

Kemp's Ridley Sea Turtle (*Lepidochelys kempii*)

FAMILY: Cheloniidae

STATUS: Endangered throughout its range (*Federal Register*, December 2, 1970).

DESCRIPTION: The Kemp's ridley turtle is one of the smallest of the sea turtles, with adults reaching about 2 feet in length and weighing up to about 100 pounds. The adult Kemp's ridley has an oval carapace that is almost as wide as it is long and is usually olive-gray in color. The carapace usually has five pairs of costal scutes. In each bridge adjoining the plastron to the carapace, there are four inframarginal scutes, each of which is perforated by a pore. The head has two pairs of prefrontal scales. Hatchlings are black on both sides. The Kemp's ridley has a triangular-shaped head with a somewhat hooked beak with large crushing surfaces. This turtle is a shallow water benthic feeder with a diet consisting primarily of crabs.

HABITAT: Outside of nesting, the major habitat for Kemp's ridleys is the nearshore and inshore waters of the northern Gulf of Mexico. Adult and sub-adult Kemp's ridleys primarily occupy nearshore habitats that contain muddy or sandy bottoms where prey can be found. Kemp's ridley hatchlings and small juveniles inhabit a very different environment than adults. After emerging from the nest, hatchlings enter the water and quickly swim offshore to open ocean developmental habitat where they associate with floating *Sargassum* seaweed. They passively drift within the *Sargassum*, feeding on a wide variety of floating items. Some of these juvenile turtles remain within Gulf of Mexico currents while others are swept out of the Gulf and into the Atlantic Ocean by the Gulf Stream. This developmental period is estimated to last approximately 2 years or until the turtles reach a carapace length of about 8 inches, at which time these sub-adult turtles return to neritic zones of the Gulf of Mexico or northwestern Atlantic Ocean where they feed and continuing growing until they reach maturity.

CRITICAL HABITAT: None designated.

REPRODUCTION AND DEVELOPMENT: Nesting occurs from April into July during which time the turtles appear off the Tamaulipas and Veracruz coasts of Mexico. Possibly precipitated by strong winds and changes in barometric pressure, the females often nest in synchronized emergences, known as *arribadas* or *arribazones*, primarily during daylight hours. Clutch size averages 100 eggs. Some females breed annually and nest an average of 2.5 times in a season at intervals of 14 to 28 days. Sexual maturity is believed to be reached at about 12 years.

RANGE AND POPULATION LEVEL: The range of the Kemp's ridley includes the Gulf coasts of Mexico and the U.S., and the Atlantic coast of North America as far north as Nova Scotia and Newfoundland. Nesting is essentially limited to the beaches of the western Gulf of Mexico, primarily in Tamaulipas and Veracruz, Mexico with a few historical records in Campeche, Mexico. Nesting also occurs regularly in Texas and infrequently in a few other U.S. states.

The Kemp's ridley is the most endangered of the sea turtles. Its numbers precipitously declined after 1947, when over 40,000 nesting females were estimated in a single *arribada*. The nesting population produced a low of 702 nests in 1985; however, since the mid-1980s, the number of nests laid in a season has been increasing primarily due to nest protection efforts and implementation of regulations requiring the use of turtle excluder devices in commercial fishing trawls. In 2011, a total of 20,570 nests were documented in Mexico, 81 percent of these nests were documented along the 18.6 miles of coastline patrolled at Rancho Nuevo. In addition, in the United States, 199 nests were recorded in 2011, primarily in Texas.

REASONS FOR CURRENT STATUS: The decline of this species is primarily due to human activities, including the direct harvest of adults and eggs and incidental capture in commercial fishing operations. Today, under strict protection, we are cautiously optimistic that the population is on its way to recovery.

MANAGEMENT AND PROTECTION: The recent nesting increase can be attributed to full protection of nesting females and their nests in Mexico, and the requirement to use turtle excluder devices in shrimp trawls both in the United States and Mexico. In 1966, conservation efforts for the Kemp's ridley were initiated on the beach near

Rancho Nuevo in Tamaulipas, Mexico. This locale is the only place in the world where large nesting aggregations of this sea turtle were and are known to occur. From 1966 to 1987, conservation efforts focused on the area of Rancho Nuevo with one turtle protection camp. In 1978, the U.S. joined with Mexico at Rancho Nuevo in a bi-national effort to prevent the extinction of the Kemp's ridley. In 1988, this bi-national program expanded to the south and another camp was added. In 1989, a third camp was established when the program was expanded to the north of Rancho Nuevo. By 1997, a total of seven camps had been established along the Tamaulipas and Veracruz coasts to allow for increased nest protection efforts.

The Mexico government also prohibits harvesting and is working to increase the population through more intensive law enforcement, by fencing nest areas to diminish natural predation, and by relocating nests into corrals to prevent poaching and predation. While relocation of nests into corrals is currently a necessary management measure, this protection effort is of concern since it makes the eggs more susceptible to reduced viability due to movement-induced mortality, altered sex ratios, disease vectors, catastrophic events like hurricanes, and marine predators that learn to concentrate efforts offshore from corral locations.

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For more information please contact:

National Sea Turtle Coordinator
U.S. Fish and Wildlife Service
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256
Phone: (904) 731-3336
Fax: (904) 731-3045
Email: seaturtle@fws.gov

Program Officer, Marine Turtle Conservation Fund
Division of International Conservation
U.S. Fish and Wildlife Service
4401 N. Fairfax Drive, MS100
Arlington, VA 22203
Phone: (703) 358-2277
Fax: (703) 358-2115

