtle research is one of the world's most intensive investigations of sea turtle foraging grounds. We have found that the population appears to be very healthy. Large mature individuals are common and population numbers are high. In addition, few green turtles in Shark Bay have fibropapillomatosis, a disease that causes abnormal growths and tumors on the skin and viscera, which is common in areas where there are large human populations nearby. Green turtles are eaten by tiger sharks, and the smallest turtles spend their time very close to shore or in mangrove creeks where sharks can't get to them. Larger turtles foraging on the seagrass beds change where they spend their time based on the risk from tiger sharks and how close they are to starvation. Turtles in good condition don't take risks. Those close to starvation forage in the middle of banks where they are at risk from sharks, but the seagrass is higher quality. In general, adult green turtles seem to be pretty good at avoiding tiger sharks. Very few – less than 10% – have injuries from run-ins with tiger sharks. We also have found that green turtles use sponges and rocks to clean their heads, flippers, and shells.

