

Status and Distribution of the Loggerhead Turtle, *Caretta caretta*, in the Wider Caribbean Region

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Identity and Description

The generic name *Caretta* was introduced by Rafinesque (1814). The specific name *caretta* was first used by Linnaeus (1758). The name *Caretta* is a Latinized version of the French word “caret”, meaning turtle, tortoise, or sea turtle (Smith and Smith, 1980). Smith and Smith (1980) suggested that the Indo-Pacific and Atlantic populations were differentiated at the subspecific level, but this conclusion has been challenged by Hughes (1974) and Pritchard and Trebbau (1984). In recent synopses of the biological data available on this species, Dodd (1988, 1990) considered *C. caretta* to be monotypic. In the Wider Caribbean, the species is referred to as loggerhead in English, cabezon and caguama in Spanish, and caouanne in French (excerpted from Eckert, 1995).

The loggerhead turtle is identifiable by the relatively large size of its head, thick carapace (often encrusted with barnacles and other epifauna), and reddish-brown pigmentation of the skin and carapace. In general there are five vertebral scutes and five pairs of non-overlapping costal (lateral) scutes on the carapace. There are two claws on each flipper. Adults can reach a size of 120 cm (straight carapace length) and weigh up to 200 kg (Pritchard et al., 1983), but more typical is an adult of 105 cm in straight carapace length and about 180 kg (Pritchard and Mortimer, 1999). The species is widely distributed in the subtropical and tropical waters of the Atlantic, Pacific and Indian Oceans. Atlantic sightings are documented as far north as Terranova Island (Squires, 1954) and northern Europe (Brongersma, 1972), and as far south as Argentina (Frazier, 1984).

Hatchlings are uniformly reddish- or grayish-brown with a scute pattern identical to the adult.

The typical straight carapace length is 45 mm, ranging from about 38-50 mm. Egg diameter ranges from 39-43 mm, with about 100-130 eggs laid per nest (see Pritchard and Mortimer, 1999).

Distribution

The most important nesting grounds for this species in the Wider Caribbean Region are mainly located along the southeastern coast of the USA, principally in the state of Florida which hosts the second greatest nesting aggregation of this species in the world, surpassed only by the most important, located in Masirah Island, Oman, in the Indian Ocean. Of the total number of nestings documented in the USA each year, 93% are in Florida (FL), 5% in South Carolina (SC), and about 1% in each of Georgia (GA) and North Carolina (NC) (Figure 1). Nesting declined in these areas during the 1980's (Ehrhart, 1989). Today the south Florida population is considered to be stable or improving. Witherington and Koeppel (1999) reported that the number of nests laid in Florida rose from 49,422 in 1989 to 85,985 in 1998. Based on 4.1 nests/female/yr (Murphy and Hopkins, 1984) this annual nesting population has increased from 12,054 to 20,972 females. In contrast, the northern population (Georgia, South Carolina, North Carolina) is considered to be stable or declining, and the status of the Florida panhandle population cannot be determined at this time (TEW/G, 2000).

Other important nesting grounds are located on the Yucatan Peninsula (particularly along the coast of Quintana Roo in the Caribbean Sea), the islands and keys of the Cuban Archipelago, and Colombia's Caribbean coast. Surveys for the Quintana Roo beaches in the early 1990's suggested annual nestings of 1,300-2,200 (Zurita et al., 1993), with a

