



Department of Planning and Natural Resources
Division of Fish and Wildlife
U.S.V.I. Animal Fact Sheet #03
Leatherback Sea Turtle
Dermochelys coriacea



Taxonomy

Kingdom	-	Animalia
Phylum	-	Chordata
Subphylum	-	Vertebrata
Class	-	Reptilia
Order	-	Chelonii
Family	-	Dermochelyidae
Genus	-	<i>Dermochelys</i>
Species	-	<i>coriacea</i>

Identification Characteristics

Foreflippers	-	very large, no claws
Size	-	large (to > 1,000 lbs)
Upper jaw	-	2 fang-like projections
Carapace	-	rubbery tissue (no shell)
Rear carapace	-	ends in a blunt point
Color (dorsal)	-	black with white spots

Description

The leatherback sea turtle (*Dermochelys coriacea*) is the largest of the sea turtles. These giant air breathing reptiles may weigh over 600 kg (1,320 pounds). The shell on their back, which is called the carapace may be over 180 cm (almost 6 feet) long. Normally, our only opportunity to closely examine living leatherbacks occurs during their nesting season, when females come ashore, and hatchlings leave.

Aside from its large size, the leatherback is unique among sea turtles in several other respects. Adult leatherbacks do not have scutes (scales) covering their carapace as in other sea turtles. Instead, the leatherback carapace is comprised of a thick (~ 4 cm, 1.5") flexible black skin that resembles rubber or leather [hence the name]. The oil-saturated skin provides the turtle with insulation in cold water, allowing them to feed in the cold North Atlantic waters. There are seven ridges that run the length of the body which form a blunt point near the tail.

The front flippers of the leatherback are proportionally much longer (up to one meter long) than those of the other sea turtles. Leatherbacks have two fang-like projections on their upper jaw to help retain soft-bodied prey.

Adult leatherbacks are white on their bellies and black on the carapace, however their black coloration is broken up by many white spots. Hatchlings lack the

white spots. However the black color is interrupted by seven white stripes running along the ridges. Their skin appears dimpled, with tiny bead-like scales which are later lost as they grow. Hatchlings are large compared to other sea turtles, averaging 6.1 cm (2.5 inches) carapace length and weighing about 45 grams.

Distribution & Habitat

Leatherbacks occur in all the world's oceans and are capable of migrating over 3,000 miles. Their nesting areas all occur in tropical and subtropical areas, but feeding areas may extend well into cold temperate waters – for example off Iceland or Canada.

Much of leatherback behavior remains a mystery. During adulthood, they spend almost their entire lives in the deep waters of the open ocean (known as the pelagic zone) and, aside from nesting periods, they are rarely encountered in coastal waters. Almost nothing is known of leatherback distribution from post-hatching through sub-adulthood. However, in the past decade two juvenile leatherbacks have been found in the Virgin Islands - such encounters are helping biologists understand the movements and behavior of this species.

Leatherback sea turtles also visit cold waters in pursuit of food. They are capable of diving to over 3,300 feet where water temperatures may fall below 6°C (43°F). To cope with extremes of temperature and depth, leatherback sea turtles have evolved a suite of

physiological and morphological adaptations; their peculiar body form allows for their unusual lifestyle.

Diet

The diet of most marine turtles is poorly understood and leatherbacks are no exception. Most evidence indicates that adults and juveniles feed almost exclusively on gelatinous organisms (especially jellyfish). The specialized structures in their mouths and throats appear to help leatherbacks capture/retain soft-bodied prey. In captivity, hatchlings will feed voraciously on jellyfish, eating up to twice their own body weight per day. Nonetheless, jellyfish are a poor nutritional source, (the tissue is mostly water) and it is unclear how leatherbacks can reach their tremendous size on such a diet.

Reproduction

We are fortunate to have the largest leatherback nesting site in the United States located at Sandy Point National Wildlife Refuge on St. Croix. Females usually select large sandy beaches with easy access to deep waters for nesting, and Sandy Point is an ideal habitat. Peak nesting season is from March through July, and nesting almost always takes place at night.

