



# Leatherback Sea Turtle

## North Carolina Wildlife Profiles



Dr. Matthew Godfrey

## Leatherback Sea Turtle

(*Dermochelys coriacea*)

The leatherback sea turtle is the largest turtle in the world, and regularly occurs off the coast of North Carolina. The greatest number of observations of this species off the coast of North Carolina occurs in the spring and early summer months, when they are migrating north to foraging grounds off of New England and Atlantic Canada.

### Description

The leatherback is named for its dorsal shell (or carapace) that is covered with a layer of dark or black leathery skin. Unlike other sea turtles, the leatherback carapace is a mosaic of small bones called osteoderms, and is characterized by seven prominent ridges or keels. The front flippers are long and smooth, with no protruding claws.

Adult leatherbacks are huge, with carapace lengths ranging from 145-165 cm (57-65 inches), and weights between 350-450 kg (770-990 lbs). They have pronounced pointed cusps on their jaws that help them bite and hold their preferred food: jellyfish. Leatherbacks usually have a pronounced pink spot on the top of their heads, above their pineal gland. These pink spots are unique and can be used to identify individuals using photo identification techniques.

### History and Status

According to the fossil record, leatherbacks have remained nearly the same for the past 90 million years. Few leatherbacks nest in North Carolina, although larger nesting assemblages occur in the Wider Caribbean region. Some nesting populations have shown increases in nesting numbers in the past few decades, including Florida, Puerto Rico and Trinidad. Most leatherback populations are considered depleted relative to historical levels. Threats faced by leatherbacks in North Carolina include degradation of nesting habitat from rampant coastal development, accidental collisions with boats, ocean pollution (especially plastic bags that looks similar to jellyfish, their preferred prey), and accidental capture in fishing gear. Leatherbacks are federally and state listed as endangered and are protected by law.

### Habitats & Habits

Leatherbacks are known to migrate great distances, often crossing entire ocean basins several times a year. Leatherbacks prefer wide sandy beaches that are close to deep water, and thus most leatherback nests in North Carolina have occurred near Cape Hatteras, Cape Lookout, or Cape Fear (Bald Head Island). Starting about 30 days after mating, reproductively active leatherback females will emerge from the ocean at night

The leatherback sea turtle is the largest turtle in the world.



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### Range and Distribution

Leatherbacks are found in the tropic and temperate waters of the Atlantic, Pacific and Indian oceans, and the Mediterranean Sea. Leatherbacks prefer to nest on wide, sandy beaches that are close to deep water. In North Carolina, most leatherback nests can be found near Cape Hatteras, Cape Lookout or Bald Head Island.

### Range Map



Leatherback Sea Turtle Range Map

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to lay their eggs deep in the sand above the high tide line. An individual female will lay between 4-8 clutches of eggs in a single season, nesting every 10 days or so. The average clutch size for leatherbacks is about 80 eggs, although in addition leatherback nests usually contain several dozen misshapen “yolkless” eggs. Incubation is temperature dependent, but is usually about 60 days in the middle of the summer. Hatchlings will emerge from the nest cavity under the cover of darkness, and scramble for the ocean, where they will remain for 15-30 years until they reach maturity. One mystery about this species is the location of their developmental habitat. Juvenile leatherbacks are rarely observed in the wild.

### NCWRC Interactions

The N.C. Wildlife Resources Commission coordinates the N.C. Sea Turtle Nest Protection Project, which is a network of cooperators and volunteers along the entire oceanside coastline. Each day between early May and the end of August, nearly every mile of sandy beach is checked for newly laid sea turtle eggs, and any found are marked off and protected during incubation. Data are collected on the number and fate of nests, which help improve our understanding of population trends and provide insight into better management practices. Biologists with the Commission work closely with the U.S. Army Corps of Engineers, the National Marine Fisheries Service, and N.C. Division of Marine Fisheries on minimizing incidental capture of leatherback sea turtles in dredges and fishing gear.

### Human Interactions

You can help protect sea turtles by:

- Using red filters on flashlights when on the beach at night
- Leaving sea turtles nests alone
- Turning off all outside lights that face the beachfront during nesting season
- Keeping pets on a leash
- Reducing beach traffic around sea turtles nests to prevent nest compaction
- Disposing of trash in an appropriate manner
- Taking care when navigating watercraft to prevent turtle collisions and injuries
- Volunteering with the Sea Turtle Stranding and Salvage network to monitor nests during the season. [Learn more.](#)

### For More Information

Spotila, J.R., and P. Santidrian Tomillo. 2015. *The Leatherback Sea Turtle: Biology and Conservation*. Johns Hopkins University Press, Baltimore, Maryland, USA.

Rabon, D.R., Jr. et al. 2003. Confirmed Leatherback Turtle (*Dermochelys coriacea*) Nests from North Carolina, with a Summary of Leatherback Nesting Activities North of Florida. *Marine Turtle Newsletter* 101: 4-8.

(<http://www.seaturtle.org/mtn/archives/mtn101/mtn101p4.shtml>)

#### Credits

Written by Dr. Matthew Godfrey, N.C. Wildlife Resources Commission (2018)

### Wild Facts

#### Classification

Class: Reptilia

Order: Testudines

Suborder: Cryptodira

#### Average Size

Carapace: 57-65 inches

Weight: 770-990 pounds

#### Food

Mainly jellyfish

#### Breeding/Young

About 30 days after mating, leatherback females will lay their eggs deep in the sand above the high tide line. Average clutch size is approximately 80 eggs, and females can lay up to four clutches in a season. In about 60 days, hatchlings will emerge from the nest cavity at night, making their way to the ocean, where they will spend the next 15 to 30 years before reaching sexual maturity.

#### Life Expectancy

Average life span is 45 years in the wild



Leatherback hatchlings make their way to the ocean.  
(Photo: Dr. Matthew Godfrey)

Find an injured, dead or stranded sea turtle? Call the N.C. Sea Turtle Stranding and Salvage Network hotline: 252-241-7367.