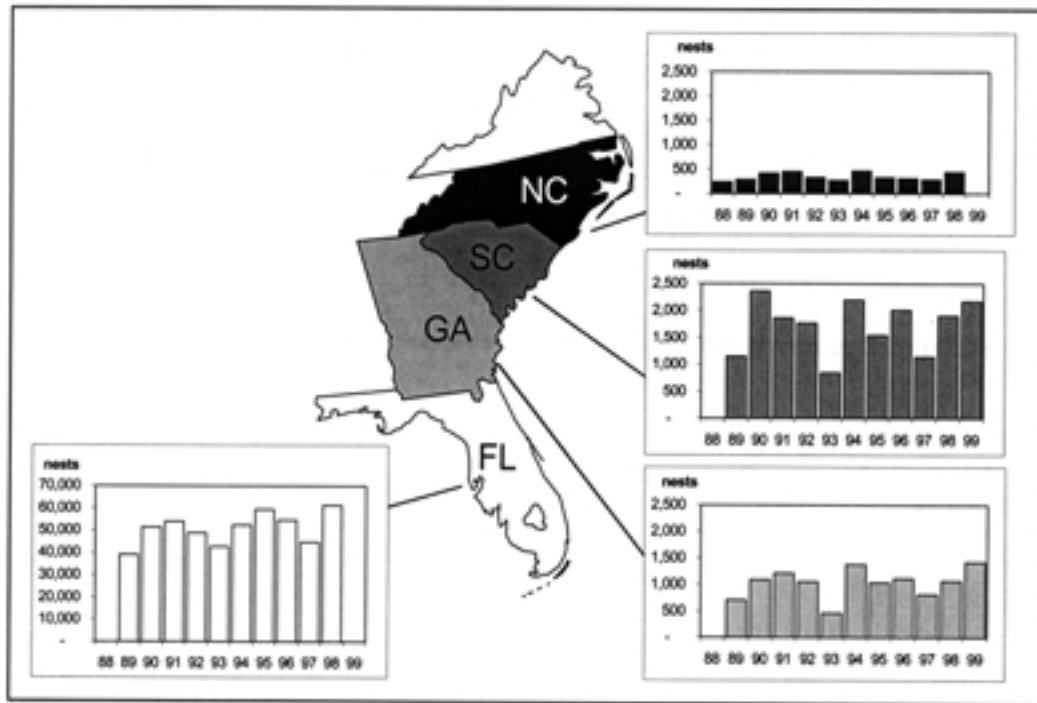


Figure 1. Loggerhead sea turtle (*Caretta caretta*) nesting trends in the USA by state, based on Index Beach data. Index Beaches account for about 70% of all nesting in Florida, about 53% in North Carolina, 50% in South Carolina, and over 90% in GA. Source: E. Possardt, U.S. Fish and Wildlife Service.

slightly increasing trend (R. Márquez, INP-México, pers. comm.). About 2,000 loggerhead nests per season were once known at beaches near Santa Marta in Colombia (Márquez, 1990), where Kaufmann (1975) estimated an annual population of 400 to 600 nesting females. By the mid-1980's only eight nesting females were reported in the same region (D. Amorochó, WIDECAS-T-Colombia, pers. comm., 1999), evidence of a drastic decrease in this population.

In the Cuban Archipelago (Figure 2), loggerheads nest mainly in the southwestern region, specifically in the Guahanacabibes Peninsula and on the islands and keys of the Canarreos Archipelago. The most important area is “El Guanál” beach (south of Pinos Island); other important areas are the San Felipe Keys, Largo del Sur Key and Rosario Key. Together these areas host about 70% (approximately 250 nests) of the annual nesting for this species in the entire Cuban Archipelago. Some additional nesting occurs in the northern coast of the island and in some keys of the Sabana-Cam-

agüey Archipelago (e.g., Cruz Key). Isolated nesting has been recorded in the southeastern region in the Doce Leguas keys.

Rare and isolated nesting is reported in the Lesser Antilles, along the Mexican Gulf (Tamaulipas and Veracruz), in Central America (Belize and Guatemala), and along the Atlantic coast of South America from Venezuela to Brazil (summarized by Dodd, 1988). More recent evidence suggests that low levels of nesting also occur in Honduras where, for example, the Rio Platano Biosphere Reserve protects approximately 10 loggerhead nests each year (E. Possardt, U.S. FWS, pers. comm.).

Ecology

Loggerhead turtles are highly migratory, undertaking transoceanic journeys as young juveniles and routinely moving between nesting and foraging grounds as adults. It is widely held that hatchlings emerging from nests laid along the southeastern coast of the USA leave their native beaches to take shelter in open sea accumulations of *Sargassum*

