Common Name: LEATHERBACK SEA TURTLE

Scientific Name: *Dermochelys coriacea* (Vandelli, 1761)

Other Commonly Used Names: Leatherback

Previously Used Names: None

Family: Dermochelyidae

Rarity Ranks: G2/S1

State Legal Status: Endangered

Federal Legal Status: Endangered

Description: Adult leatherbacks are the largest turtles in the world, weighing an average of 300-550 kg (660-1,210 lbs) and measuring 135-175 cm (53-69 in). These turtles are generally black in appearance, with some gray and white spots ("vermiculations") on the ventral side of the body and dorsal surface of the flippers. Leatherback sea turtles that have washed up dead on Georgia's beaches since 1982 have ranged in size from 25-188 cm (10-74 in) curved carapace length, with an average of 151 cm (60 in). Unlike other sea turtles, leatherbacks do not have large scutes covering the carapace and plastron; instead, they have a layer of skin over a very flexible shell. The carapace has seven, raised longitudinal ridges. The most distinguishing morphological characteristics of leatherbacks are their large size and dark color. Two large cusps on the upper jaw can be seen on close examination and are also distinctive.

Similar Species: Their massive size, dark color, flexible shell, and raised carapacial ridges make leatherbacks easily distinguishable from all other marine turtles.

Habitat: Leatherback sea turtles are highly pelagic, but may also forage in coastal waters. Leatherbacks make long-distance migrations from nesting sites in the tropics to foraging sites in the sub-Arctic. Leatherbacks are found along the Georgia coast during annual migrations in the fall and spring. They are also commonly seen in the winter months foraging on sea jellies. Little is known about habitat used by post-hatchlings and small juveniles.

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Diet: Leatherbacks eat primarily sea jellies, but occasionally other marine invertebrates like octopi and squid. Leatherback turtles have been observed off the Georgia coast foraging on cannonball jellyfish and sea nettles.

Life History: Leatherbacks, like other sea turtles, deposit eggs in the sand of warm tropical and subtropical beaches. Central and South American beaches support the majority of nesting in the western Atlantic. Leatherback sea turtles are found in Georgia waters in the fall and early spring during migration to and from the tropics. They have also been documented in high densities foraging on sea jellies during the winter months. Dead leatherbacks found on Georgia's beaches have been identified by tags and genetic samples originating from the nesting beaches of St. Croix, Columbia, Trinidad, and French Guiana. Leatherbacks nest regularly in the southeastern U.S., particularly Florida where nesting has been increasing over the last decade. Very few nests have been confirmed in Georgia although a consistent pattern of low annual nesting (<10 nests) has emerged since 2000. Leatherback sea turtles normally nest about six times in a season but have been known to nest as many as eleven times. Like other sea turtles, leatherbacks do not nest every year but normally return to nest every 2-4 years. The 80-90 billiard-ball sized white eggs normally hatch in 50-78 days. Very little is known about leatherback sea turtles during any of their developmental life stages, and virtually nothing is known of the post-hatching and juvenile periods. Young leatherbacks grow more rapidly than other sea turtles and probably reach maturity at a much earlier age. The average age of maturity has been estimated at 13-14 years for females, which is quite rapid compared to the estimated 30-35 years to maturity in loggerheads. Maximum life span is not known. Leatherback sea turtles are one of the deepest diving air-breathing animals, reaching depths of approximately 1,000 m (3,300 ft).

Range: Leatherback sea turtles have a global distribution, perhaps more widely distributed than any other reptile on earth. Found throughout the Atlantic, Pacific, and Indian oceans, leatherbacks can tolerate cool northern ocean temperatures, allowing them regularly to move farther north than other sea turtles. They have been found swimming in sub-Arctic regions, a reflection of their apparent ability to maintain core body temperatures that are higher than surrounding ambient ocean temperatures.

Threats: Although Pacific leatherback populations are thought to have declined by 80% or more, nesting populations in the western Atlantic appear to be stable or increasing. The primary threats to leatherback population recovery are the harvest of adults and eggs and incidental capture and drowning in commercial fisheries. Leatherback turtles and their eggs are harvested for human consumption in many parts of the developing world. In addition, leatherbacks are

incidentally captured in longlines, gillnets and trawl fisheries. Entanglement in pot and trap gear is a serious threat in some areas. The ingestion of discarded plastic bags that superficially resemble sea jellies has been identified as a significant source of mortality.

Georgia Conservation Status: Leatherback sea turtles are listed as endangered as a result of long-term declines in nesting and persistent threats from human activities such as commercial fishing. A significant proportion of Georgia's leatherback nesting habitat is in conservation ownership including Little Tybee Island Natural Area, Wassaw Island National Wildlife Refuge, Ossabaw Island Heritage Preserve, Blackbeard Island National Wildlife Refuge, Sapelo Island Wildlife Management Area, Wolf Island National Wildlife Refuge, Jekyll Island State Park, Little Cumberland Island, and Cumberland Island National Seashore.

Conservation and Management Recommendations: Mortality associated with the shrimp trawl fishery is the primary threat to leatherbacks in Georgia. Leatherback turtles are most likely to wash ashore in Georgia during two periods, March through June and October through December. The temporal distribution of the strandings reflects the periods of greatest abundance in Georgia's nearshore waters. A small number of nesting females may also be present in coastal waters during the nesting season. Turtle Excluder Device (TED) regulations were modified in 2003 to enlarge the size of the escape opening to accommodate adult leatherbacks. The originally mandated TED opening was too small for leatherbacks to escape. Leatherback strandings have decreased in Georgia since the modification of the TED regulations, but it is unclear whether it is a result of change in the regulations or an overall reduction in shrimp trawling effort.

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Website of interest: http://www.seaturtle.org/nestdb/index.shtml?view=3

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Date Compiled or Updated: February 28, 2011