



Natural Heritage & Endangered Species Program

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Massachusetts Division of Fisheries & Wildlife

Leatherback Sea Turtle *Dermochelys coriacea*

State Status: **Endangered**
Federal Status: **Endangered**

DESCRIPTION: This is the largest of all the sea turtles and the only one without a hard bony shell surface. Adults range from 4.5 to 8 feet long (averaging about 5 feet), and weigh about 650 to 1,300 pounds. Everything about this turtle is streamlined to reduce resistance as it “flies” through the water. The shell is shaped like an elongated teardrop which comes to a long point in the rear over the tail. The carapace (top) is covered by a sleek covering of smooth skin and has a prominent longitudinal ridge down the center of the back, flanked by 3 pairs of smaller ridges that act like keels to stabilize the turtle’s forward motion through the water. The front flippers are proportionally longer than those of other sea turtles, and lack the single claw the others have to help tear apart their food. The upper jaw has a pair of large tooth-like cusps that help grasp food.

SIMILAR SPECIES: The Leatherback Sea Turtle’s large size and unique appearance make it easy to identify.

RANGE: This species is found in all of the seas of the world. It is the most pelagic, wide-ranging, and cold-hardy of all the sea turtles. Most, if not all, of the Leatherback Sea Turtles found off the Massachusetts coast breed on the sandy beaches of the Caribbean islands, the northeastern coast of South America, and Florida, during the winter. A small number of nest records extend north to the Outer Banks of North Carolina, and in 1996 one nested in Maryland. In the spring, they move back to the northeast U.S. continental shelf, and then disperse widely into the northwest Atlantic, a few going as far north as Newfoundland. The largest nesting sites for this species are on the western coast of Africa and northern South America.

Adult leatherbacks can tolerate a wide range of temperatures due to thermoregulatory adaptations such as counter-current heat exchange, high oil content, and



Photo courtesy of United State Fish & Wildlife Service

larger body size. These adaptations allow leatherbacks to inhabit such a wide range in oceans around the world. The species is known to prefer open ocean, but does forage in coastal areas. They often mate in waters adjacent to nesting beaches. Females migrate from tropical to temperate waters post-nesting, where high populations of jellyfish can sustain their diet throughout the summer.

HABITAT IN MASSACHUSETTS: Although the Leatherback Sea Turtle is primarily known as an open ocean animal, they also come into shallow coastal waters during the summer months to feed on concentrations of jellyfish. Twenty or more are reported annually along the Massachusetts coast, mostly in southern Cape Cod Bay near the Cape Cod Canal, and in waters south of the cape.

LIFE CYCLE AND BEHAVIOR: Leatherbacks reach sexual maturity between 6 and 10 years of age with females nesting every second to third year. Their clutches consist of approximately 100 eggs laid on

A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan

Massachusetts Division of Fisheries & Wildlife

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sandy, tropical beaches in nests backed by vegetation. Females can lay up to six clutches a season with 10-day periods between nestings, and females can move up to 7 miles between original nesting sites. Eggs incubate for 55 to 74 days. Hatchlings emerge at night, immediately heading towards the ocean. Though juvenile migrations are poorly understood, younger leatherbacks are predominantly observed in water 79° F and warmer, while adults were found in water as cold as 32-59° F. It is theorized that leatherbacks follow jellyfish migration patterns, moving north along the Atlantic coast as far as Canada throughout summer, south towards New England throughout autumn, and further south along the coast of Florida and into the Gulf of Mexico during the winter.

The Leatherback Sea Turtle's diet consists mainly of jellyfish; however, they also feed on sea urchins, squid, crustaceans, tunicates, fish, blue-green algae, and floating seaweed.

Leatherback Turtles are unique and amazing in many ways. Although they typically swim at speeds of 1 to 6 miles per hour, their streamlined body and extra-long flippers enable burst of speed up to an impressive 22 miles per hour. They are by far the deepest diving of all reptiles. Typically, dives are short (less than 12 minutes) and reach less than 250 feet, but depths down to at least 4,035 feet and just over an hour long have been recorded. They are also the furthest traveling of all reptiles. Individual Leatherback Sea Turtles have been documented over 3,000 miles from their nesting beach, and may travel over 10,000 miles each year.

THREATS: In Massachusetts, the most frequent causes of Leatherback Sea Turtle mortality is entanglement in fishing gear, especially lobster trap buoy line. Others are injured or killed by boat propellers. Around the world, all sea turtles are threatened by human activities, such as harvesting of eggs and turtles, incidental capture in a variety of fishing gear, ingestion of plastic, nest predation, degradation of nesting habitat, and artificial lighting that can misguide hatchlings on their journey to the sea.

MANAGEMENT RECOMMENDATIONS: The Massachusetts Division of Marine Fisheries has helped create and fund a marine turtle disentanglement program which responds to about 10-20 entangled Leatherback Sea Turtles every year. Many of these turtles can be

saved by a rapid response, but some are already dead when found, and others die in spite of efforts to save them. NOAA has created regulations designed to protect sea turtles, including gear modifications to prevent entanglement, changes in fishing practices, and time/area closures for some gear types.

Provincetown Center for Coastal Studies'

Disentanglement Hotline: 800-900-3622 (mostly to disentangle leatherbacks)

Wellfleet Bay Wildlife Sanctuary's Sea Turtle Hotline: 508-349-2615

NOAA Fisheries Marine Animal Hotline: 866-755-6622

New England Aquarium's Marine Animal Hotline: 617-973-5247

REFERENCES

Leatherback Turtle (*Dermochelys coriacea*). NOAA Fisheries. URL:

<http://www.nmfs.noaa.gov/pr/species/turtles/leatherback.htm>

Leatherback Seaturtle: *Dermochelys coriacea*. Connecticut Department of Energy & Environmental Protection. URL:

http://www.ct.gov/deep/cwp/view.asp?a=2723&q=326028&depNav_GID=1655

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