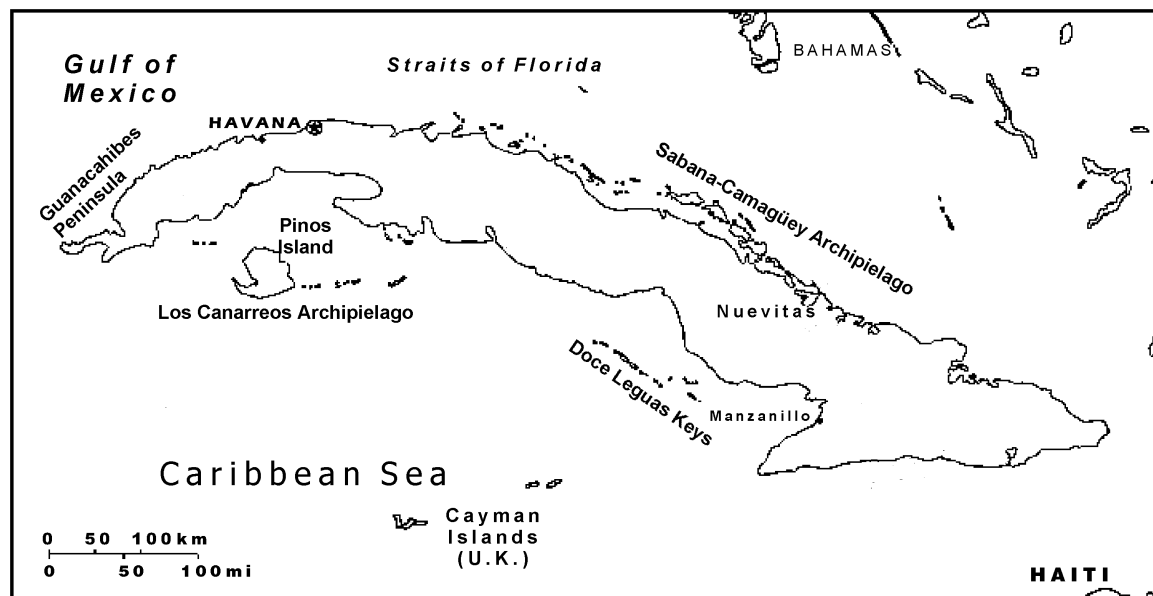


Figure 2. Major loggerhead sea turtle (*Caretta caretta*) nesting areas in Cuba (see text).

weed. The young turtles are transported passively by a branch of the Gulf Stream that carries them to the eastern part of the Atlantic Ocean. Later they move south with the North Atlantic Gyre, to the Azores and Canary Islands, and ultimately return as large juveniles with the Northern Equatorial Current to western Atlantic foraging grounds where they specialize on mollusks and crustaceans in nearshore habitats (Figure 3).

Tagging and recapture studies conducted in Florida, Cuba and the Yucatan Peninsula (Mexico) have demonstrated that this species can travel long distances in relatively short periods of time, traveling either with or against ocean currents. For example, nesting females tagged while nesting in Florida have been recaptured on the Cuban ocean platform, mainly along the north coast of Pinar del Rio, an area rich in species of benthic invertebrates (Murina et al., 1969) known to be part of the diet for this species (cf. Bjorndal, 1985). Nesting females tagged in Cuba ("El Guanál" beach, south of Pinos Island) have been reported in foraging areas near Nicaragua (Moncada, 1998); and loggerheads tagged in Yucatan have been recaptured in Cuba and other areas of the region (Moncada, 1998; R. Márquez, INP-México, pers. comm., 1999).

Conservation Status

The loggerhead turtle is included in Annex II of the SPAW Protocol to the Cartagena Convention in the Caribbean Region. It is classified as "Endangered" by IUCN (the World Conservation Union; Baillie and Groombridge, 1996) and is included in Appendix I of the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), which prohibits international commerce. The species is also included in Appendices I and II of the Convention on Conservation of Migratory Species and in the annexes to the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere.

