

# Olive Ridley Sea Turtle (*Lepidochelys olivacea*)

**FAMILY:** Cheloniidae

**STATUS:** Breeding colony populations on the Pacific Coast of Mexico are listed as Endangered; all others are listed as Threatened (*Federal Register*, July 28, 1978).

**DESCRIPTION:** The olive ridley was named for the olive color of its heart-shaped shell and is one of the smallest of the sea turtles, with adults reaching 2 to 2½ feet in length and weighing 80 to 110 pounds. The species may be identified by the uniquely high and variable numbers of vertebral and costal scutes. Although some individuals have only five pairs of costals, in nearly all cases some division of costal scutes occurs, so that as many as six to nine pairs may be present. In addition, the vertebral scutes also show frequent division, as do the scales on the dorsal surface of the head. The prefrontal scales, however, typically number two pairs. The olive ridley's diet includes crabs, shrimp, lobsters, jellyfish, mollusks, and tunicates. In some parts of the world, algae have been reported as its principal food.

**HABITAT:** The olive ridley occurs worldwide in tropical and warm temperate ocean waters. The olive ridley appears to be more of an open ocean inhabitant than its congener, the Kemp's ridley, which primarily inhabits shallow nearshore coastal waters. The majority of nesting occurs along continental margins and rarely on oceanic islands.

**CRITICAL HABITAT:** None designated.

**REPRODUCTION AND DEVELOPMENT:** The olive ridley is most noted for its massive nesting aggregations, known as *arribadas* or *arribazones*, with literally thousands of females nesting in large simultaneous emergences over small stretches of beach. Although the exact cues that trigger *arribadas* are unknown, they may be precipitated by strong offshore winds, tides, and lunar phases. Not all females participate in *arribadas*; some are solitary nesters. Olive ridleys commonly nest in successive years. They typically nest 1 to 3 times per season, producing about 100 to 110 eggs on each occasion. The internesting interval is variable, but for most localities it is approximately 14 days for solitary nesters and 28 days for *arribada* nesters. Incubation takes about 50 to 60 days. The median age at sexual maturity is 13 years with a range of 10 to 18 years.

**RANGE AND POPULATION LEVEL:** The olive ridley occurs within the tropical regions of the Pacific, Atlantic, and Indian Oceans. In the East Pacific, it nests on beaches from Mexico south to at least Colombia with *arribada* nesting beaches at Playa Chacocente and Playa La Flor, Nicaragua; Nancite and Ostional, Costa Rica; and Isla Cañas, Panama. In the North Indian Ocean, *arribada* nesting occurs on three beaches in the Indian State of Orissa: Gahirmatha, Devi River mouth, and Rushikulya. In the West Atlantic, two distinct olive ridley nesting populations are recognized: Suriname/French Guiana and Brazil. This species does not nest in the United States, but during feeding migrations, olive ridley turtles nesting in the East Pacific may disperse into waters off the U.S. Pacific coast as far north as Oregon.

Endangered Population (Mexico breeding population) – Based on the number of olive ridleys nesting on the Pacific coast of Mexico, the Endangered population appears to be stable at some locations (e.g., Mismaloya and Moro Ayuta) and increasing at one location (La Escobilla). A comparison of the current abundance of the Mexico nesting assemblages with the former abundance at each of the large *arribada* beaches indicates that the populations experienced steep declines that have not yet been overcome. Nesting trends in Mexico at non-*arribada* beaches are stable or increasing in recent years. However, current threats, particularly with regard to commercial fisheries, remain a serious concern for the future of this population. Incidental capture of olive ridleys in shrimp trawl fisheries has been and remains a significant threat to nesting populations. Also of concern is the growing threat posed by expansion of the longline fisheries in this region. The nationwide ban on harvest of nesting females and eggs has decreased the threat to the Endangered population. The nesting population at La Escobilla, Oaxaca, Mexico, has increased from 50,000 nests in 1988 to more than a million nests in 2000 as a result of the harvest prohibitions and the closure of a nearshore turtle fishery. However, illegal harvest of eggs and turtles is believed to still be widespread in Mexico.

Threatened Population (globally except Mexico breeding population) – In the eastern Pacific, the large *arribada* nesting populations have declined since the 1970s. Nesting at some *arribada* beaches continues to decline (e.g., Nancite in Costa Rica) and is stable or increasing at others (e.g., Ostional in Costa Rica). There are too few empirical data available from solitary nesting beaches to confirm the declining trend that has been described for numerous countries throughout the region including El Salvador, Guatemala, Costa Rica, and Panama. Western Atlantic *arribada* nesting populations are currently very small. Recent data indicate the Suriname/French Guiana nesting population may still be threatened by incidental capture in the shrimp trawl fishery. Nesting data from French Guiana/Suriname during the 2002-2006 nesting seasons indicate that while nesting in Suriname continues at very

low levels, nesting in French Guiana and overall nesting appears comparable to levels recorded for both countries about two decades ago. This may indicate a shift from nesting beaches in Suriname to French Guiana and reflect the dynamic aspects of beach erosion and accretion in the region. The other nesting population in Brazil, for which no long term data are available, is small, but increasing. In the eastern Atlantic, long-term empirical data are not available and thus the abundance and trends of this population cannot be assessed at this time. However, the threats associated with growing commercial and artisanal (i.e., generally smaller scale local, non-commercial) fisheries in the region are serious and warrant close attention. In the northern Indian Ocean, *arribada* nesting populations are still large but are characterized as stressed and either in decline or on the verge of decline due primarily to the incidental capture of large numbers of turtles in shrimp trawl and gillnet fisheries. Declines of solitary nesting olive ridleys have been reported in Bangladesh, Myanmar, Malaysia, Pakistan, and southwest India.

**REASONS FOR CURRENT STATUS:** The decline of this species is primarily due to human activities, including the direct harvest of adults and eggs, incidental capture in commercial fisheries, and loss of nesting habitat.

**MANAGEMENT AND PROTECTION:** In Mexico, 17 reserve areas were established for the protection of sea turtles in 1986, and a total prohibition on sea turtle harvest was instituted and additional protection camps were established on nesting beaches in 1990. Since the 1990 ban, the take of olive ridleys has been reduced, and the population appears to be stabilizing. U.S. and Mexico government regulations requiring shrimp trawlers to use turtle excluder devices have resulted in reduced mortality from commercial fishing operations in U.S. and Mexico waters. Continued direct and incidental take, particularly in shrimp trawl nets, remains a serious concern in the western Atlantic and Indian Oceans.

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