

Sea Turtles On Long Island

Sea turtles are marine reptiles which have evolved to live a completely aquatic life, with the exception of egg laying by females. Sea turtles have dry, scaly skin that is impermeable to water, and a tapered, streamlined shell. Their powerful paddle-shaped foreflippers help them to move easily through the water, where they are capable of diving to great depths. Four different species of sea turtles are commonly found inhabiting Long Island waters during the summer months, where they feed on a variety of food, such as spider crabs, jellyfish, seaweed, and green crabs.

Kemps Ridley Sea Turtle (*Lepidochelys kempii*)



Kemps Ridelys are the most critically endangered of all the sea turtles, as well as the smallest. Adults may grow to lengths of .06 to .08 meters (2.0-2.5 feet), and can reach weights between 36-50 kg (80-100 lbs). Kemp's Ridelys have a heart shaped carapace (top shell) that ranges in color from olive, to gray, to black, while their plastron (underbelly) is white in color. These turtles feed on marine life such as crabs, fish, jellyfish, squid, snails, clams, sea stars, and some marine vegetation. Kemp's Ridelys found in New York waters generally feed on a diet that consists mainly of spider crabs, rock crabs, and lady crabs. These turtles can dive for an average of 12-18 minutes, and can dive to depths up to 164 feet. Females begin to nest between April and August on one beach in Ranchos Nuevos, Mexico, although some evidence has been found of very small numbers nesting at other sites. Kemp's Ridelys are the only turtles that nest during the day, making their eggs and their young more vulnerable to predators. Adults can live to be up to 20 years old.

Loggerhead Sea Turtle (*Caretta caretta*)



Loggerhead Sea Turtles can be identified by their reddish-brown colored carapace, and by their large, stout head and neck. Adult Loggerheads may reach lengths up to 0.9m (3 feet), and can weigh as much as 136 kg (300 lbs). These turtles have a worldwide distribution, but populations may be especially concentrated around Newfoundland in the summer and Argentina in the winter. Loggerheads can dive to depths up to 233 meters (764 ft) to feed on crabs, crustaceans, squid, bivalves, jellyfish, fish, and eelgrass. Average dives last between 17 and 30 minutes. This species nests in April through September on Atlantic coast beaches of the U.S. from New Jersey to Texas, but they prefer to nest in Florida. Loggerheads are considered to be a threatened species, with a lifespan of around 30 years.

Green Sea Turtle (*Chelonia mydas*)



Green Sea turtles are the largest of the hard-shelled sea turtles. Adults can reach lengths up to 1 meter (4 feet), and weigh up to 226 kg (500 lbs). Green Sea turtles have a worldwide distribution, but concentrated populations can be found near Massachusetts in the summer and Argentina in the winter. These turtles have a unique starburst pattern to their carapace, with colors ranging from gray, to green, to brown, and black. Green Sea turtles are not named for their carapace color, but rather for the color of their body fat. This body fat, called *calipee*, is pigmented green as a result of their largely herbivorous diet. Hatchling and juvenile Green Sea turtles are carnivores that feed on squid, bivalves, jellyfish, and crustaceans out in the open ocean. As these turtles mature and attain a length of 20-25 cm, they migrate to benthic (bottom) areas where they feed mainly on seagrass and algae. They are not exclusive herbivores, but plant matter makes up the majority of their diet as adults. Green Sea turtles can dive to depths up to 110 meters (361 feet), and can stay submerged for up to 66 minutes. This species nests on tropical beaches in Florida, Puerto Rico, and the U.S. Virgin Islands between the months of March and October. Green Sea turtles are a threatened species, with a life span of around 20 years.

Leatherback Sea Turtle (*Dermochelys coriacea*)



Leatherback Sea Turtles are the largest living turtles, and are the only remaining representative of the Dermochelids. They are also an endangered species. Adult Leatherbacks can reach lengths up to 2 meters (6 feet) and reach weights up to 590 kg (1300 lbs). The carapace of the Leatherback Sea turtle is covered with a black, leathery skin, which is what they are named for. This black skin is often spotted with white or pink on the underside of the head, limbs, and body. In addition, leatherbacks have seven longitudinal ridges running along the length of the shell, and they have five along the underside of the shell. These turtles are the most pelagic of all sea turtles, capable of diving to 1300 meters (4,290 feet) to feed primarily on jellyfish, salps, and other gelatinous species. Leatherbacks tend to dive for less than 20 minutes per dive, but are capable of diving for up to 37 minutes. Unlike other reptilian species, Leatherbacks have been known to inhabit waters with temperatures ranging from 0-15 degrees celsius, suggesting that they are capable of thermoregulation (controlling their internal body temperature). Studies done on Leatherbacks suggest that their core body temperatures can average 8-10 degrees higher than the air temperature, and 2.5-5.1 degrees celsius higher than their surrounding water temperature. Scientists refer to this phenomenon as *gigantothermy*. Leatherback nesting occurs from April to November on beaches along the east coast of Florida and the Caribbean, and their lifespan is estimated to be more than 45 years.

Marine Studies Sea Turtle Review

1. What three things do sea turtles have that help them survive in the aquatic environment and how do they help?
2. How many sea turtles are commonly found on Long Island?
3. Why do sea turtles come to Long Island?
4. The Kemp Ridley is named after the beach in which the female turtles lay their eggs, this beach is guarded by armed guards with machine guns to stop poaching; what is the size of the Kemp Ridley and how does it compare to other sea turtles?
5. What are the colors of the Kemp Ridley and what do they eat and what is their New York Diet?
6. How long and how deep can the Ridley dive, plus what makes this turtle more vulnerable to predation and how long do they live for?
7. The Loggerhead Sea Turtle is named after the shape of its head looking like a whalers logging cleat. When whalers harpooned a whale, the whale would dive down so the whalers tied a rope to that harpoon and a log to that rope (which floats) so they can track the animal under water to finish killing it for its oil. What is the coloration of the loggerhead?
8. How big do Loggerheads grow and where can they be found around the world?
9. How long and how deep can the Loggerheads dive, plus what do they eat?

10. When does the species nest and where does the Loggerhead nest and how long do they live for?

11. Green Sea Turtles are the largest of the hard shelled turtles and gets its name from the color the water turns when you make soup from their meat and body fat. How big can they grow?

12. How wide is the Green turtles distribution and what colorations do the turtles have?

13. What is the name of the green turtles body fat and why is it green?

14. What is the different diet that juvenile Greens have compared to the adults and what size does the adult need to change this diet and what is the advantage of this?

15. How deep/long can the Greens dive and when/where do they nest plus what is their life span?

16. The leather back is the largest sea turtle and has a leathery back instead of a hard shelled back. How big can they grow?

17. What is the coloration of the leatherback and how many longitudinal ridges and what are they?

18. How deep/long can the Leatherback dive and when/where do they nest plus what is their life span?

19. What can Leatherbacks do with their body temperature and how do they do it and what do scientists call this phenomenon?