



# Sea Turtles

There are seven species of sea turtles found in the world's oceans. These species are the Kemp's ridley, olive ridley, loggerhead, hawksbill, green, leatherback and flatback turtles, all of which are either endangered or threatened. The largest kind of sea turtle is the leatherback, which can be up to eight feet long and weigh as much as 1,500 pounds. The smallest sea turtles are the Kemp's and olive ridley, each of which can grow up to 30 inches long and weigh no more than 100 pounds. Though these turtles come in various shapes and sizes, they are all marine reptiles, which means they have several traits in common.

The flat, streamlined shell and flippers of a sea turtle allow it to move through the water efficiently and thrive in the marine environment. All sea turtles have a backbone and ribs that are attached to the inside of their shell. As a result, sea turtles, like other turtles and tortoises, can never leave their shell. The top part of the shell is called the carapace, while the underside is called the plastron. The carapace is covered in special scales, called scutes, which are made of a material called keratin. The leatherback sea turtle, however, does not have scutes; instead it has tough, rubbery skin. Since sea turtles are reptiles, they must come to the ocean's surface to breathe air using their lungs. They also have a sharp, toothless beak which they use to capture prey. Most sea turtles are carnivores, or meat eaters, and

use their beaks to eat things like crabs, shrimp, mollusks, sponges and jellies. The green sea turtle, however, begins life as a carnivore and then switches to a diet of sea grass and algae when it becomes a juvenile.

## THE CIRCLE OF LIFE

While flippers are useful for traveling in the ocean, they make moving on land difficult. As their name suggests, sea turtles spend most of their lives at sea. Females of all seven sea turtle species, however, come up onto land to lay their eggs. They lay eggs during the summer months, except for leatherback turtles which lay eggs in fall and winter. The female crawls onto the beach at night and uses her hind flippers to dig a 20- to 30-inch deep hole in the sand. She then deposits between 50 and 200 ping pong ball-sized eggs inside. She covers the eggs with sand before crawling back to the ocean. This whole process can take two hours to complete and happens up to ten times per season. Female sea turtles can also let up to four years pass between clutches of eggs.

The eggs remain buried for approximately two months, during which time the nest temperature determines how many male and female hatchlings will develop. Lower temperature nests produce more male hatchlings while higher nest temperatures produce more females. The eggs typically



## KEY TERMS

### Keratin

A tough protein substance found in turtle scutes.

### Clutch

A group of eggs produced at the same time.

### Bycatch

Animals accidentally caught while fishing for another species.

## FAST FACTS

- Sea turtles have existed for approximately 180 million years.
- Sometimes female sea turtles perform "false crawls" where they crawl onto a beach and return to the ocean without laying eggs.
- It is estimated that sea turtles can live up to 80 years.



hatch at night and the two-inch long hatchlings make their way toward the ocean. The first years of the hatchlings' lives are called the "lost years" because little is known about where they go or what they do during that time. It is thought that the hatchlings ride ocean currents to a region known as the Sargasso Sea where they rest on drifting algae and eat small invertebrates. Sea turtles continue to eat and grow for up to 50 years, sometimes longer. Once they mature they will breed in coastal waters.

### DANGER AHEAD

Unfortunately, it is estimated that only one out of every one thousand sea turtle eggs

will survive long enough to reproduce. From the moment an egg is laid on a beach it is in danger of being eaten or destroyed. For example, beach erosion, high tide or tree roots can destroy nests before the eggs hatch. Predators such as raccoons, crabs, foxes and even humans have been known to dig up nests and eat sea turtle eggs. Hatchlings are also eaten by seabirds and dogs as they crawl towards the ocean. Lights from hotels and streetlights along the beach may disorient and confuse hatchlings, creating yet another barrier between them and the ocean. Once in the ocean, a sea turtle may swallow plastic bags that look like jellies, which can block their digestive tract. Sea

turtles also become bycatch when they are accidentally caught and killed in trawling nets. Given the long list of challenges sea turtles face throughout their lives, it is not surprising that less than one percent of eggs become adults.

### SEA TURTLE CONSERVATION

The good news is that humans are taking steps to protect sea turtles from many of these threats. All seven species of sea turtles are listed as endangered or threatened under the Endangered Species Act, which makes it illegal to harm, harass or kill sea turtles, their eggs or hatchlings. During the nesting season, conservation organizations place markers around sea turtle nests to protect them from predators and identify them for monitoring purposes. Commercial fisheries are using turtle excluder devices, or TEDs, to prevent turtles from getting caught and drowning in their nets. A TED is basically an escape hatch that allows sea turtles to exit fishing nets while keeping small shrimp and fish inside.

You can help protect sea turtles, too. If you're at the beach between the months of May and October, you can turn off your outdoor lights so they won't confuse sea turtles or hatchlings. You can also use reusable cloth bags instead of plastic bags, which will reduce the number of bags that could end up in the ocean and eventually a sea turtle's stomach. These actions will help to keep sea turtles in the oceans for many years to come.



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