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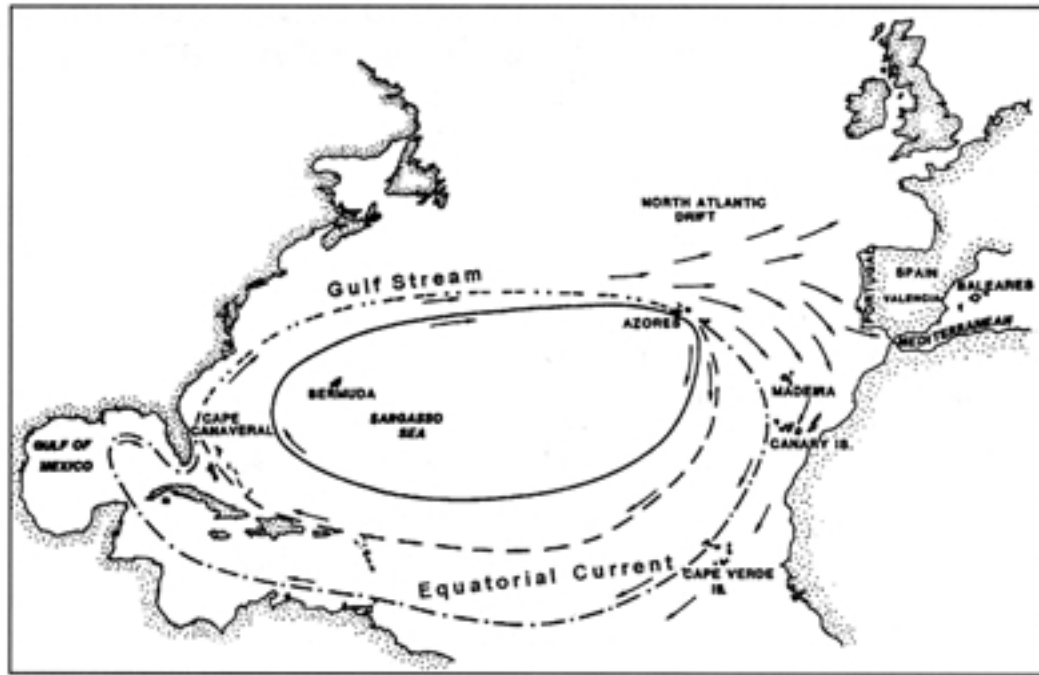


Figure 3. Oceanic transport routes for juvenile loggerhead sea turtles, *Caretta caretta*. Source: Musick and Limpus, 1997 (adapted from Carr, 1987).

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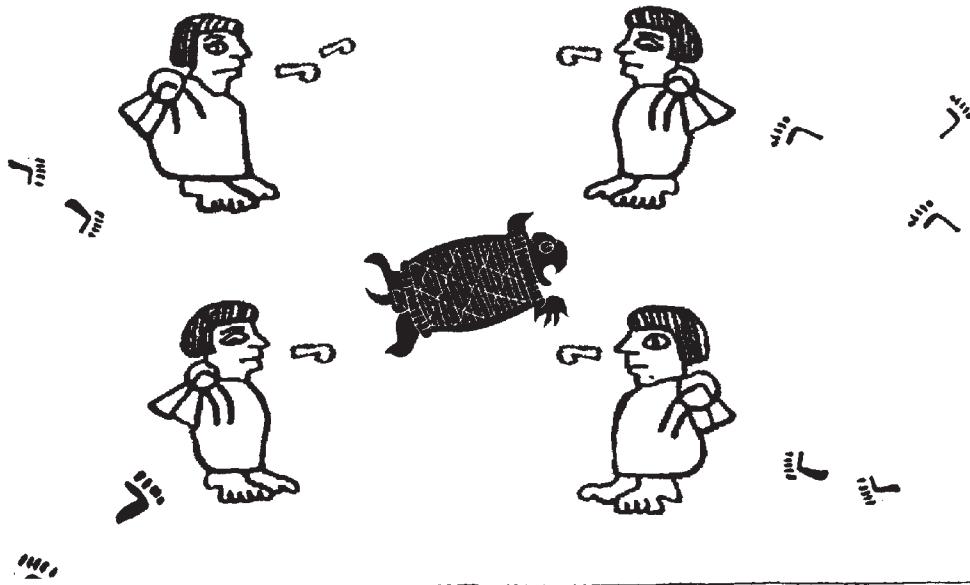
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Marine Turtle Conservation in the Wider Caribbean Region: A Dialogue for Effective Regional Management

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PROCEEDINGS



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About the cover

The designs for the cover were extracted from various Mexican pre-Columbian codices. The human figures, footprints, and the speech symbols were taken from the *Códice Boturini*, also known as *Tira de la Peregrinación*, which depicts the migration of the Mexicas (ancient Aztecs) towards the Valley of Mexico. The turtle figure in the center comes from an ancient Mayan codex. We felt that this symbolism, taken from pre-Colombian art, well reflected the nature and purposes of the people attending the workshop — bringing together many people, traveling from far and wide, to dialogue about marine turtles.