Nesting females drag themselves up the beach using their front flippers, leaving behind a large and distinctive track in the sand. They first sweep away loose dry sand to form a large shallow depression (a process called body pitting). They then use their rear flippers to scoop out a hole, alternating between left and right flippers and flinging sand forward over their head. When the nest is deep enough, they proceed to lay approximately 80 eggs. They will try to disguise their nests after the eggs have been laid.

Adult female leatherbacks migrate to nesting sites every 2-3 years. During a single season, females will nest every 9-10 days, laying between 5-7 clutches.

Conservation

The U.S. Fish and Wildlife Service lists the leatherback as globally endangered. It is also listed by CITES (Convention on International Trade of Endangered Species) under Appendix I – the most endangered of the CITES-listed animals and plants - which prohibits all international trade in this species. In the U.S.V.I., Federal and territorial law prohibits harvesting adults or eggs of all sea turtle species.

Pollution and commercial fishing impact leatherbacks. Leatherbacks will mistake pieces of floating plastic for food, becoming entangled and may starve or suffocate. Commercial fishing gears (longlines, gillnets) can entangle leatherbacks, leading to injury or drowning.

Destruction and modification of nesting habitat also represent a significant threat to leatherback sea turtles. Beach erosion, poaching and lighting have reduced nesting success, accelerating the decline of leatherback

populations. In the Pacific Ocean leatherback turtles are in serious decline, and may becoming locally extinct.

We are very fortunate that on St. Croix we have an internationally renown program to study, monitor and protect our local population of leatherbacks. Since 1980, teams of researchers, locals and Earthwatch volunteers have participated in this project. This project is the longest and largest continuous research and monitoring project for leatherback sea turtles in the world. Since the start of the project in 1980 the numbers of leatherback sea turtles nesting on the beach has gone from 20 per year to nearly 200 per year. A great deal of information has been gathered and we continue to collaborate with researchers world wide to learn more about these magnificent animals.

What you can do to help

1. If you see any turtle nesting or hatching events, please write down the date, time and location you saw the turtles then call the Division of Fish and Wildlife at 340-772-1955 (on St. Croix) or 340-775-6762 on St. Thomas/St. John to report the event.
2. Hatchlings can crawl to the water themselves, if you see hatchlings making their way into the water, please let them complete the journey themselves.
3. Please make an extra effort to keep plastic out of the marine environment.
4. Turtles, especially hatchlings, will head toward the brightest light source on the beach. This used to be star and moon light shining on the ocean, but today it may be street or building lights. If possible turn off lights that shine on and toward the beach, when hatchlings are emerging.
5. Do not take flash pictures or shine lights directly toward the turtles - it will disorient them. Like us, turtle eyes will maintain the ghost image of the flash, only the hatchlings see this as a bright area and will crawl toward it.
6. If hatchlings emerge during the day, you may protect them from predators, and guide them to the waters edge.
7. If you see a nesting turtle do not crowd around it and do not harass it. You may observe nesting from a distance. Be sure to stay behind the front flippers of the turtle so that you do not disturb her. No flash photography.
8. Occasionally turtles will nest during the day. If you see a daytime nesting sea turtle, please call the Division of Fish and Wildlife immediately.
9. For more information on this and other animals in the Virgin Islands please visit our web site at:
www.vifishandwildlife.com

**BY WILLIAM COLES AND WES TOLLER, 2003
THIS PUBLICATION WAS PRODUCED WITH FUNDS
FROM THE WILDLIFE CONSERVATION AND
RESTORATION PROGRAM (WCRP).
FOR MORE INFORMATION ON
ANIMALS OF THE U.S.V.I., CONTACT**

THE DIVISION OF FISH AND WILDLIFE

**6291 ESTATE NAZARETH, 101, ST. THOMAS, VI 00802
PHONE 340-775-6762 FAX 340-775-3972
OR
45 MARS HILL, ST. CROIX, VI 00840
PHONE 340-772-1955 FAX 340-772-3227**