



U.S. Fish & Wildlife Service

Loggerhead Sea Turtle (*Caretta caretta*)

FAMILY: Cheloniidae

STATUS: Threatened throughout its range (*Federal Register*, July 28, 1978).

DESCRIPTION: The loggerhead is characterized by a large head with blunt jaws. The carapace and flippers are a reddish-brown color; the plastron is yellow. The carapace has five pairs of costal scutes with the first touching the nuchal scute. There are three large inframarginal scutes on each of the bridges between the plastron and carapace. Adults grow to an average weight of about 200 pounds. The species feeds on mollusks, crustaceans, fish, and other marine animals.

REPRODUCTION AND DEVELOPMENT: The United States nesting season extends from about May through August with nesting occurring primarily at night. Loggerheads are known to nest from one to seven times within a nesting season (mean is about 4.1 nests per season) at intervals of approximately 14 days. Mean clutch size varies from about 100 to 126 along the southeastern United States coast. Incubation ranges from about 45 to 95 days, depending on incubation temperatures, but averages 55-60 days for most clutches in Florida. Hatchlings generally emerge at night. Remigration intervals of 2 to 3 years are most common in nesting loggerheads, but remigration can vary from 1 to 7 years. Age at sexual maturity is believed to be about 20 to 30 years.

RANGE AND POPULATION LEVEL: The loggerhead occurs throughout the temperate and tropical regions of the Atlantic, Pacific, and Indian Oceans, with major nesting beaches in the Sultanate of Oman, southeastern United States, and eastern Australia. From a global perspective, the southeastern U.S. nesting aggregation is of paramount importance to the survival of the species and is second in size only to the nesting aggregation on Masirah Island, Oman. The status of the Oman colony has not been evaluated recently, but its location in a part of the world that is vulnerable to disruptive events (e.g., political upheavals, wars, catastrophic oil spills) is cause for considerable concern. The loggerhead nesting aggregations in Oman, the southeastern U.S., and Australia account for about 88 percent of nesting worldwide. Loggerheads nest within the U.S. from Texas to Virginia, although the major nesting concentrations are found in Florida, Georgia, South Carolina, and North Carolina. About 80 percent of loggerhead nesting in the southeastern U.S. occurs in six Florida counties (Brevard, Indian River, St. Lucie, Martin, Palm Beach, and Broward Counties). Total estimated nesting in the U.S. is approximately 50,000 to 70,000 nests/year. Adult loggerheads are known to make considerable migrations between foraging areas and nesting beaches. During non-nesting years, adult females from U.S. beaches are distributed in waters off the eastern U.S. and throughout the Gulf of Mexico, Bahamas, Greater Antilles, and Yucatán,

Genetic research (mtDNA) has identified four loggerhead nesting subpopulations in the western North Atlantic: (1) the Northern Subpopulation occurring from North Carolina through Northeast Florida; (2) South Florida Subpopulation occurring from just north of Cape Canaveral on Florida's east coast and extending up to around Sarasota on Florida's west coast; (3) Northwest Florida Subpopulation occurring on Florida's Panhandle beaches; and (4) Yucatán Subpopulation occurring on the eastern Yucatán Peninsula, Mexico. These data indicate that gene flow between these four regions is very low. If nesting females are extirpated from one of these regions, regional dispersal will not be sufficient to replenish the depleted nesting population. The Northern Subpopulation has declined substantially since the mid-1970s but may have stabilized in recent years. The South Florida Subpopulation has shown significant increases over the last 25 years, indicating the population is recovering, although a trend could not be detected during the first 7 years (1989-1995) of the State of Florida's Index Nesting Beach Survey program. Nesting surveys in the Northwest Florida and Yucatán Subpopulations has been too irregular to date to allow for a meaningful trend analysis.

HABITAT: The loggerhead is widely distributed within its range. It may be found hundreds of miles out to sea, as well as in inshore areas such as bays, lagoons, salt marshes, creeks, ship channels, and the mouths of large rivers. Coral reefs, rocky places, and ship wrecks are often used as feeding areas. Nesting occurs mainly on open beaches or along narrow bays having suitable sand, and it is often in association with other species of sea turtles. Most loggerhead hatchlings originating from U.S. beaches are believed to lead a pelagic existence in the North Atlantic gyre for an extended period of time, perhaps as long as 10 to 12 years, and are best known from the eastern Atlantic near the Azores and Madeira. Post-hatchlings have been found floating at sea in association with *Sargassum* rafts. Once they reach a certain size, these juvenile loggerheads begin recruiting to coastal areas in the western Atlantic where they become benthic feeders in lagoons, estuaries, bays, river

mouths, and shallow coastal waters. These juveniles occupy coastal feeding grounds for a decade or more before maturing and making their first reproductive migration, the females returning to their natal beach to nest.

CRITICAL HABITAT: None designated.

REASONS FOR CURRENT STATUS: Threats include loss or degradation of nesting habitat from coastal development and beach armoring; disorientation of hatchlings by beachfront lighting; excessive nest predation by native and non-native predators; degradation of foraging habitat; marine pollution and debris; watercraft strikes; disease; and incidental take from channel dredging and commercial trawling, longline, and gill net fisheries. There is particular concern about the extensive incidental take of juvenile loggerheads in the eastern Atlantic by longline fishing vessels from several countries.

MANAGEMENT AND PROTECTION: In the Southeast United States, major nest protection efforts and beach habitat protection are underway for most of the significant nesting areas, and significant progress has been made in reducing mortality from commercial fisheries in U.S. waters with the enforcement of turtle excluder device regulations. Many coastal counties and communities in Florida, Georgia, and South Carolina have developed lighting ordinances to reduce hatchling disorientations. Important U.S. nesting beaches have been and continue to be acquired for long-term protection. The migratory nature of loggerheads severely compromises these efforts once they move outside U.S. waters, however, since legal and illegal fisheries activities in some countries are causing high mortality on loggerhead sea turtle nesting populations of the western north Atlantic region. Due to the long range migratory movements of sea turtles between nesting beaches and foraging areas, long-term international cooperation is absolutely essential for recovery and stability of nesting populations.

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